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FINAL SUPPLEMENTAL INVESTIGATION SITE 69 OPERABLE UNIT 14 (OU14) RIFLE RANGE CHEMICAL DUMP MCB CAMP LEJEUNE NC

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CH2M HILL

Final

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Executive Summary

Introduction

This Supplemental Investigation (SI) Report summarizes previous investigations and presents the field activities, data, results, and conclusions of environmental investigation activities conducted by CH2M HILL in February through March 2010 and February through March 2011 at Operable Unit (OU) No. 14, Site 69 at Marine Corps Base Camp Lejeune (MCB CamLej), located in Onslow County, North Carolina. Site 69 is located within the boundary of Munitions Response Program (MRP) Site Unexploded Ordnance-02 (UXO-02). UXO-02 was identified in the *Final Range Identification and Preliminary Range Assessment, Marine Corps Base Camp Lejeune, Onslow, North Carolina* (USACE, 2001) as an "Unnamed Explosive Contaminated Range." Site UXO-02 is currently undergoing a Preliminary Assessment/Site Investigation (PA/SI) under a separate CLEAN Contract Task Order.

Environmental investigations at Site 69 have historically focused on volatile organic compounds (VOCs) impacting the groundwater in the southern portion of Site 69, and have not adequately characterized the Site or the extent of contamination (i.e., a sufficient quantity of data does not exist to support a corrective action decision).

The purpose of this SI is to:

- Present a complete history of the investigation activities at Site 69.
- Present information collected during the SI field investigation to supplement and/or verify the environmental setting at Site 69.
- Characterize the sources of environmental contamination by collecting analytical data and evaluate the physical and chemical properties of the contaminants, including migration and dispersal characteristics.
- Assess the nature and extent of site contaminants, including their fate and transport, by collecting and analyzing surface water, sediment, soil, and groundwater samples.
- Evaluate the environmental risk posed by the site contaminants.
- Provide sufficient information to select a final remedy for the site.

Site 69 Setting and History

MCB CamLej encompasses approximately 236 square miles of land in Onslow County, North Carolina, adjacent to the southern side of the City of Jacksonville. The Base is bordered by the Atlantic Ocean to the east, U.S. Route 17 to the west, and State Route 24 to the north, and is bisected by the New River, which flows into the Atlantic Ocean in a southeasterly direction. Jacksonville is the largest city near MCB CamLej and contains

approximately half of the county's total population. The areas adjacent to the Base are generally rural.

Site 69 consists of approximately 14 acres of wooded land with elevations generally ranging from 25 to 40 feet above mean sea level (amsl). Drainage features to the northeast and southeast of Site 69 convey surface water to the New River. Three surface water bodies are located within a quarter-mile of the Site: the New River to the east, an unnamed tributary of the New River to the north, and Everett Creek to the south. The area is overgrown to the point that the boundary of the former dump is not easily discernable. In the 1990s, a 6-foot high chain link fence was erected around the Site to prevent access. The Site is secluded; however, training exercises are conducted throughout the surrounding area.

Site 69, the Rifle Range Chemical Dump, was first identified in the 1983 Basewide Initial Assessment Study (IAS) as a priority site for further investigation based on historical disposal activities. From 1950 to 1976, Site 69 was reportedly used for the disposal of chemical wastes, including polychlorinated biphenyls (PCBs), solvents, and pesticides. According to one account, chemical agent (CA) may have been disposed in the form of 50 to 60 drums containing mustard or nerve agent (Scudder, 1982).

Soil and groundwater contamination resulting from chemicals disposed of at the Site has been identified during past environmental investigations and subsequent investigations. The primary constituents at Site 69 are chlorinated volatile organic compounds (CVOCs) trichloroethene [TCE] and its daughter products cis-1, 2-dichloroethene (cis-1,2-DCE) and vinyl chloride (VC) in groundwater.

Supplemental Investigation Field Activities

The SI field investigation was conducted in February and March 2010 to refine the nature and extent of impacted media. Based on the data collected during the initial SI field investigation, it was determined that the extent of impacted media could not be thoroughly defined without further investigation and an additional field investigation was conducted in February and March 2011. Based on historical site use and the fact that Site 69 is located within the boundary of munitions response (MR) Site UXO-02, the potential for contact with munitions and explosives of concern (MEC) and CA hazards was present. Each field sampling team was accompanied by a CH2M HILL UXO Technician at all times and MEC avoidance procedures were followed. Additionally, monitoring and screening for CA was provided by Edgewood Chemical Biological Center (ECBC).

Field activities conducted in March 2010 included (1) a geophysical investigation to delineate the buried debris, (2) the collection of surface and subsurface soil samples around the perimeter of the fenced portion of Site 69, (3) collection of surface water and sediment samples in drainage features to the north and south of the Site, (4) installation of downgradient and sidegradient monitoring wells screened in the upper Castle Hayne and middle Castle Hayne aquifers, and (5) collection of groundwater samples from new and existing monitoring wells screened in the surficial, upper Castle Hayne, middle Castle Hayne, and lower Castle Hayne aquifers. All samples collected during the initial field event were analyzed for VOCs, semivolatile organic compounds (SVOCs), pesticides, PCBs, and metals. Field activities conducted in March 2011 included installation of five additional

monitoring wells screened in the upper Castle Hayne and middle Castle Hayne aquifers and collection of groundwater samples from these newly installed monitoring wells. Samples collected in the additional field event in March 2011 were analyzed for VOCs only.

Site 69 Physical Characteristics

Geology at Site 69 consists of three distinct geologic formations (undifferentiated sediments, the Belgrade Formation, and the River Bend Formation), which correspond to the surficial aquifer, Castle Hayne confining unit, and Castle Hayne aquifer, respectively. The undifferentiated sediments (surficial aquifer) consist primarily of fine-grained sands with lesser amounts of silts and clays. The Belgrade Formation consists primarily of moderate to high plasticity silty clays with lesser amounts of sand. The River Bend Formation (Castle Hayne aquifer) consists of sand and silty sands in the upper Castle Hayne aquifer with a marker bed of fossiliferous limestone that separates the middle and upper Castle Hayne aquifer at approximately 50 feet below ground surface (bgs). The lower portion of the River Bend Formation (middle and lower Castle Hayne aquifers) is characterized by alternating layers of sand, silt, and limestone.

Nature and Extent of Contamination

Soil

Pesticides (alpha-benzene hexachloride [BHC], beta-BHC, delta-BHC, gamma-BHC, and heptachlor epoxide) and metals (arsenic, chromium, iron, and manganese) were detected in surface soils at concentrations exceeding applicable screening values. The highest concentrations of pesticides were detected in samples from the northern portion of Site 69. All pesticide concentrations were generally within the same order of magnitude as the most conservative screening value and did not exceed any of the less conservative screening values. Chromium and iron were within the same order of magnitude as Base background concentrations. Arsenic and manganese were reported at higher concentrations than the Base background concentrations but were generally within the same order of magnitude as the applicable screening values.

Metals (aluminum, arsenic, chromium, and iron) were detected in subsurface soils at concentrations exceeding applicable screening values. With the exception of iron, all metals were within one order or magnitude of background concentrations. Iron was detected at concentrations one order of magnitude higher than background concentrations.

Surface Water

Metals (lead, selenium, silver, thallium, and zinc) were detected in surface water at concentrations exceeding screening values. The maximum concentrations of lead and selenium were within the same order of magnitude as the screening value. Thallium exceeded the screening value in one sample, but was not detected in any filtered metals samples. The maximum concentrations of silver and zinc were both detected in dissolved metals analysis. Silver was not detected in the total metals analysis.

Sediment

One VOC (VC), one SVOC (benzo(a)pyrene), pesticides (beta-BHC, delta-BHC, gamma-BHC, heptachlor epoxide, and monocrotophos), and metals (aluminum, antimony, chromium, and manganese) were detected in sediment at concentrations exceeding applicable screening values. The contaminant concentrations were generally within one order of magnitude of the most conservative screening value or background concentration. Monocrotophos is an organophosphorous pesticide with no screening value. It was detected in one sediment sample at a concentration greater than two orders of magnitude higher than all other detected pesticide concentrations.

Groundwater

Groundwater in the surficial aquifer and upper Castle Hayne aquifer at Site 69 appears to be primarily impacted by two groups of CVOCs:

- Ethanes (1,1,2,2-tetrachloroethane [PCA], 1,1,2-trichloroethane [TCA], and 1,2-dichloroethane [DCA])
- Ethenes (TCE, cis- and trans-1,2-dichloroethene [DCE], and VC)

Exceedances in the surficial aquifer were limited to the groundwater samples collected from the three monitoring wells closest to the buried waste disposal areas in the south-central portion of Site 69 (IR69-GW02, IR69-GW03, and IR69-GW15) and the groundwater sample collected from monitoring well IR69-GW04.

The predominant CVOCs in the upper Castle Hayne aquifer are chlorinated ethenes, primarily cis-1,2-DCE and VC. As in the surficial aquifer, the highest concentrations were detected in samples in the south-central portion of Site 69 (IR69-GW15IW, IR69-GW19UW, and IR69-GW19IW), with concentrations decreasing in downgradient wells to the northeast and east. The downgradient portion of the VC plume does not appear to be delineated, since samples from the farthest downgradient wells (IR69-MW09IW and IR69-GW13IW) exhibited concentrations of VC exceeding North Carolina Administrative Code (NCAC) Title 15A, Subchapter 2L Groundwater Quality Standards (NCGWQS). However, the concentration reported in the sample from monitoring well IR69-GW09IW (0.38 J [estimated] micrograms per liter [µg/L]) was below the laboratory reporting limits.

VC was the only CVOC detected in the middle Castle Hayne aquifer at concentrations exceeding the NCGWQS of 0.03 µg/L. VC was limited to samples collected from two monitoring wells, with a maximum concentration of 1.4 µg/L in the sample collected from monitoring well IR69-GW11DW. The VC detections in the middle Castle Hayne aquifer indicate that the vertical extent of VC in the Castle Hayne aquifer has not been fully delineated.

The highest concentrations of all analytes exceeding screening criteria in the surficial aquifer and upper Castle Hayne aquifer were reported in monitoring wells located in the south-central portion of Site 69, (IR69-GW02, IR69-GW03, and IR69-GW15 well clusters). The concentrations of CVOCs reported in the sample from IR69-GW15IW were at least two to three orders of magnitude higher than in all other samples from the upper Castle Hayne aquifer. Based on geophysical investigation results and historical site use, these wells are located in or near the waste disposal area.

Pesticides were detected in samples from IR69-GW02, IR69-GW03, IR69-GW04, and IR69-GW15 in the surficial aquifer, and in samples from IR69-GW15IW and IR69-GW15DW in the upper and middle Castle Hayne aquifers.

Concentrations of metals that exceeded twice the mean Base background concentrations and NCGWQS were detected in all monitored aquifers. Chromium was within one order of magnitude of the NCGWQS and manganese was within one order or magnitude of background concentrations. The iron concentration was five times higher than the background concentration in the sample collected from monitoring well IR69-GW15.

Fate and Transport

Source Areas

SVOCs, pesticides, and metals were detected in soil, surface water, sediment, and groundwater at Site 69. However, their concentrations are not indicative of a single historical or ongoing release. Rather, they appear to be associated with naturally occurring levels (metals), atmospheric deposition from anthropogenic sources (SVOCs), or application for intended use (pesticides).

Based on the geophysical, chemical, and physical data collected during the SI activities, the contaminant plume appears to have originated in an area with geophysical anomalies and historical trench disposal pits. The presence of cis-1,2-DCE at concentrations above 1 percent of its solubility indicates that drums containing waste cis-1,2-DCE may still be leaking or that dense non-aqueous phase liquid (DNAPL) is present.

Contaminant Transport

Sediment, and soil contaminants at Site 69 are generally immobile (unless physically transported by storms or anthropogenic processes), and are not necessarily related to contaminated groundwater. Based on the physical and chemical properties of the contaminants detected in these media, they are not expected to migrate to receptors and will likely degrade in situ.

Groundwater flow in the surficial aquifer is radially outward from the source area and follows the site topography to surface water features to the north, east, and south of the Site. Groundwater flow in the upper and middle Castle Hayne aquifer is east and northeast toward the New River. Vertical migration of CVOCs is evidenced by detected concentrations in samples from downgradient monitoring wells screened in deeper aquifers. There is also a downward vertical gradient between the surficial and Castle Hayne aquifers.

The New River is located downgradient of the eastern boundary of Site 69, and is the ultimate receptor for surface water and groundwater discharge from the Site. During the March 2010 field activities, downgradient monitoring wells were installed in the upper and middle Castle Hayne aquifers to define the lateral extent of contamination. Contaminants of concern (COCs) were not detected at concentrations exceeding NCGWQS in samples from downgradient surficial monitoring wells (IR69-GW09, IR69-GW11, IR69-GW12 and IR69-GW13), indicating that groundwater is not discharging from the surficial aquifer to surface water bodies. VC was detected at a concentration above the NCGWQS in one sample

collected from downgradient upper Castle Hayne monitoring well (IR69-MW09IW) to the northeast of the Site. However, based on the concentration (0.38 J µg/L) and distance to the New River (approximately 500 feet), discharge into the New River is unlikely.

Groundwater Modeling

Predictive modeling was conducted as part of the SI to estimate the time required for groundwater to achieve NCGWQS via the natural attenuation (NA) processes and the potential for CVOCs to reach the New River. Groundwater fate and transport modeling was performed using BIOCHLOR Version 2.2 (Aziz et al., 2002). The model was used to predict the constituent concentrations and maximum plume extent for a 100-year time span.

A continuous source model was used, since concentrations of cis-1,2-DCE in the source area were indicative of the presence of DNAPL. As a result, the concentrations of TCE, cis-1,2-DCE, and VC are not predicted to attenuate below their respective NCGWQS (3 µg/L, 70 µg/L, and 0.03 µg/L, respectively) in the source area. The model predicts that each plume (defined as groundwater concentrations exceeding NCGWQS) will remain relatively stable over the 100-year predicted period. TCE, cis-1,2-DCE, and VC concentrations were not predicted to exceed surface water standards (30 µg/L for TCE, no criterion available for cis-1,2-DCE, and 2.4 µg/L for VC) in all future models (2020 to 2110) at the discharge point to the New River.

Human Health Risk Assessment

The Human Health Risk Assessment (HHRA) was conducted to evaluate the potential human health risks associated with current and hypothetical future receptors. The current and future receptors evaluated were current/future military personnel, current maintenance workers, current/future trespassers, future residents, and future construction/industrial workers. The exposure scenarios evaluated included exposure to surface soil, surface water, and sediment for current receptors; and exposure to surface soil, groundwater, surface water, and sediment for future receptors. The vapor intrusion pathway from groundwater to indoor air was semi-quantitatively evaluated; the groundwater concentrations were screened against vapor intrusion groundwater screening levels (GWSLs) to determine the potential for vapor intrusion from groundwater to indoor air. Human health risks are assumed to be present as a result of impacted soils and waste materials present in the disposal trenches/ burial pits at Site 69; however, Land Use Controls (LUCs) prevent current or future exposure to this area. As a result, these areas were not included in the HHRA.

Potential cancer and non-cancer risks were calculated based on reasonable maximum exposure (RME) and central tendency exposure (CME) exposure point concentrations (EPCs). The RME assumes the highest level (maximum concentration) of human exposure that could reasonably be expected to occur, whereas the CTE reflects a more realistic human exposure to levels (average concentrations) across the Site. Potential unacceptable risks are based on a conservative estimate of the potential cancer risk or the potential to cause other health effects not related to cancer (non-cancer hazard, or hazard index [HI]). For known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper-bound lifetime cancer risk to an individual of between 10^{-4} (a 1 in

10,000 chance of developing cancer) and 10^{-6} (a 1 in 1,000,000 chance of developing cancer) using information on the relationship between dose and response. A non-cancer hazard of 1 is used as an upper limit to which calculated HI values are compared. Any HI exceeding 1 indicates an existing non-cancer hazard.

The major conclusion of the HHRA was that current site use and site-related impacts do not pose an unacceptable risk to human health. The non-carcinogenic hazards and carcinogenic risks based on contact with surface soil, surface water, and sediment were below or within USEPA target levels. Six VOCs were detected at concentrations above GWSLs for the vapor intrusion from groundwater to indoor air exposure pathway in a residential building: VC, 1,1,2,2- PCA, 1,1,2-TCA, 1,2- DCA, chloroform, and cis-1,2-DCE, and two VOCs (1,1,2-TCA and VC) were detected at concentrations above GWSLs for the vapor intrusion from groundwater to indoor air exposure pathway in an industrial building. However, these risks have not been fully quantified because the vapor intrusion pathway is not a current pathway and is not expected to be a future pathway. If future buildings are constructed at the Site, the vapor intrusion pathway would need to be re-evaluated.

The future use scenario indicated that there would be an unacceptable risk from exposure to groundwater from the surficial aquifer and upper Castle Hayne aquifer. Potential risks associated with future residential and industrial worker contact with groundwater from the surficial aquifer and upper Castle Hayne aquifer were above the USEPA's acceptable risk range and hazard level. The primary COCs contributing to the elevated risk in surficial aquifer are VC, cis-1,2-DCE, 1,1,1-TCA, iron, and manganese. The primary COCs contributing to elevated risk in the upper Castle Hayne aquifer are VC, chromium, 1,2-DCA, cis-1,2-DCE, trans-1,2-DCE, aroclor-1260, and heptachlor epoxide.

Ecological Risk Assessment

The Ecological Risk Assessment (ERA) was completed to evaluate whether past site operations have adversely affected terrestrial and aquatic communities on or adjacent to Site 69. Soil, surface water, groundwater, and sediment samples were compared to published values for toxicity in various aquatic and terrestrial species. The point of exposure included species living in, or coming into contact with, contaminated media or bioaccumulation from consumption of smaller organisms, because bioaccumulation was considered likely to occur at Site 69. Ecological risks are assumed to be present as a result of impacted soils and waste materials present in the disposal trenches/ burial pits at Site 69. Empirical data are not available for the soil or waste material present in this area; as a result, these areas were not included in the ERA.

The risk characterization evaluates the potential for decreases in the aquatic and terrestrial populations from contaminants identified at the Site. The hazard quotient (HQ) and weight-of-evidence (WOE) approaches were used to characterize the risk to aquatic receptors from exposure to surface water, sediments, and groundwater which may discharge to surface water and to terrestrial receptors from exposure to surface soil, surface water, and biota.

Pesticides in soil and sediment were identified as posing a risk to lower trophic level receptors, but not to upper trophic level receptors. Pesticides in groundwater, assuming

exposure at the groundwater–surface-water interface, were identified as posing a risk to lower trophic level receptors. Although upper trophic level receptors were not identified as being at risk from pesticides, the data set for sediments was limited.

Recommendations

Based on the results and conclusions of the SI performed at Site 69, the major recommendation is to complete a feasibility study (FS). The FS should incorporate the results of the Site 69 SI and the Site UXO-02 PA/SI to identify remedial action objectives; identify potential treatment alternatives, resource recovery technologies, and containment technologies that would satisfy these objectives; screen the technologies based on their effectiveness, implementability, and cost; assemble the technologies into treatment alternatives; and analyze the alternatives against evaluation criteria. After the completion of the FS, a Proposed Remedial Action Plan and Record of Decision (ROD) should be completed for the selected final remedy to address both Site 69 and Site UXO-02**.**

The additional activities to complete the FS should include:

- Complete Step 3b of the ERA (problem formulation development) to evaluate the distribution of pesticides, the potential for the Site to be the source of pesticides found in the downgradient areas, and their potential toxicity to site receptors.
- Complete the PA/SI at UXO-02 and conduct an intrusive investigation to assess the nature of the identified geophysical anomalies outside of the Site 69 boundary.
- Evaluate the necessity for investigating geophysical anomalies and characterization of buried wastes within the disposal/trench areas inside the Site 69 boundary.
- Re-evaluate the need for long-term monitoring (LTM) at Site 69. LTM sampling was suspended at Site 69 pending completion of the SI. Recent groundwater sampling results indicate that impacted groundwater has not reached the New River. Limited downgradient groundwater sampling could be conducted to confirm that LUCs will remain protective until the final remedy is in place.

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5-21 Historical Groundwater Analytical Data – IR69-GW02 and IR69-GW15IW

7-1 HHRA Conceptual Site Model

8-1 Conceptual Site Model of Ecological Exposures at Site 69

Acronyms and Abbreviations

ADAF	age-dependent adjustment factor
AF	attenuation factor
amsl	above mean sea level
AQTESOLV	Aquifer Test Solver
ARAR	applicable or relevant and appropriate requirement
atm-m^3/M	atmosphere-cubic meter per mole
ATSDR	Agency for Toxic Substances and Disease Registry
AUF	area use factor
Baker	Baker Environmental, Inc.
bgs	below ground surface
BHC	benzene hexachloride
CA	chemical agent
Cal EPA	California Environmental Protection Agency
CBRN	chemical, biological, radiological, and nuclear
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CLEAN	Comprehensive Long-term Environmental Action—Navy
cm/sec	centimeters per second
COC	contaminant of concern
COPC	contaminant of potential concern
cPAH	carcinogenic polycyclic aromatic hydrocarbon
CS	confirmation study
CSF	carcinogenic slope factor
CSM	conceptual site model
CTE	central tendency exposure
CTO	Contract Task Order
CVOC	chlorinated volatile organic compound
°C	degrees Celsius
°F	degrees Fahrenheit
DAAMS	Depot Area Air Monitoring System
DCA	dichloroethane
DCE	dichloroethene
DDD	dichlorodiphenyldichloroethene
DDE	dichlorodiphenyldichloroethane
DDT	dichlorodiphenyltrichloroethane
DGM	digital geophysical mapping
DHC	*Dehalococcoides*
DNAPL	dense non-aqueous phase liquid
DO	dissolved oxygen
DoD	Department of Defense

DOT	Department of Transportation
DQO	data quality objective
n_e	effective porosity
ECBC	Edgewood Chemical Biological Center
EcoSSL	Ecological Soil Screening Level
ELCR	excess lifetime cancer risk
EM	electromagnetic
EPC	exposure point concentration
EPIC	Environmental Photographic Interpretation Center
ERA	Ecological Risk Assessment
ESV	ecological screening value
Fe(II)	ferrous iron
Fe(III)	ferric iron
FFA	Federal Facilities Agreement
FID	flame-ionization detector
FRB	Federal Remediation Branch
FS	feasibility study
ft/day	feet per day
ft/ft	feet per foot
ft/year	feet per year
GHG	greenhouse gas
GI	gastrointestinal
GPO	geophysical prove-out
GSA	grain size analysis
GWSL	groundwater screening level
HEAST	Health Effects Assessment Summary Tables
HHRA	Human Health Risk Assessment
HI	hazard index
HSP	Health and Safety Plan
HQ	hazard quotient
IAS	Initial Assessment Study
ID	inner diameter
IDW	investigation-derived waste
IR	Installation Restoration
IROD	Interim Record of Decision
IUR	inhalation unit risk factor
K_d	distribution coefficient
K_h	Henry's Law Constant
K_{oc}	octanol-water partition coefficient
kg	kilogram
KGB	Coaxial Groundwater Ventilation
LOAEL	lowest observed adverse effects level
LTM	long-term monitoring

LUC	land use control
LUCAP	Land Use Control Assurance Plan
LUCIP	Land Use Control Implementation Plan
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
MCAS	Marine Corps Air Station
MCB CamLej	Marine Corps Base Camp Lejeune
MCL	maximum contaminant level
MDL	method detection limit
MEC	munitions and explosives of concern
MEK	methyl ethyl ketone
MF	modifying factor
mg/kg	milligrams per kilogram
mg/kg-day	milligrams per kilogram per day
mg/L	milligrams per liter
MIBK	methyl isobutyl ketone
MINICAMS	Miniature Continuous Air Monitoring System
ml/g	milliliter per gram
MMOA	mutagenic mode of action
MNA	monitored natural attenuation
MPP	Master Project Plans
MR	munitions response
MRP	Munitions Response Program
mV	millivolt
NA	natural attenuation
NAD	North American Datum
NAIP	natural attenuation indicator parameter
NAVD	North American Vertical Datum
NAVFAC	Naval Facilities Engineering Command
NCSWQS	NCAC Title 15A, Subchapter 2L Surface Water Quality Standards
NCGWQS	NCAC Title 15A, Subchapter 2L Groundwater Quality Standards
NC SSL	North Carolina Soil Screening Level
NCAC	North Carolina Administrative Code
NCDENR	North Carolina Department of Environment and Natural Resources
NCEA	National Center for Environmental Assessment
NIH	National Institutes of Health
NOAEL	no observed adverse effects level
NPL	National Priorities List
NRWQC	National Recommended Water Quality Criteria
OCP	organochlorine pesticide
OD	outer diameter
ORP	oxidation-reduction potential
OU	operable unit
PAH	polycyclic aromatic hydrocarbon
PAL	Project Action Limit

PA/SI	Preliminary Assessment/Site Inspection
PCA	tetrachloroethane
PCB	polychlorinated biphenyl
PCE	tetrachloroethene
PDB	passive diffusion bag
PPE	personal protective equipment
PPRTV	Provisional Peer Reviewed Toxicity Values
PQL	practical quantitation limit
PRG	preliminary remediation goal
PVC	polyvinyl chloride
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
RAGS	USEPA Region IV Risk Assessment Guidance
RCRA	Resource Conservation and Recovery Act
RDA	recommended daily allowance
RfC	reference concentration
RfD	reference dose
RI	remedial investigation
RME	reasonable maximum exposure
ROD	Record of Decision
RSL	regional screening level
SI	Supplemental Investigation
SLERA	Screening-level Ecological Risk Assessment
SOD	soil oxidant demand
SOP	standard operating procedure
SQL	sample quantitation limit
STSC	Superfund Health Risk Technical Support Center
SVE	soil-vapor extraction
SVOC	semivolatile organic compound
TAL	Target Analyte List
TBC	to-be-considered
TCA	trichloroethane
TCE	trichloroethene
TCL	Target Compound List
TOC	total organic carbon
TR	Technical Report
TRV	toxicity reference value
TS	Treatability Study
UCL	upper confidence level
UF	uncertainty factor
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USMC	United States Marine Corps

UVB	Vacuum Vaporizer Well
UXO	unexploded ordnance
VC	vinyl chloride
VOC	volatile organic compound
WHO	World Health Organization
WMP	Waste Management Plan
WOE	weight-of-evidence
ZOI	zone of influence

SECTION 1

Introduction

This Supplemental Investigation (SI) Report presents the field activities, findings, and conclusions of environmental investigation activities conducted by CH2M HILL at Operable Unit (OU) 14, Site 69—Rifle Range Chemical Dump ("Site") at Marine Corps Base Camp Lejeune (MCB CamLej), located in Onslow County, North Carolina.

From 1950 to 1976, Site 69 was reportedly used for the disposal of chemical wastes, including polychlorinated biphenyls (PCBs), solvents, and pesticides. According to one account, Site 69 may also have a history of chemical agent (CA) disposal in the form of 50 to 60 drums containing mustard or nerve agent (Scudder, 1982). Soil and groundwater contamination resulting from chemicals dumped at the Site has been identified during past environmental investigations.

Environmental investigations at Site 69 have historically focused on volatile organic compounds (VOCs) impacting the groundwater in the southern portion of Site 69, and have not adequately characterized the source area(s) or the extent of contamination (i.e., a sufficient quantity of data does not exist to support a corrective action decision).

In order to address data gaps identified in previous investigations, this SI was performed in accordance with the *Final Supplemental Investigation Work Plan, Site 69 – Operable Unit No. 14, Marine Corps Base Camp Lejeune, North Carolina* (CH2M HILL, 2010). Given the potential presence of buried CA, this SI was specifically designed to avoid direct contact with buried wastes.

This SI Report was prepared by CH2M HILL under the Naval Facilities Engineering Command (NAVFAC), Mid-Atlantic Division, Comprehensive Long-term Environmental Action—Navy (CLEAN) Program, Contract Task Order (CTO)-081. This report will be submitted to NAVFAC Mid-Atlantic, MCB CamLej Installation and Environmental Management Division, the United States Environmental Protection Agency (USEPA), and the North Carolina Department of Environment and Natural Resources (NCDENR).

1.1 Objectives and Approach

The objectives and approach of this SI are to:

- Present a complete history of the previous investigation activities conducted at Site 69.
- Collect information to supplement existing site characterization data, including hydrogeology, geology, hydrology, topography, as well as potential anthropogenic influences that may affect the hydrology or contaminant pathways at the Site.
- Characterize environmental contamination by collecting analytical data and evaluating the physical and chemical properties of the contaminants, including migration and dispersal characteristics.

- Assess the nature and extent of site contaminants, including their fate and transport, by collecting and analyzing surface water, sediment, soil, and groundwater samples.
- Evaluate the environmental risk posed by the site contaminants.
- Provide sufficient information to select a final remedy for the site.

1.2 Supplemental Investigation Report Organization

This SI includes the following sections:

- Section 1, Introduction
- Section 2, Background
- Section 3, SI Field Activities
- Section 4, Site Physical Characteristics
- Section 5, Nature and Extent of Contamination
- Section 6, Contaminant Fate and Transport
- Section 7, Human Health Risk Assessment
- Section 8, Ecological Risk Assessment
- Section 9, Conclusions and Recommendations
- Section 10, References

Figures and tables referenced throughout the text are provided at the end of each section.

SECTION 2

Background

This section presents a summary of the Site setting, history, and previous phases of investigation.

MCB CamLej was placed on the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) National Priorities List (NPL) effective November 4, 1998. Subsequent to this listing, the USEPA Region 4, NCDENR, the Department of the Navy (Navy), and the United States Marine Corps (USMC) entered into a Federal Facilities Agreement (FFA) for MCB CamLej. The primary purpose of the FFA was to ensure that environmental impacts associated with past and present activities at the Base are thoroughly investigated and that appropriate CERCLA response and Resource Conservation and Recovery Act (RCRA) corrective action alternatives are developed and implemented, as necessary, to protect public health and welfare and the environment.

2.1 Facility-wide Demography and Land Use

MCB CamLej is home to active duty, dependent, retiree, and civilian populations of approximately 150,000 personnel. Approximately 47,000 military personnel are stationed at the Base, including 39,000 Marines for resident formal school training and 8,000 Marines and Department of Defense (DoD) employees for job enhancement training. MCB CamLej provides housing, training facilities, logistical support, and administrative supplies for Fleet Marine Force units and other assigned units.

MCB CamLej is composed of training facilities that include Camp Geiger, Camp Johnson, Stone Bay, Greater Sandy Run, and Marine Corps Air Station (MCAS) New River (**Figure 2-1**). Military training operations at MCB CamLej include 34 gun positions, 50 tactical landing zones, 3 state-of-the-art training facilities for Military Operations in Urban Terrain, 80 live fire ranges, and 11 miles of beach capable of supporting amphibious operations (MCB CamLej, 2010).

MCB CamLej is located within Onslow County, along the coastal plain of North Carolina. The Base covers more than 153,000 acres, including approximately 26,000 acres of water and 127,000 acres of terrestrial features. The Base encompasses a 92-mile perimeter, including approximately 14 miles along the Atlantic Ocean. The ocean frontage of the Base consists of a fragile barrier island system that is separated from the mainland by salt marshes, small bays, and the Intracoastal Waterway.

2.2 Site Setting and History

The Base is bisected by the New River, which flows into the Atlantic Ocean in a southeasterly direction. The Base is bordered by the Atlantic Ocean to the east, U.S. Highway 17 to the west, and State Route 24 to the north. Site 69, the Rifle Range Chemical Dump, is located within OU No. 14, west of the New River in the Rifle Range area

of MCB CamLej. The Site is also located within the boundary of Munitions Response Program (MRP) Site Unexploded Ordnance-02 (UXO-02) (**Figure 2-2**). Site UXO-02 was identified in *Final Range Identification and Preliminary Range Assessment, Marine Corps Base Camp Lejeune, Onslow, North Carolina.* (USACE, 2001) as an "Unnamed Explosive Contaminated Range." Site UXO-02 is currently undergoing a Preliminary Assessment/Site Inspection (PA/SI) under a separate CLEAN CTO (CH2M HILL, 2009b).

Site 69 consists of approximately 14 acres of wooded land with elevations ranging from roughly 25 to 40 feet above mean sea level (amsl). Three small drainage features located northeast and southeast of Site 69 carry surface water to the New River. Three larger surface water bodies are located within a quarter-mile of the Site: the New River to the east, an unnamed tributary of the New River to the north, and Everett Creek to the south. Prior to the SI activities, the Site was overgrown to the point that the boundaries of the waste disposal trenches and burial pits were not easily discernable. In the 1990s, a 6-foot high chain link fence was erected around the Site to prevent access.

From 1950 to 1976, Site 69 was reportedly used to dispose of chemical wastes, including PCBs, solvents, and pesticides. Based on available documentation, Site 69 may also have a history of CA disposal. Discarded M9 CA detector kits were observed during a 1982 site visit (Water and Air Research, 1983). Formal documentation of disposal methods, particularly related to CA, is unavailable. However, a letter dated October 6, 1982 (Scudder, 1982) refers to an interview with a former heavy equipment operator indicating that drums of possibly nerve or mustard agent were buried in trenches at Site 69. The disposal incident allegedly occurred in 1953 or 1954 when approximately 50 to 60 drums of suspected training agent were reportedly delivered to the Site on rubber-padded trucks and disposed of in two trenches, each approximately 20 feet deep. The drums were unmarked and light-blue or blue-green in color and were stacked in the trenches so the top layer of the drums was approximately 5 or 6 feet below ground surface (bgs) (Scudder, 1982). A second disposal incident occurred in 1970 when 5-gallon cans and 55-gallon drums of dichlorodi-phenyltrichloroethane (DDT), trichloroethene (TCE), and calcium hypochlorite were placed together in a common pit. When soil was being placed over the containers, an explosion occurred, resulting in a brush fire and ejection of drums as far as 120 feet from the pit (Water and Air Research, 1983).

In 1992, an aerial photograph review was conducted by the USEPA's Environmental Photographic Interpretation Center (EPIC). Black and white aerial photographs from the years 1949, 1956, 1964, 1970, 1974, 1975, and 1980 were reviewed to identify features that could potentially represent burial trenches or clearings where disposal may have occurred. Three suspected trenches located in the southern and eastern portions of Site 69 were identified in the aerial photographs (Baker, 1997). Copies of annotated aerial photographs from 1956, 1964, and 1970 are provided in **Appendix A-1.**

2.3 Previous Environmental Investigations

Soil and groundwater contamination resulting from chemicals disposed of at the Site has been identified during past environmental investigations. The following sections describe the nature of the environmental investigations conducted at Site 69.

Table 2-1 summarizes previous investigation activities, results, and conclusions, and **Table 2-2** lists the target parameters analyzed during each of the previous investigations. Based on the findings of previous investigations, a conceptual site model (CSM) was generated (**Figure 2-3**) showing sources of contamination, pathways for migration, and potential receptors. Figures and analytical results from previous investigations are provided in **Appendix A**.

2.3.1 Initial Assessment Study (Water and Air Research, 1983)

In 1980, Water and Air Research, Inc. was contracted to initiate a Basewide Initial Assessment Study (IAS). The purpose of the IAS was to identify and assess sites posing a potential threat to human health or the environment due to the presence of contamination related to historical waste management practices. The study entailed collection and evaluation of archival and activities records relating to waste generation, handling, and disposal; characterization of physical conditions at the Site such as geology and hydrogeology; and identification of migration pathways and potential receptors. Interviews with current and past employees were conducted, as well as ground and aerial tours of potential historical disposal sites.

The IAS identified 76 sites at MCB CamLej, of which 22 (including Site 69) were recommended for a confirmation study (CS) to verify the existence of chemical impacts in environmental media. The IAS indicated that Site 69 was once designated as a dump site for disposal of hazardous chemicals, including pesticides, PCBs, pentachlorophenol, TCE, and many other compounds.

While the IAS was being performed, in 1981 and 1982, MCB CamLej conducted a limited environmental investigation that included sampling groundwater from monitoring wells surrounding Site 69 and water supply wells in the Rifle Range area. Surface water samples were collected from a small tributary to Everett Creek and from standing water on or near the Site. Elevated levels of chlorinated solvents were reported in samples collected from the monitoring wells and in samples collected from the surface water, indicating that buried chemical waste may have impacted surrounding environmental media (Navy, 1981; 1982). These results supported the IAS recommendation to include Site 69 as a priority site for further investigation.

As a result of the IAS, MCB CamLej was placed on the NPL. Given the limited nature of the environmental investigation conducted during the IAS, evaluation of actual risk was not possible.

2.3.2 Site Assessment (ESE, 1992)

In 1984, Environmental Science and Engineering (ESE) initiated a CS of the 22 sites identified in the IAS, with the intent of verifying the presence and/or absence of contamination at these sites (ESE, 1992). Field investigations were conducted from 1984 to 1991 to support the CS and Site Assessment for Site 69. Field activities included monitoring well installation and groundwater, surface water, sediment, and shellfish tissue sampling; soil sampling was not conducted during this investigation. Figures showing sample locations and tables of analytical results are provided in **Appendix A-2**.

From July to August 1984, 8 monitoring wells were installed in the surficial aquifer around the perimeter of the Site, and screened to a depth of approximately 20 feet bgs (69GWl [IR69-GW01] through 69GW8 [IR69-GW08]). Groundwater samples were collected from each monitoring well, and surface water samples were collected from two areas of standing water (69SW1 and 69SW2). All samples were analyzed for VOCs, organochlorine pesticides (OCPs), PCBs, pentachlorophenol, mercury, and residual chlorine (**Table 2-2**). Sample locations are shown on Figure 5-3 in **Appendix A-2.**

In December 1986, a second monitoring event was conducted, and involved collection of groundwater samples from all eight monitoring wells along with surface water samples from two locations (69SW2 and 69SW3) and sediment samples (69SE4 and 69SE5) collected from two of the small drainage features that flow from the Site into the New River estuary (Figure 5-3 in **Appendix A-2**). Samples were analyzed for the same target compounds as in the previous investigation, plus tetrachlorodioxin, xylenes, methyl ethyl ketone (MEK), methyl isobutyl ketone (MIBK), and ethylene dibromide (**Table 2-2**).

In January 1991, groundwater samples were again collected from all eight monitoring wells along with a surface water and sediment sample from location 69SW1. Additionally, four surface water samples (69SW4-1, 69SW4-2, 69SW5-1, and 69SW5-2) and co-located sediment samples (69SE4-1, 69SE4-2, 69SE5-1, and 69SE5-2) were collected downstream of previous sampling locations 69SE4 and 69SE5, located at the confluences of two small drainage features with the New River estuary (shown on Figure 5-3 in **Appendix A-2**). All groundwater, surface water, and sediment samples were analyzed for full Target Compound List (TCL) parameters, which included VOCs, semi-volatile organic compounds (SVOCs), pesticides, and metals (**Table 2-2**). The January 1991 investigation also included collection and analysis of four shellfish samples. Approximately 10 oysters (*Clostridius virzinica*) and 2 to 3 mussels (*Geukensia demissa*) were composited for each of the 4 samples.

The results of the investigations indicated that shallow groundwater in the southern portion of the Site contained concentrations of VOCs that exceeded the North Carolina Administrative Code (NCAC) Title 15A, Subchapter 2L Groundwater Quality Standards (NCGWQS), primarily in samples collected from monitoring well 69GW2 (Table 5-5 in **Appendix A-2**). The primary VOC detected in groundwater was 1,2-dichloroethene (1,2-DCE), which was reported at a maximum concentration of 37,000 micrograms per liter (µg/L) in the sample collected from 69GW2 in 1986. Surface water samples collected from onsite standing water in low-lying areas of the Site were reported to contain the same analytes detected in shallow groundwater, but at much lower concentrations. Additionally, pentachlorophenol and the p,p- isomers of dichlorodiphenyldichloroethane (DDE) and di-chlorodiphenyldichloroethene (DDD) were detected in sediment samples 69SE4 and 69SE5 (Tables 5-6 and 5-7 in **Appendix A-2**).

The Site Assessment Report concluded that, due to the presence of chemical wastes in the various matrices, and the proximity of the Site to significant aquatic environments, Site 69 should be considered a potential risk to human health and the environment (ESE, 1992).

2.3.3 Remedial Investigation, 1992 to 1996 (Baker, 1997)

In 1992, Baker Environmental, Inc. (Baker) initiated a Remedial Investigation (RI) to assess the nature and extent of contamination, and evaluate potential risks to human health and

environmental. The RI was completed in several phases between 1992 and 1996. **Table 2-1** summarizes the field investigation for the RI and **Table 2-2** summarizes sample analyses for each medium. Figures from the RI showing sample locations and historical concentrations are provided in **Appendix A-3**.

Prior to the start of intrusive activities at Site 69, a geophysical survey using electromagnetic (EM) terrain conductivity and magnetometry was conducted in August and December 1992 to locate areas indicative of buried waste. EM conductivity and magnetic intensity measurements were collected along orthogonal transects extending across the Site. Two broad areas representative of buried metallic waste and fill material were identified based on the analysis of the geophysical data (Figure 2-4 in **Appendix A-3**).

Intrusive RI activities were conducted between January 1994 and April 1996. The initial sampling activities included surface and subsurface soil sampling, groundwater sampling via Hydropunch™ and permanent monitoring wells, surface water and sediment sampling, and an aquatic and ecological survey. Subsequent investigations focused upon the delineation of VOC impacts to groundwater by installing and sampling additional permanent monitoring wells.

A total of 29 shallow soil borings (between 0 and 1 feet bgs) and 16 subsurface soil borings (between 4 and 10 feet bgs) were completed to assess the nature and extent of releases from the waste burial areas (Figure 2-8 in **Appendix A-3**). Seven surface water and sediment samples were collected from stagnant or slow-moving water within the Site 69 boundary and offsite in drainage channels to the northeast and southeast of the Site (Figure 2-12 in **Appendix A-3**). A total of 20 monitoring wells were installed in 4 phases of groundwater investigation. Seven monitoring wells were installed in the surficial aquifer (5–15 feet bgs), six were installed in the upper Castle Hayne aquifer (40–60 feet bgs), two were installed in the middle Castle Hayne aquifer (110–125 feet bgs), and three were installed in the lower Castle Hayne aquifer (220–230 feet bgs). A summary of RI activities and monitoring well installation dates is provided in **Table 2-1**. Monitoring well construction information is provided in Section 3. During the initial investigation, groundwater samples were analyzed for VOCs, SVOCs, pesticides, PCBs, inorganics, and CA degradation compounds; analyses focused on VOCs in later groundwater monitoring events (**Table 2-2**).

Soil sample results are summarized in Table 4-5 in **Appendix A-3**. The only constituents that exceeded screening criteria from samples in shallow soil were the pesticide beta-benzene hexachloride (beta-BHC) and silver, both in soil sample 69-CSA-SB25. Acetone was detected in two subsurface samples (69-GW11-04 and 69-GW12-01) at concentrations which exceeded the screening criterion.

Surface water and sediment sample results are summarized in Table 4-5 and Figures 4-12 through 4-16 in **Appendix A-3**. Surface water samples indicated that onsite ponded water in the southern portion of the Site had been impacted with VOCs (vinyl chloride [VC], total 1,2-DCE, and TCE) (Figure 4-16 in **Appendix A-3**). Additionally, acetophenone was detected in onsite and drainage sediment samples. Baker concluded that the presence of acetophenone may have been attributable to training activities in the area where "riot gas" had been used.

Groundwater analytical results are summarized in Table 4-5 and Figures 4-7 through 4-11 in **Appendix A-3**. Groundwater in the surficial aquifer and groundwater in the upper and middle portions of the Castle Hayne aquifer under the former disposal area were found to have been impacted by VOCs (primarily TCE, cis- and trans-1,2-DCE, and VC). Based on groundwater concentrations and the results of the geophysical survey, the VOCs appeared to be associated with a source area near well cluster IR69-GW15, centered in the southern area of Site 69. However, due to the potential presence of CA, the actual nature and location of the source material was not assessed.

Human health and ecological risk assessments based on the results of investigative activities were completed during the RI and are further discussed in Sections 2.4.4 and 2.4.5.

2.3.4 Treatability Study (Baker/SBP, 1998)

In February 1996, a Treatability Study (TS) was initiated during the RI activities to evaluate *in situ* groundwater treatment technologies. This two-phase TS was completed to evaluate the technical and economic feasibility of using in-well aeration technology. Figures showing the TS area and well locations are provided in **Appendix A-4**.

The TS focused on the waste disposal area near well cluster IR69-GW15. During the TS, two *in situ* treatment systems were installed: a Vacuum Vaporizer Well (UVB) system in the surficial aquifer and upper Castle Hayne aquifer; and a Coaxial Groundwater Ventilation (KGB) system in the surficial aquifer.

The UVB system consisted of a double-screened well (screened in the surficial and upper Castle Hayne aquifers) that mobilized and treated contaminants by creating a circulation cell within the formation adjacent to the well.

The KGB system consisted of a single-screened well in the surficial aquifer and a soil-vapor extraction (SVE) well screened in the lower vadose zone. A vacuum was applied to the SVE well while air was simultaneously pumped into the submerged well screen, which allowed the air to be circulated, treating the groundwater through air-stripping. Soil vapor recovered from the SVE well was treated by activated carbon.

The objectives of the Phase I study (March 1996 to October 1996) were to evaluate the potential for creation of a groundwater or air circulation cell which could: mobilize and transport contaminants to the UVB and KGB systems for treatment; experimentally (via dye test) estimate the zone of influence (ZOI) of each circulation cell; and evaluate whether contaminants were being removed by monitoring for target VOCs in the off-gases and in groundwater (Baker/SBP, 1998). The objectives of the Phase II study (August 1997 to December 1997) were to: evaluate the contaminant removal efficiency of the UVB system by relocating the system to well IR69-GW15UW; assess the effective ZOI of the UVB system in the new location; estimate required operating time for the UVB system to achieve cleanup goals for the upper Castle Hayne aquifer; and continue operation of the KGB system in its original position.

To monitor the performance of the UVB system, 12 UVB monitoring wells (Figures 3-8 and 3-9 in **Appendix A-4**) were installed in the Castle Hayne aquifer. Six of the wells were installed in the upper Castle Hayne aquifer to depths of approximately 40–45 feet bgs, while the 6 deep wells were installed to depths of 69–74 feet bgs in the middle Castle Hayne

aquifer. Performance of the KGB system was monitored by eight KGB monitoring wells (Figure 3-10 in **Appendix A-4**) installed in the surficial aquifer. Four KGB monitoring wells were installed to approximately 9 feet bgs, and 4 were installed to 12 feet bgs.

During the initial 6 months of the Phase I study, operation of the UVB well resulted in an average target VOC reduction of 16 percent in the circulation cell. On average, the concentration of target VOCs was reduced by 15 percent in groundwater monitoring wells within the estimated ZOI of the KGB system.

The Phase II TS was initiated in June 1997. The KGB system experienced problems with the well screen becoming plugged with formation materials, and in October 1997, the KGB system was shut down. The Phase II UVB system was modified by moving the UVB system to IR69-GW15UW (Figure 7-3 in **Appendix A-4**) and operated until December 1997. The TS concluded that in-well aeration was ineffective for remediating VOC contamination at Site 69, primarily due to low hydraulic conductivity soils in the source area.

2.3.5 Feasibility Study (Baker, 1998)

In 1998, a feasibility study (FS) was completed by Baker to present a detailed analysis of remedial alternatives based on the RI and TS results.

The FS presented two soil remedial alternatives:

1. No action
2. Institutional controls (ICs)

Five groundwater remedial alternatives were presented, including:

1. No action
2. ICs and natural attenuation (NA)
3. Groundwater extraction and physical treatment with ICs and monitoring
4. Dual-phase vacuum extraction and physical treatment, ICs, and monitoring
5. *In situ* air stripping with ICs and monitoring

The FS included (1) a detailed evaluation of the potential alternatives with respect to nine evaluation criteria to address statutory requirements and preferences of CERCLA and (2) a comparative analysis of the evaluated alternatives.

2.3.6 Interim Record of Decision (Baker, 2000)

In June 2000, an Interim Record of Decision (IROD) was issued to address the human health and ecological risks due to VOCs in groundwater and safety risks due to the potential presence of buried CA. The IROD incorporated a site-specific Land Use Control Implementation Plan (LUCIP) for Site 69 in accordance with the Memorandum of Agreement dated May 24, 1999, known as the Land Use Control Assurance Plan (LUCAP) (USEPA/Navy/NCDENR, 1999). An IROD, rather than a Final ROD, was implemented due to the reported presence of CA at the Site. Based on discussions with the Design Center for Ordnance and Explosives Team of the United States Army Corps of Engineers (USACE), the unearthing of CA would require indefinite storage somewhere at MCB CamLej pending final disposition. At the time of the IROD, disposal alternatives for such materials were not readily available.

Land Use Controls (LUCs) and monitored natural attenuation (MNA) were the selected remedial actions, which are required to remain in effect until the remedial goals have been achieved or the IROD is superseded by a final ROD. The remedial actions included: implementing a groundwater monitoring program targeting the VOCs of concern; conducting groundwater monitoring of metals and CA degradation products in select wells; and implementing land use and aquifer use controls (surficial and Castle Hayne aquifers). The objectives of the LUCs were to:

- Protect uncontaminated groundwater for future beneficial use
- Remediate contaminated groundwater for future beneficial use
- Prevent future potential exposure to subsurface soil, including landfill material
- Prevent migration of potential contaminants to shallow groundwater

LUCs were implemented in 2001 and updated in 2002 (Baker, 2002). The LUCs were recorded with Onslow County as a notice of contamination and in the Base GIS and Master Plan (**Figure 2-2**).

2.3.7 Long-term Monitoring (Engineering and Environment, Inc, 2005)

Long-term monitoring (LTM) activities at Site 69 began in 1998 and continued until 2005 on a semi-annual basis during the second (April) and fourth (October) quarters of each calendar year to assess plume stability and monitor seasonal changes. Sampling activities were conducted and subsequent laboratory analyses were performed according to procedures and methods specified in the LTM and MNA Work Plan for OU 14 (Baker, 2002a).

Groundwater samples were collected from eight monitoring wells screened in the surficial aquifer, six monitoring wells screened in the upper Castle Hayne aquifer, and one monitoring well screened in the middle Castle Hayne aquifer (Figure 4 in **Appendix A-5**). Groundwater samples collected under this program were analyzed for VOCs, and select samples were also analyzed for natural attenuation indicator parameters (NAIPs), detailed in **Table 2-2**. Samples were not analyzed for metals or CA degradation products as specified in the IROD. The results of the 2004-2005 LTM sampling event are summarized on Figures 4 and 5 in **Appendix A-5**.

The 2004-2005 LTM report concluded that VOCs have been detected in groundwater samples collected from monitoring wells IR69-GW13DW and IR69-GW15DW during the past year, indicating that VOCs in the upper Castle Hayne aquifer were migrating horizontally to the east and deeper within the aquifer.

In 2005, an optimization of the LTM Program was conducted, and the LTM Optimization Report (CH2M HILL, 2005) recommended removal of Site 69 from the program, as a Supplemental Investigation was planned.

2.3.8 UXO-02 Preliminary Assessment/Site Inspection

A Preliminary Assessment/Site Inspection (PA/SI) is being completed at Site UXO-02 to evaluate the potential presence and nature of impacts to environmental media resulting from historical munitions use at the site, and to evaluate whether additional investigation and/or remediation activities are necessary. Accordingly, the investigation is focused on

environmental impacts related to munitions constituents (MC). A secondary objective is to assess the site for the presence of geophysical anomalies that may represent subsurface munitions and explosives of concern (MEC).

The PA/SI includes a geophysical survey of approximately 10 percent of Site UXO-02 to evaluate the number and density of geophysical anomalies representing potential subsurface MEC and environmental sampling to evaluate the potential presence and nature of MC contamination.

Surface soil sampling was conducted between February and March 2010. A total of 184 surface soil samples (MR02-SS01 through MR02-SS184) were collected from the portion of Site UXO-02 located outside the fenced perimeter of Site 69. Due to the potential presence of CA within Site 69, the remaining 21 surface samples (MR02-IR69-SS01 through MR02-IR69-SS21) were collected during the SI field activities (February and March 2010).

A total of 31 subsurface soil samples were collected from intervals above the estimated water table at depths ranging from 1 to 9 ft bgs. During drilling investigation activities, 28 temporary groundwater monitoring wells (MR02-TW01 through MR02-TW30) were installed. The temporary wells were screened to bracket the water table.

Groundwater samples were collected from each of the 28 temporary monitoring wells in March and April 2010. Groundwater samples were also collected from seven existing monitoring wells (MR02-IR69-MW05, 09, 11, 12, 13, 14 and 15) within the fenced perimeter of Site 69 in February and March 2010.

The results of the investigation will be reported in the *Preliminary Assessment/Site Inspection Report, MMRP Site UXO-02, Unnamed Explosive Contaminated Range, ASR #2.201* to be submitted in late 2011.

2.4 Results of Previous Investigations at Site 69

The following sections discuss the nature and extent of impacted media at Site 69, as identified through the investigations discussed in Section 2.3**.** The nature and extent of contamination is discussed for each medium below. Analytical results were compared to the most conservative among the USEPA Regional Screening Levels (RSLs) (USEPA, 2011a) and North Carolina Soil Screening Levels (NC SSLs) for soil and sediment, NCAC Title 15A Subtitle 2B Surface Water Standards (NCSWQS) for surface water and NCGWQS for groundwater (NCDENR, 2010a), and metals were compared to twice the mean Base background concentrations (Baker, 2001; 2002b).

2.4.1 Soil

Surface and subsurface soils at Site 69 were investigated during the RI in 1994 through 1995. Samples were analyzed for TCL organics and Target Analyte List (TAL) inorganics, as well as CA degradation products. Subsurface soil samples collected from monitoring well boreholes during the March 1995 investigation were analyzed for VOCs and CA constituents (**Table 2-2**). The following is a summary of the nature and extent of soil contamination at Site 69:

- Methylene chloride and acetone were the only VOCs detected in soils. Methylene chloride was reported at concentrations ranging from 47 to 105 µg/kg in surface soils, exceeding the NC SSL (23 µg/kg). Acetone was detected in subsurface soils at GW11 and GW12 at concentrations of 28,000 µg/kg and 41,000 µg/kg, respectively, exceeding the NC SSL of 24,000 µg/kg. SVOCs and PCBs were not reported at levels exceeding the screening criteria.
- Beta-BHC was the only pesticide that exceeded the NC SSL (1.2 µg/kg), with a concentration of 11 J µg/kg in sample 69-CSA-SB25-00.
- Two potential CA degradation constituents, acetophenone and hydroxyacetophenone, were detected in two surface soil samples collected from the center of the Site. Acetophenone was reported at a concentration of 51 µg/kg in sample 69-CSA-SB17-00, below the screening criterion, and is attributed to the use of "riot gas" in training rather than buried CA. Hydroxyacetophenone was detected at concentrations of 120 µg/kg in sample 69-CSA-SB08-00 and 160 µg/kg in sample 69-CSA-SB17-00, and no screening criterion exists for this constituent. Hydroxyacetophenone was also detected in one subsurface soil sample at a concentration of 45 J µg/kg in sample 69-GW15IW-01.
- Arsenic was the only metal to exceed twice the mean Base background concentration (2,100 µg/kg) and screening criteria (Residential RSL of 390 µg/kg and Industrial RSL of 1,600 µg/kg), with a concentration of 2,900 µg/kg in sample 69-GW09-05.

2.4.2 Surface Water and Sediment

Surface water and sediment at Site 69 were investigated during the 1992 Site Assessment Investigation and RI. The "onsite" surface water and sediment investigation included the drainage areas northeast and southeast of the Site, and standing water bodies within low-lying areas of the Site (Figures 4-12 to 4-15 in **Appendix A-2**). The "offsite" surface water body and sediment sampling included the New River, the unnamed tributary to the New River, and Everett Creek (Figure 4-16 in **Appendix A-2**).

The surface water results were rescreened using NCSWQS and tapwater RSLs. Samples were analyzed for VOCs, SVOCs, pesticides, PCBs, CA, and metals. Based on these results, the following were concluded:

- Sample location IR69-OS-SW01, in the southern portion of the Site, contained three VOCs, including VC, chloroform, and TCE, above screening criteria.
- No SVOCs, pesticides, or PCBs have been detected above screening levels in surface water samples.
- Eighteen of 24 TAL Metals were detected in all 7 surface water samples (antimony, cadmium, cobalt, cyanide, selenium, and thallium were not detected). Detected concentrations of metals in onsite surface water at Site 69 were within an order of magnitude of Base background levels, with the exception of magnesium, sodium, and zinc.
- Samples collected from Everett Creek and the New River exceeded the screening criterion for silver.

The sediment results were compared to Industrial and Residential RSLs and NC SSLs. Samples were analyzed for VOCs, SVOCs, pesticides, PCBs, CA, and metals. Based on these results, it was concluded that:

- Methylene chloride was detected in samples collected from the northern and southern tributaries; however, these detections were considered to be related to laboratory contamination, since the detections were at least an order of magnitude less than the concentration detected in the quality assurance/quality control (QA/QC) blank samples.
- SVOCs, pesticides, PCBs, and CA have not been detected above screening levels in samples collected from the within the Site 69 boundary .
- Numerous organics and metals were detected in the sediment samples outside the Site 69 boundary above screening criteria, including acetone, methyl chloride, benzo(a)pyrene, 4,4'-DDD, 4,4'-DDE, aroclor-1260, cadmium, and mercury (Figure 4-16 in **Appendix A-3**).

2.4.3 Groundwater

The most comprehensive groundwater sampling event took place during the RI in 1994-1995. Further characterization was completed as part of the TS and the LTM. Over the course of these investigations, groundwater samples were analyzed for VOCs, SVOCs, CA, pesticides, PCBs, metals, and NAIPs. The results of these previous investigations indicate the following:

- Primary groundwater contaminants are CVOCs. The maximum concentrations and locations reported in the 2004-2005 LTM report are summarized below:

	Surficial Aquifer			Upper Castle Hayne Aquifer		
VOC	Concentration (µg/L)	Location	Year	Concentration (µg/L)	Location	Year
1,1,2,2-PCA	100	IR69-GW15	2004	<5	IR69-GW15IW	2004
TCE	29	IR69-GW15	2004	90	IR69-GW15IW	2004
cis-1,2-DCE	550	IR69-GW03	2005	39,000	IR69-GW15IW	2004
trans-1,2-DCE	490	IR69-GW15	2004	610	IR69-GW15IW	2004
VC	570	IR69-GW15	2004	2700	IR69-GW15IW	2004
1,2-DCA	4	IR69-GW02	2004	14	IR69-GW15IW	2005

DCA = dichloroethane; PCA = tetrachloroethane

- The highest VOC concentrations in the surficial aquifer were reported in samples collected from monitoring wells IR69-GW15, IR69-GW02, and IR69-GW03, in the south-central area of the Site.
- VOC-impacted groundwater in the Castle Hayne aquifer was concentrated in the south-central area near monitoring well IR69-GW15IW. However, detections of cis-1,2-DCE, and VC were also reported in samples from IR69-GW13DW, indicating possible migration of VOCs to the east of Site 69.
- Detections of cis-1,2-DCE in groundwater samples collected from monitoring well IR69-GW15DW indicated that downward vertical contaminant migration may be occurring.

- Results from IR69-GW15IW indicated daughter product increases, including final products ethane and ethene, along with anaerobic conditions, indicating that NA was occurring.

2.4.4 Human Health Risk Assessment

A Human Health Risk Assessment (HHRA) was completed as part of the RI (Baker, 1997) to evaluate the potential impact of contaminants of potential concern (COPCs) on human health. COPCs were selected based on the following criteria: historical information, prevalence, mobility, persistence, toxicity, examination of Federal and State criteria and standards, and comparison to risk-based concentrations, QA/QC data, background data, and anthropogenic levels. The selection of COPCs for the HHRA was based on the initial round of samples collected in January 1994.

The following is a summary of COPCs selected for each medium:

- **Surface soil—**none
- **Subsurface soil–**chromium and manganese
- **Groundwater–**total 1,2-DCE, TCE, 1,1,2,2-PCA, toluene, VC, 1,4-dichlorobenzene, 1,1-DCE, benzene, alpha-BHC, delta-BHC, arsenic, barium, beryllium, cadmium, chromium, copper, lead, nickel, manganese, mercury, selenium, vanadium, and zinc
- **Surface water–**total 1,2-DCE, TCE, toluene, VC, ethylbenzene, xylene isomers, arsenic, barium, beryllium, cadmium, chromium, copper, lead, nickel, manganese, mercury, vanadium, and zinc
- **Sediment**–total 1,2-DCE, toluene, VC, 4,4′-DDE, 4,4′-DDT, 4,4′-DDD, alpha-BHC, beta-BHC, delta-BHC, barium, beryllium, chromium, copper, lead, manganese, mercury, vanadium, and zinc
- **Biota–** toluene, 4,4′-DDE, 4,4′-DDD, alpha-BHC, beryllium, cadmium, selenium, and zinc

Current and future potential receptors evaluated in the HHRA include current military personnel, future residents (i.e., children and adults), and future construction workers. Exposure scenarios evaluated included: exposure to surface soil for current military personnel and future residents; exposure to subsurface soil for future construction workers; exposure to groundwater for future residents; exposure to COPCs from ingestion of fish for current and future recreational fishermen; and inhalation of airborne particles for future residents, future construction workers, and current military personnel. The results of the HHRA are summarized below:

- Under current human health exposure scenarios, human health risks are within acceptable ranges from (1) exposure to groundwater, as it is not utilized for potable water supply; (2) exposure to soils, as access to the Site is restricted and there were no COPCs retained for surface soil; and (3) exposure to COPCs from ingestion of fish and shellfish.

- Under future potential human health exposure scenarios, potential unacceptable human health risks would result due to exposure to site groundwater if used as a potable water supply. Future human health risks from exposure to subsurface soil and inhalation of airborne particles were within acceptable ranges. Future residential use of the area is unlikely, since the Site could contain buried CA.

2.4.5 Ecological Risk Assessment

An Ecological Risk Assessment (ERA) was conducted as part of the RI (Baker, 1997) to evaluate the potential effects of contaminants at Site 69 on sensitive environments, including wetlands, protected species, and fish nursery areas. The RI included sampling and chemical analysis of the surface water, sediments, biota, soil, and groundwater, as applicable. The ERA also compared the results of the surface water, sediment, fish, and benthic macroinvertebrate samples collected at background stations in the White Oak River basin.

The ERA concluded that there were no significant ecological risks to aquatic or terrestrial receptors associated with Site 69. Although environmental media concentrations exceeded Applicable or Relevant and Appropriate Requirements (ARARs) and to-be-considered (TBC) requirements, aquatic biosurveys indicated that fish and benthic macroinvertebrate populations were representative of typical estuarine and tidal freshwater systems and were not adversely impacted by contaminant sources.

2.5 Data Gaps from Previous Investigations

Despite the completion of numerous investigations at Site 69, the nature of the source material and extent of contamination had not been completely assessed prior to the completion of the SI in 2010. The specific data gaps from previous investigations included:

- **Limited source area delineation—**Geophysical investigations were not confirmed with test-pit excavations or other intrusive investigations due to the suspected presence of CA. The presence and location of suspected buried CA was not verified.
- **Incomplete plume delineation—**VOC impacts within the upper Castle Hayne aquifer have not been delineated to the north and northeast. Samples from 2004 and 2005 indicate vertical and horizontal migration of VOCs into the Castle Hayne aquifer and downgradient of the waste disposal area. The vertical extent of VOC impacts had not been adequately defined.

Table 2-1
Previous Investigations
Supplemental Investigation Site 69, Operable Unit No. 14
MCB CamLej, North Carolina

Site 69 Investigation	Year	Media Investigated	Purpose of Investigation	Target Analytes	Activities	Aquifer	Results and Conclusions
Rifle Range WWTP and Chemical Dump Sampling (U.S. Navy, 1981; U.S. Navy, 1982)	1981, 1982	GW/SW	Sample water supply wells, monitoring wells, and surface water to monitor for contaminants due to proximity to suspected dump site.	VOCs, SVOCs, Pesticides, PCBs, Metals	Groundwater and surface water sampling.	NA	Elevated chlorinated VOCs, and trihalomethanes detected in groundwater samples collected from monitoring wells.
Initial Assessment Study (WAR, 1983)	1983	NA	Evaluate historical records for evidence of environmental releases.	All	Historical records review, site visits.	NA	Drums of suspected chemical agents, 5-gallon cans and 55-gallon drums of DDT, other pesticides, TCE sludge, wood preservative compounds, training agents, and PCBs. Disposal was reportedly in pits/trenches between 6 and 20 feet deep. At least 12 different occurences of dumping have been documented.
Site Assessment Report (Confirmation Study) (ESE, 1992)	1984	GW/SW/SD	Verify and characterize the presence and/or absence of contamination at Site 69 by investigating environmental media.	VOCs, organochlorine pesticides, PCBs, pentachlorophenol, mercury, residual chlorine	Install 8 surficial aquifer monitoring wells IR69-GW01 through IR69-GW08 (1984) Sample: 8 surficial groundwater monitoring wells (all phases of investigation), surface water and sediment (all phases of investigation), and shellfish (1991 only).	Surficial	VOCs were detected in groundwater in the southern portion of the site near monitoring well IR69-GW02. The most significant compounds were: TCE, trans-1,2-DCE, and vinyl chloride detected in both IR69-GW02 and IR69-GW03. Lower concentrations of VOCs were detected in surface water and pesticides were detected in off-site sediment samples.
	1986	GW/SW/SD		1984 analyses, tetrachlorodioxin, xylene, MEK, MIBK, ethylene dibromide			
	1991	GW/SW/SD/ Shellfish		Full TCL VOCs, SVOCs, pesticides, metals			
Remedial Investigation (Baker, 1997)	1992	SB	Identify potential subsurface waste disposal areas.	NA	Conduct geophysical investigation in transects near suspected disposal trenches.	NA	The geophysical investigation indicated there is potential buried waste in the south and east portions of Site 69. VOCs were detected in the surficial, upper and middle Castle Hayne aquifer in the southern portion of Site 69. The highest concentrations were located near monitoring well IR69-GW15 cluster, which is the suspected source area. The human health risk assessment indicated that unacceptable risk from future residential use of groundwater existed. No unacceptable risk exists from exposure to site soils.
	January - March 1994	GW/Soil/SW/ SD/Biota	Assess the nature and extent of impacts in all site media resulting from historical site use.	VOCs, SVOCs, pesticides, PCBs, inorganics, and CWM degradation compounds	Collect 29 surface soil, 16 subsurface soil, 7 surface water and sediment samples. Sample surficial groundwater via hydropunch in 14 locations. Install surficial groundwater monitoring wells IR60-GW09 through IR69-GW12 (12.5 to 20 ft bgs), install upper Castle Hayne aquifer monitoring wells IR69-GW02DW (50 ft bgs), IR69-GW12DW (58 ft bgs). Sample all monitoring wells.	Surficial, Upper Castle Hayne	
	May 1994	GW	Vertically and horizontally delineate VOC impacts in groundwater.	VOCs	Install surficial monitoring well IR69-GW13 (13 ft bgs), upper Castle Hayne aquifer monitoring wells IR69-GW03DW and IR69-GW13DW (60 ft bgs), and middle Castle Hayne aquifer well IR69-GW02DD (125 ft bgs)	Surficial, Upper and Middle Castle Hayne	
	December 1994	GW	Horizontally delineate VOC impacts in groundwater in southern direction.	VOCs	Install and sample well cluster IR69-GW14 (14 ft bgs), GW14IW (62 ft bgs), and GW14DW (127 ft bgs).	Surficial, Upper and Middle Castle Hayne	
	January 1995	GW, SB	Locate the source area near IR-69-GW02 and delineate the northern boundary of VOC impacts in groundwater.	VOCs	Conduct geophysical investigation near well cluster IR69-GW02. Sample surficial groundwater using hydropunch in 9 locations near anomalies detected in the geophysics survey.	Surficial	
	March 1995	GW	Monitor source area groundwater.	VOCs	Install and sample well cluster IR69-GW15 (13 ft bgs) and IR69-GW15IW (60 ft bgs) near highest concentration of VOCs detected during hydropunch investigation.	Surficial, Upper Castle Hayne	
	September 1995	GW	Support treatment study, assess vertical concentrations of VOCs in source area.	VOCs	Install and sample upper Castle Hayne aquifer monitoring well IR69-GW15UW (37 ft bgs) and middle Castle Hayne aquifer monitoring well IR69-GW15DW (120 ft bgs).	Upper and Middle Castle Hayne	
	March - April 1996	GW	Vertically delineate VOCs in source area.	VOCs	Install and sample lower Castle Hayne aquifer monitoring wells IR69-GW15BCH, IR69-GW02BCH, and IR69-GW03BCH (230 ft bgs).	Lower Castle Hayne	

Table 2-1
Previous Investigations
Supplemental Investigation Site 69, Operable Unit No. 14
MCB CamLej, North Carolina

Site 69 Investigation	Year	Media Investigated	Purpose of Investigation	Target Analytes	Activities	Aquifer	Results and Conclusions
Treatability Study (Baker and SBP Technologies, 1998)	1996 - 1997	GW	Test in-well aeration as a remediation technology to remove VOCs in surficial and upper Castle Hayne aquifers.	VOCs	Phase I: Install UVB treatment system (UVB injection well screened at 35-40 and 66-70 ft bgs, and 12 monitoring wells to 45 and 75 ft bgs) and KGB treatment system (KGB injection well and 8 shallow monitoring wells to 9 and 12 ft bgs) to assess VOC removal and the zone of influence of each treatment system using dye tests and analytical sampling. Phase II: move UVB system to higher area of contamination (IR69-GW15UW), run both treatment systems and continue to monitor groundwater VOC concentrations.	Surficial, Upper Castle Hayne	The UVB system was successful in reducing high concentrations in the treatment well, subsurface lithology prevented widespread treatment and the rate of decrease was low. The KGB system failed to operate and perform consistently due to formation material plugging the screens and sandpack. Overall in-well aeration was not recommended as a treatment for Site 69 groundwater VOC impacts.
Feasibility Study (Baker, 1998)	1997	Soil/GW	Identify and present remedial alternatives for Site 69 soils and groundwater contamination.	NA	Analyzed 2 soil remedial alternatives 1) no action and 2) institutional controls and 5 groundwater remedial alternatives 1) no action, 2) institutional controls and natural attenuation, 3) groundwater extraction and physical treatment with institutional controls and monitoring, 4) dual-phase vacuum extraction and groundwater extraction and physical treatment, institutional controls and monitoring, and 5) In-situ air stripping with institutional controls and monitored natural attenuation.	Surficial, upper and middle Castle Hayne	Removal of soil and waste material was not an option because indefinite storage of CWM contaminated materials was required and such storage was unavailable at the time of the FS.
Interim Record of Decision (Baker, 2000)	2000	Soil/GW	Present selected interim remedy for Site 69 impacted media (soil and groundwater).	NA	Selected remedy for soil was institutional land use controls. Selected remedy for groundwater was institutional aquifer use controls and monitored natural attenuation.	Surficial, Upper, Middle and Lower Castle Hayne	Remedy included 5 years of quarterly sampling 24 monitoring wells screened in all aquifer zones, followed by 25 years of semi-annual sampling of 12 monitoring wells to be selected based on quarterly sampling results.
Long Term Monitoring (Engineering and Environment Inc., 2005)	1998-2005	GW	Present analytical results from long term monitoring of Site 69 groundwater.	VOCs	Collect groundwater from selected monitoring wells (surficial: IR69-GW01, -GW02, -GW03, -GW10, -GW12, GW13, GW14, GW15; upper Castle Hayne: IR69-GW02DW, -GW03DW, -GW12DW, -GW13DW, -GW14IW, -GW15IW and middle Castle Hayne: IR69-GW15DW).	Surficial, Upper and Middle Castle Hayne	VOCs were detected in Upper Castle Hayne aquifer samples, indicating that contamination was migrating vertically.

Legend:
GW- groundwater
SW- Surface water
SD- sediment
NA- Not applicable
VOCs- volatile organic compounds
MEK-methyl ethyl ketone
MIBK-Methyl isobutyl ketone
PCB-Polychlorinated biphenyls
SVOC- Semi-Volatile Organic Compound
TCE-Trichloroethene
1,2 DCE-1,2-Dichloroethene
CWM - Chemical warfare materiel

Table 2-2
Previous Investigations Analytical Parameters
Supplemental Investigation Site 69, Operable Unit No. 14
MCB CamLej, North Carolina

Investigation	Sample Date	Sample Media	VOCs (EPA Method 8260B)	SVOCs (EPA Method 8270C)	Pesticides (EPA Methods 8141A/8081)	PCBs (EPA Method 8082)	Metals (EPA Method 6010B)	CWM	Trihalomethane	Thiodiglycol	Pentachlorophenol	Residual Chlorine	Organochlorine Pesticides (EPA Method 3550B/8081A)	Mercury	Methyl ethyl ketone (MEK)	Methyl isobutyl ketone	Ethylene dibromide	Xylenes	Microbial Count	Tetrachlorodioxin	Total Organic Carbon (E415)	Dissolved Gases (SW381)	Total Phosphorus (EPA Method 365.3)	Total Organic Nitrogen (351.1/350.1)	Nitrate/Nitrite (300.0/353.2)	Sulfate (300.0/375.4)	Sulfide (376.1)	Chloride (E300.0)	Ammonia (350.1)	Orthophosphate (356.2)	Alkalinity	BOD, COD, TOC	Atterburge Limits	Particular Size Distribution (ASTM D422)
Rifle Range WWTP and Chemical Dump Sampling (U.S. Navy, 1981; U.S. Navy, 1982)	1981 to 1982	Groundwater	X	X	X	X	X		X																									
		Surface Water	X	X	X	X	x		X																									
ESE Site Assessment Report	1984 to 1991	Groundwater - 1984	X			X					X	X	X	X																				
		Groundwater - 1986	X			X					X	X	X	X	X	X	X	X	X	X														
		Groundwater - 1991	X	X	X	X	X																											
		Surface Water - 1986	X	X	X		X																											
		Sediment	X	X	X		X																											
		Fish Tissue	X	X	X		X																											
Geophysical Investigation	1992	None	Electromagnetic Terrain Conductivity and Magnetometry																															
Remedial Investigation	1997	Soil	X	X	X	X	X	X		X				X																			X	X
		Groundwater	X	X	X	X	X	X						X					X				X	X							X	X		
		Surface Water	X	X		X		X						X																				
		Sediment	X	X	X	X	X	X		X				X																				
		Fish Tissue	X	X	X	X	X							X																				
Treatability Study Investigation	1995	Groundwater	X																															
Annual Monitoring	2004-2005	Groundwater	X																			X		X	X	X	X	X	X	X				

BOD - Biological Oxygen Demand
COD - Chemical Oxygen Demand
CWM - Chemical Warfare Material
PCB - Polychlorinated Biphenyls
SVOC - Semi-Volatile Organic Compound
TOC - Total Organic Carbon
VOC - Volatile Organic Compound

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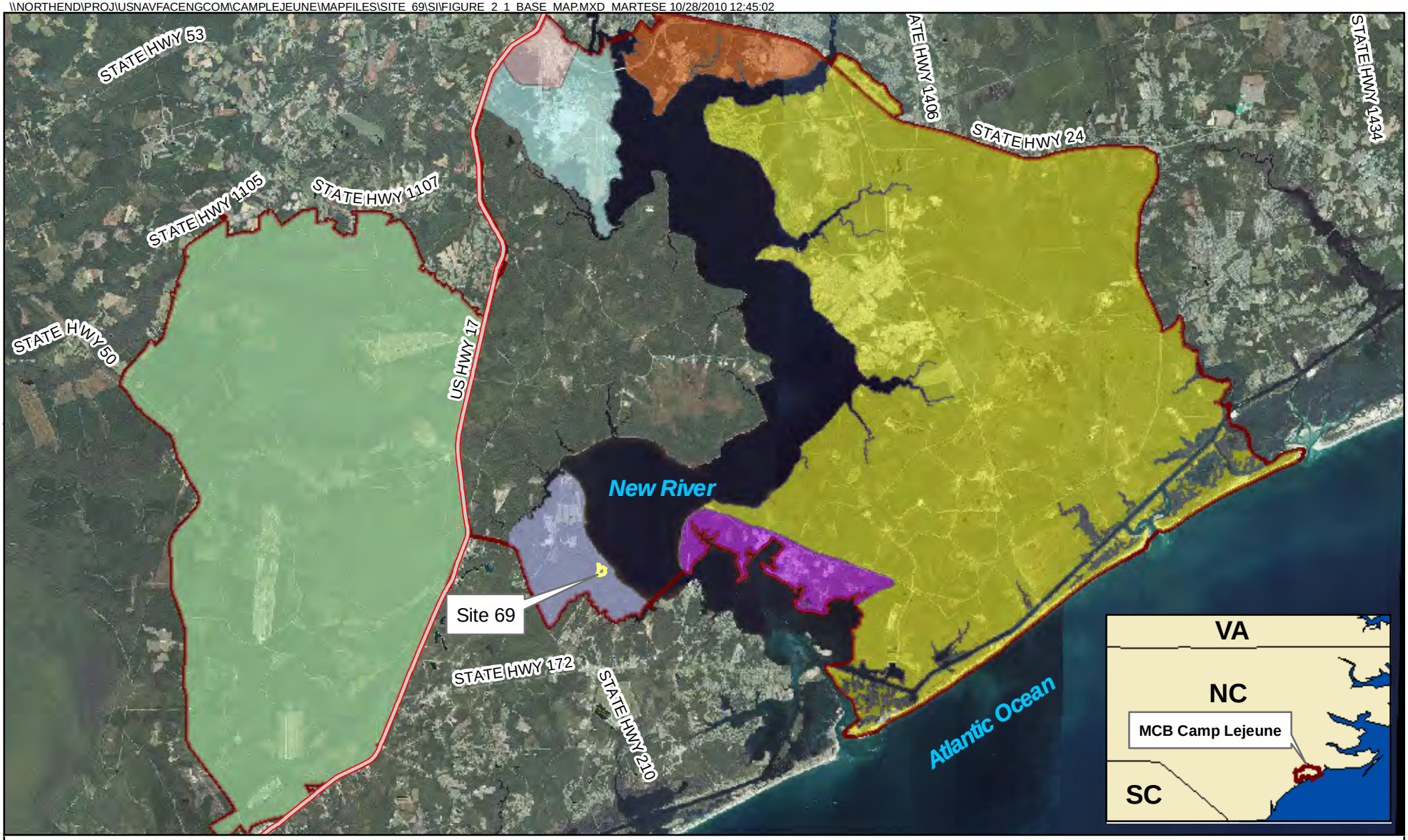

Legend

- Highways
- Site 69 Boundary
- Camp Geiger
- Greater Sandy Run
- Marine Corps Air Station New River
- Stone Bay
- Montford Point/Tarawa Terrace
- Courthouse Bay
- Main Side
- Installation Boundary

N

0 7,500 15,000 30,000 Feet

1 inch = 15,000 feet

Figure 2-1
Base Map
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

CH2MHILL

Generated By: ***K. Rogers/RDU*** Checked by: ***T. Grim/CLT***

Legend

- Site 69 Boundary
- Site UXO-02 Boundary
- Operable Unit No. 14
- Aquifer Use Control Boundary
- Intrusive Activities Control Boundary (Soil)
- Intrusive Activities Control Boundary (Groundwater)

N

0 300 600 1,200 Feet

1 inch = 600 feet

Figure 2-2
Site Map
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

CH2MHILL

Generated By: *K. Rogers/RDU* Checked by: *T. Grim/CLT*

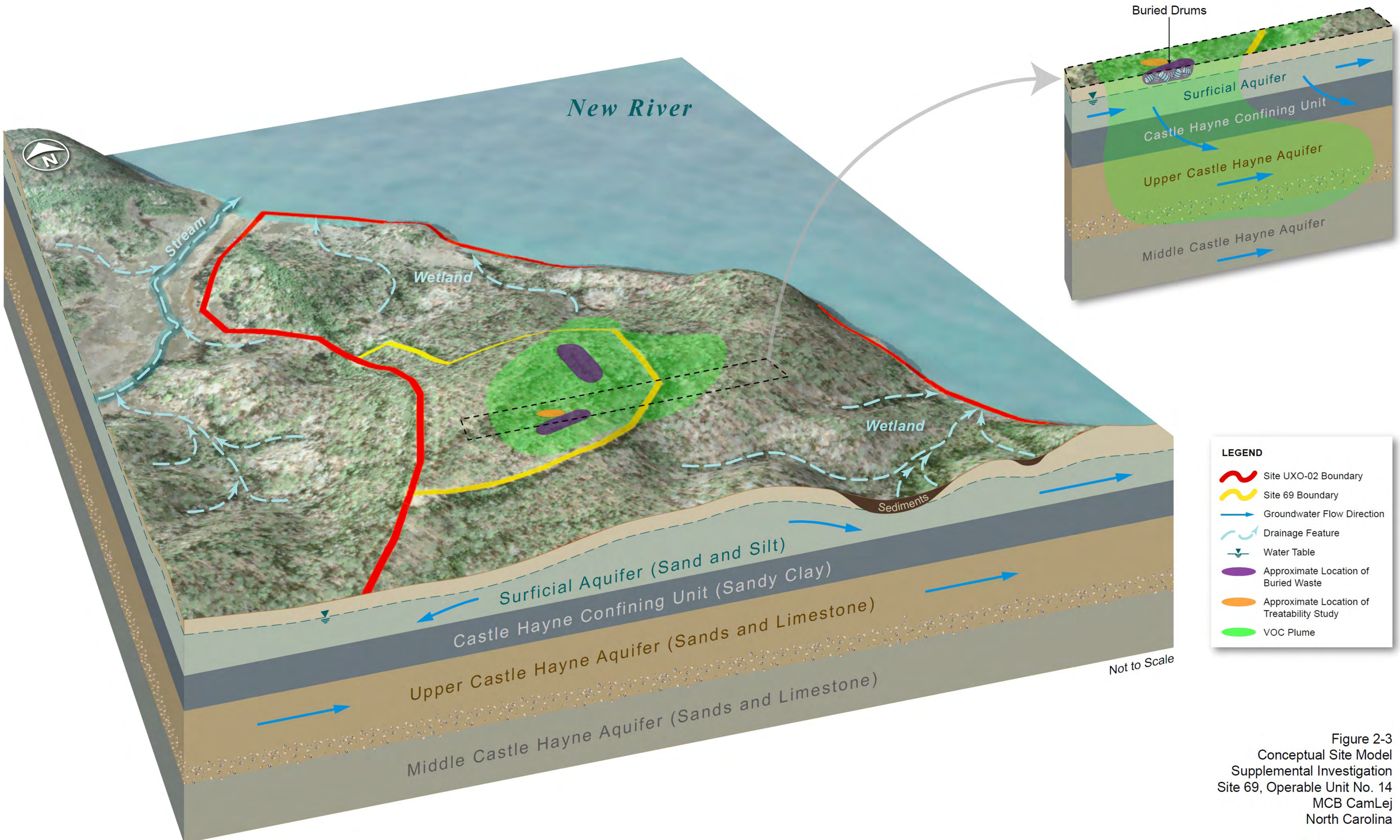

Figure 2-3
Conceptual Site Model
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

SECTION 3

Supplemental Investigation Field Activities

This section presents a summary of the SI field activities conducted at Site 69 in February through March 2010 and February through March 2011 to refine the nature and extent of impacted media and update the HHRA and ERA. All field activities were conducted in accordance with the procedures outlined in the *Supplemental Investigation Work Plan Site 69* (Site-Specific Work Plan) dated January 2010 (CH2M HILL, 2010) and in conjunction with the Master Project Plans (MPP) (CH2M HILL, 2008), which includes the Master Work Plan, Master Quality Assurance Project Plan (QAPP), and Master Health and Safety Plan (HSP). The MPP is referenced to the greatest extent practicable.

Based on historical site use and the fact that Site 69 is located within the boundary of Site UXO-02, contact with MEC and CA was considered to be a possibility. Therefore, each field sampling team was accompanied by a CH2M HILL UXO Technician at all times and MEC avoidance procedures were followed for the duration of the field activities. Potential hazards posed by the reported presence of CA were mitigated by monitoring ambient air and screening environmental samples for CA, both of which were conducted by Edgewood Chemical Biological Center (ECBC).

SI field activities included:

- MEC avoidance
- CA monitoring, screening, and analysis
- Land surveying
- Vegetation clearing
- Buried utility locating
- Geophysical investigation
- Surface and subsurface soil sampling
- Surface water and sediment sampling
- Monitoring well installation and development
- Groundwater sampling
- Investigation-derived waste (IDW) management
- Sample location surveying

3.1 Site Preparation and Support

3.1.1 MEC Avoidance

MEC avoidance procedures were followed at all times during field activities at Site 69. Field staff and subcontractors were trained to "Recognize, Retreat, and Report" potential MEC items. A CH2MHILL UXO Technician accompanied field staff at all times or established cleared access routes for field staff to follow to individual monitoring well and sample locations. The access routes and surface sample locations were cleared using a Schonstedt™ magnetic locator to survey for metallic debris. The access route was, at a minimum, twice

the width of the vehicle/equipment used. MEC was not encountered during the environmental field sampling events.

Subsurface soil and monitoring well boreholes located outside of the fenced area were advanced using a hand auger and cleared every foot with a downhole magnetometer to 5 feet bgs. Borings located inside the Site 69 fence were cleared to a depth of 15 feet bgs with an Mk 26 Ferex instrument specifically used to detect ferromagnetic materials. Once the borehole was cleared, the drill rig was positioned over the boring location and drilling to the planned depth was initiated.

3.1.2 CA Monitoring, Screening and Analysis

Due to the potential for encountering CA during field activities conducted in 2010, air monitoring and screening of all sample media was performed prior to shipping to an offsite fixed-base laboratory. All subsurface soil sampling, monitoring well installation activities, and groundwater sampling conducted inside the fenced area was performed in Level C personal protective equipment (PPE), including Tyvek™ Type F coveralls, chemical-resistant butyl gloves, and an MSA Millenium® CBRN (chemical, biological, radiological, and nuclear) air purifying respirator, or equivalent.

Ambient air monitoring was conducted during all field activities, which included opening monitoring wells and drilling activities. The air monitoring equipment used to monitor the breathing zone during intrusive activities included real-time Miniature Continuous Air Monitoring Systems (MINICAMS), and a Depot Area Air Monitoring System (DAAMS) for MINICAMS alarm confirmation. Specific procedures and health and safety requirements are detailed in the Site-specific HSP and Low Probability Contingency Plan in the Site-specific Work Plan (CH2M HILL, 2010).

Soil, surface water, sediment, and groundwater samples were collected by field staff as described in the following sections. To minimize the risk of personnel coming into contact with CA, samples were collected in duplicate (liquid samples) and triplicate (solid samples) to facilitate sequential screening of the samples. The first aliquot of the solid samples was screened by the onsite ECBC mobile laboratory for CA. According to ECBC protocol, liquid samples were not screened by the onsite ECBC laboratory. When cleared, the samples were transported by ECBC to their laboratory in Edgewood, Maryland for CA analysis. If the CA results were negative, the remaining portions of the samples, stored onsite, were sent to the environmental laboratory for analysis. CA was not detected during any of the field screening activities, and all samples were cleared for shipment to environmental laboratories for analysis.

3.1.3 Site Survey

In preparation for the field sampling activities, land surveying was conducted by SEPI Engineering, a North Carolina-licensed surveyor from Raleigh, North Carolina in accordance with the Site-specific Work Plan (CH2M HILL, 2010) and MPP (CH2M HILL, 2008). Surveying was conducted in two phases, as described below.

The first phase consisted of surveying transects for vegetation clearance to facilitate the geophysical investigation and sampling activities. Transects were flagged at 10-foot intervals and surveyed points were marked every 65 to 100 feet and at any turning points in

each transect. Survey data were provided to NAEVA Geophysics, Inc. of Charlottesville, Virginia (NAEVA) for use during the geophysical survey.

The second phase consisted of surveying all newly installed wells and select existing monitoring wells. The locations were referenced both horizontally and vertically to permanent land monuments or a grid system. The survey controls were tied to a benchmark, the 1983 North American Datum (NAD), and the North American Vertical Datum (NAVD) of 1988. Ground surface and monitoring well top of casing vertical control were surveyed to the nearest 0.01 foot, and the horizontal control was to the nearest 0.10 foot. Each monitoring well top of casing was notched or otherwise marked to identify a constant measuring point for measuring depths to groundwater.

3.1.4 Vegetation Clearing

Vegetation was cleared along the surveyed transects to facilitate the geophysical investigation, surveying, and environmental sampling activities. Transects were cut 5 feet wide and spaced approximately 10 feet apart within Site 69. Vegetation was cut to within 6 inches of the ground surface to provide an unobstructed pathway for geophysical mapping, drilling activities, and sampling crews and to comply with MR safety guidance related to encountering potential MEC and UXO.

3.1.5 Utility Locating

Prior to any intrusive field activities, the public North Carolina One Call utility locating service was notified and all underground utilities were located and marked by a subcontractor within a 20-foot radius of each sample location. A CH2M HILL representative accompanied the utility locator to identify sample locations.

3.2 Geophysical Investigation

The objective of the geophysical investigation was to identify subsurface geophysical anomalies indicative of disposal trenches and buried wastes within the fenced area and an approximate 10-acre portion of Site UXO-02 located immediately north and west of the fenced area. The digital geophysical mapping (DGM) survey was conducted from February 11 to 19, 2010 by NAEVA, and is documented in **Appendix B**. In addition to locating potential areas of waste disposal, the DGM survey results were also used to minimize the risk of field sampling activities coming into direct contact with buried wastes.

The geophysical investigation utilized two different types of instruments, including a Geonics® EM31 electromagnetic terrain conductivity meter and a Geometrics® G-858 magnetometer system. The EM31, measuring both quadrature (subsurface conductivity) and in-phase (metal detection) channels, was used in vertical dipole mode to identify changes in conductivity that may be indicative of buried waste materials. The G-858 magnetometer system was used to detect ferrous material within the survey area, specifically to evaluate metallic anomalies detected by the EM31. To evaluate the effectiveness of the instrumentation and methods prior to actual field work, a geophysical prove-out (GPO) survey was performed using the G-858 magnetometer. Due to its inability to distinguish small metallic anomalies, the EM31 was validated by correlating variations in ground

conductivity with a utility manhole cover to demonstrate that the instrument was able to meet project data quality objectives.

Geophysical data were collected along a series of linear transects, spaced 10 feet apart and marked with points surveyed by a professional land surveyor every 65 to 100 feet. A total of 204 transects were surveyed inside the fence and to the northeast of Site 69, covering a total area of 9.01 acres.

Instrument-specific software was used for initial data processing, and the output was imported into Geosoft Oasis Montaj™ for additional processing, graphical display, anomaly selections, and QA/QC.

The results of the DGM survey indicated the presence of three distinct areas of geophysical anomalies, the largest of which was found to be located in the south-central portion of Site 69 (Plate 1, **Appendix B**). The anomaly identified as AOI1 on Plate 1 of **Appendix B** is located in the same area of Site 69 that has yielded the highest historical concentrations of chlorinated solvents in groundwater. Several smaller anomalies likely indicative of smaller burial areas were identified during the magnetometer survey as shown on Plate 3 of **Appendix B**. No significant anomalies were identified outside of the fenced area of Site 69. As a result, it appears that the fence was installed in the correct location to encompass the area containing buried waste material.

3.3 Soil Sample Collection

3.3.1 Surface Soil

A total of 11 surface soil samples were collected at Site 69, as indicated on **Figure 3-1**. Six discrete surface soil samples, IR69-SS01 though IR69-SS06, were collected outside the fence from depths of 0 to 1 foot bgs. Five composite soil samples (MR02-IR69-SS01, MR02-IR69-SS02, MR02-IR69-SS04, MR02-IR69-SS05, and MR02-IR69-SS06) were collocated with UXO-02 PA/SI samples.

Prior to sample collection, leaf litter and other organic debris were removed to expose the surface soil. Samples were collected using a stainless steel hand auger from a depth of 0 to 1 foot bgs. VOC samples were collected prior to soil homogenization to minimize volatilization. Following collection of the samples intended for VOC analyses, soil was homogenized in a stainless steel bowl and divided in quarters. Sample containers were filled by scooping an equal amount of soil alternately from each quartered section. The five UXO-02 surface soil samples were collected using the TR-02-1 method as described in USACE Technical Report (TR) ERDC/CRREL TR-02-1 (Thiboutot et al., 2002). Each sample consisted of 30 aliquots of soil collected randomly within a 1-meter by 1-meter area, from a depth of 0 to 6 inches.

All surface soil samples were packed on ice in coolers and shipped under chain-of-custody control to CompuChem laboratory of Cary, North Carolina for analysis of VOCs, SVOCs, pesticides, PCBs, and TAL Metals, as listed in **Table 3-1**.

3.3.2 Subsurface Soil

Six discrete vadose zone subsurface soil samples (IR69-SB01 through IR69-SB06) were collected using a hand auger from locations outside the fenced area, as indicated on **Figure 3-1**. The samples were shipped under chain-of-custody control to CompuChem for analysis of VOCs, SVOCs, TAL Metals, pesticides, and PCBs by the USEPA methods listed in **Table 3-1**.

Additional subsurface soil samples were collected during well installation activities and used to evaluate total organic carbon (TOC), soil buffering capacity, soil oxidant demand (SOD), and grain size analysis; samples were collected from IR69-MW26DW (20-25 feet, 50-55 feet, and 80-85 feet), and IR69-MW28DW (50–55 feet and 80–85 feet). With the exception of the samples intended for grain size analysis, each sample was shipped to the CH2M HILL laboratory in Corvallis, Oregon. Grain size analysis was conducted by CompuChem.

3.4 Sediment and Surface Water

Figure 3-1 illustrates the locations of the three surface water (IR69-SW01 to IR69-SW03) and three sediment (IR69-SD01 to IR69-SD03) samples**.** Samples were collected from downstream to upstream to avoid cross-contamination by sediment suspension. Surface water samples were collected using a peristaltic pump to minimize turbidity. Water quality parameters, including dissolved oxygen (DO), turbidity, temperature, specific conductance, salinity, hardness, and pH were measured to support the ERA.

Sediment samples were collected at a depth of approximately 0 to 0.5 foot into the stream sediment using decontaminated stainless steel spoons/trowels. Sediment pH measurements were collected using a soil pH field test kit.

Surface water and sediment samples were collected in appropriately labeled containers and shipped under chain-of-custody control to CompuChem for the following analyses: VOCs, SVOCs, TAL Metals, pesticides, PCBs, and TOC (for sediment only) by the USEPA methods listed in **Table 3-2**. Surface water samples were also analyzed for dissolved TAL Metals to support the ERA. Surface water sampling forms are included in **Appendix C.**

3.5 Monitoring Well Installation

A total of 15 monitoring wells were installed at Site 69 in March 2010, and five additional monitoring wells were installed in February 2011 to further evaluate the distribution of VOCs in groundwater. Monitoring well locations are shown on **Figure 3-2**. Soil borings were advanced with a Geoprobe® 8140 DT track-mounted rotosonic drill rig. Drilling operations in 2010 were conducted by SMD Drilling Services from Huntsville, Alabama, while drilling operations in 2011 were conducted by Major Drilling Environmental from Huntsville, Alabama. Drilling procedures, equipment, and monitoring well construction details are discussed further in the following sections.

3.5.1 Borehole Advancement and Sample Collection

The rotosonic drilling method eliminated the need for permanent isolation casings through the use of temporary outer casings, significantly reduced the volume of IDW generated, and

allowed for a higher production rate on well installation as compared to other drilling methods. The dual-line casing method of the rotosonic technique consisted of a sampling barrel and multiple overriding outer casings. Rotosonic drilling uses high-frequency vibration and low rotational energy to displace soil at the head of the outer casing and to simultaneously advance both the inner sampling barrel and the overriding outer casings. Continuous soil cores were collected from the sampling barrels as each well borehole was advanced while maintaining the borehole integrity with the overriding outer casings.

The soil cores were screened for the presence of organic vapors using a flame-ionization detector (FID) and examined to assess lithology (**Appendix D**). Upon reaching the target depth, the 6-inch outer diameter (OD) override casing remained at the bottom of the borehole while the core barrel was removed to allow installation of the monitoring wells within the override casing. Due to the presence of a laterally extensive clay layers within portions of the Site, an additional override casing was temporarily emplaced at a depth of roughly 40 feet bgs to limit potential cross-contamination between surficial and upper Castle Hayne aquifers. This procedure was employed during construction of 8 of the 20 monitoring wells (IR69-GW04IW, IR69-GW04DW, IR69-GW04DD, IR-GW11DD, IR69-GW26IW, IR69-GW26DW, IR69-GW28IW, and IR69-GW28DW).

Drill cuttings and decontamination fluids generated during well drilling activities were contained in 55-gallon steel drums and managed according to the Site-Specific Work Plan (CH2M HILL, 2010) and Waste Management Plan (WMP) (CH2M HILL, 2009a).

3.5.2 Monitoring Well Installation

Twenty monitoring wells were installed, including 10 wells screened in the upper Castle Hayne aquifer at depths ranging from 38 to 60 feet bgs, and 10 deeper wells screened in the middle Castle Hayne aquifer at depths ranging from 75 to 121 feet bgs.

Monitoring wells were constructed using 2-inch inner diameter (ID) Schedule 40 polyvinyl chloride (PVC) screen and riser. All monitoring wells were constructed with 5 feet of 0.010-inch machine slotted screens. The annular space surrounding the well screens was filled with either 20–30 or 18-30 grade silica sand, followed by a bentonite seal of approximately 5-foot thickness. Monitoring wells were completed with an above-ground locking steel casing surrounded by a concrete pad with protective bollards. A watertight cap was placed on the PVC well casing and permanent well tags were affixed to the protective covers. Monitoring well construction details are summarized in **Table 3-3,** and well construction diagrams are provided in **Appendix D**.

3.5.3 Monitoring Well Development

Each monitoring well was developed by surging across the entire length of the well screen and over-pumping with a submersible pump. Well development was generally considered complete when the pump discharge was free of visible sediment, and the water quality parameters (pH, conductivity, DO, oxidation-reduction potential [ORP], and temperature) stabilized. Turbidity was reduced to the extent practicable. All development fluids were containerized and managed as IDW in accordance with the WMP (CH2M HILL, 2009a).

3.6 Groundwater Sample Collection

Groundwater samples were collected from a total of 49 monitoring wells, as shown in **Figure 3-2.** The initial SI field investigation conducted in March 2010 included sampling 44 monitoring wells using the low-flow sampling method. The 2011 event consisted of collecting groundwater samples from the five newly-installed (February 2011) monitoring wells using passive diffusion bag (PDB) samplers. The two methods used for groundwater sample collection are described below.

3.6.1 Low-Flow Sampling Method (2010 Event)

Groundwater samples were collected from monitoring wells using a pneumatic bladder pump or electric submersible pump following low-flow sampling procedures.

During well purging, water quality parameters (specific conductance, pH, turbidity, temperature, DO, and ORP) and depth to water level measurements were recorded (approximately every 5 to 10 minutes) to monitor compliance with stabilization criteria prior to sample collection. Groundwater samples were collected after a minimum of one well volume had been purged and the water quality parameters had stabilized for three consecutive readings, and if drawdown did not exceed 5 percent of the static water column. Parameters were considered stabilized when three successive readings were as follows:

- pH within 0.1 pH unit
- DO within 10 percent
- Conductivity within 3 percent

If water quality parameters did not stabilize or drawdown exceeded 5 percent of the static water column, at least three well volumes were purged prior to sampling. If purging resulted in the well going dry, the well was allowed time to recharge and the sample was collected.

Field test kits were used to measure the concentrations of ferrous iron, nitrate, and nitrite. Groundwater purge forms are provided in **Appendix C**. Groundwater samples were collected in appropriately labeled containers and shipped under chain-of-custody to a fixed-base environmental laboratory. Samples were analyzed by CompuChem for the following analytes: VOCs, SVOCs, TAL Metals, pesticides, PCBs, and NAIPs by the methods listed in **Table 3-4**. Samples were also collected from select monitoring wells (IR69-MW11IW, IR69-MW15IW, IR69-MW15DW, IR69-MW27IW, and IR69-MW27DW) for microbial analyses by Microbial Insights of Rockford, Tennessee.

3.6.2 PDBs (2011 Event)

Groundwater quality within the five monitoring wells installed in 2011 was assessed by analyzing the contents of PDBs suspended within the screened intervals of each well. In order for the de-ionized water within the PDBs to reach chemical equilibrium with the formation water, the PDBs remained in the wells for at least 2 weeks prior to retrieval. During sample collection, the PDBs were carefully removed from the wells and the contents transferred into the laboratory supplied sample containers.

Samples collected from the PDBs were analyzed for VOCs (SW-846 EPA Method 8260B) by fixed-base laboratory, Katahdin Analytical Services of Scarborough, Maine.

3.6 Investigation-Derived Waste Management

All IDW generated during the SI field activities was handled according to the MCB CamLej WMP (CH2M HILL, 2009a). Miscellaneous non-hazardous waste generated during the investigation (e.g., PPE, plastic sheeting, and sampling supplies) was placed in non-translucent, black contractors' trash bags. Trash bags were temporarily stored in drums and labeled with the date and contents until cleared by ECBC. Following ECBC clearance, all trash generated from the field sampling event was disposed of in Base dumpsters. Soil cuttings, well development water, purge water from groundwater sampling, and decontamination water were containerized into labeled Department of Transportation (DOT)-approved 55-gallon drums. Drums were temporarily staged on wooden pallets at a designated area within Site 69. A total of 138 drums of IDW were generated during the SI field activities. Samples were collected from the drums and submitted for analysis (toxicity, reactivity, and corrosivity) to characterize the wastes and determine disposal options. The contents of four drums containing liquid were subsequently found to exceed the toxicity criteria, and were therefore determined to be hazardous waste. All 138 drums were manifested, transported, and disposed of offsite at approved landfills by Shamrock Environmental of Greensboro, North Carolina.

Table 3-1
Soil Samples and Analytical Parameters
Supplemental Investigation Site 69, Operable Unit No. 14
MCB CamLej, North Carolina

Station ID	Sample ID	Matrix	VOC (EPA Method 8260B)	SVOC and PAH (EPA Methods 3550B/8270C)	Target Analyte List Metals (EPA Method 6010B;7471A)	OP Pesticides (EPA Method 3550/8141A)	OC Pesticides (EPA Method 3550B/8081A)	PCB (EPA Method 8082)	Total Organic Carbon (EPA Method 415.3)	Soil Buffering Capacity	Soil Oxidant Demand	Grain Size Analysis (ASTM D422)
IR69-SS01	IR69-SS01-10A	SS	X	X	X	X	X	X				
IR69-SS02	IR69-SS02-10A	SS	X	X	X	X	X	X				
IR69-SS03	IR69-SS03-10A	SS	X	X	X	X	X	X				
IR69-SS04	IR69-SS04-10A	SS	X	X	X	X	X	X				
IR69-SS05	IR69-SS05-10A	SS	X	X	X	X	X	X				
IR69-SS06	IR69-SS06-10A	SS	X	X	X	X	X	X				
MR02-IR69-SS01	MR02-IR69-SS01-10A	SS	X	X	X	X	X	X				
MR02-IR69-SS02	MR02-IR69-SS02-10A	SS	X	X	X	X	X	X				
MR02-IR69-SS04	MR02-IR69-SS04-10A	SS	X	X	X	X	X	X				
MR02-IR69-SS05	MR02-IR69-SS05-10A	SS	X	X	X	X	X	X				
MR02-IR69-SS06	MR02-IR69-SS06-10A	SS	X	X	X	X	X	X				
IR69-SB01	IR69-SB01-01-02-10A	SB	X	X	X	X	X	X				
IR69-SB02	IR69-SB02-08-10-10A	SB	X	X	X	X	X	X				
IR69-SB03	IR69-SB03-04-05-10A	SB	X	X	X	X	X	X				
IR69-SB04	IR69-SB04-06-07-10A	SB	X	X	X	X	X	X				
IR69-SB05	IR69-SB05-06-07-10A	SB	X	X	X	X	X	X				
IR69-SB06	IR69-SB06-06-07-10A	SB	X	X	X	X	X	X				
IR69-SBMW26DW	IR69-SBMW26DW-20-25-10A	SB							X	X	X	X
IR69-SBMW26DW	IR69-SBMW26DW-55-60-10A	SB							X	X	X	X
IR69-SBMW26DW	IR69-SBMW26DW-85-90-10A	SB							X	X	X	X
IR69-SBMW28DW	IR69-SBMW28DW-50-55-10A	SB							X	X	X	X
IR69-SBMW28DW	IR69-SBMW28DW-80-85-10A	SB							X	X	X	X

Notes:
Analytical method in parenthesis
SS - surface soil
SB - subsurface soil
VOC - volatile organic compound
SVOC - semi-volatile organic compound
PAH - polycyclic aromatic compound
OP - organophosphate
OC - organochlorine
PCB - polychlorinated biphenyls

Table 3-2

Surface Water and Sediment Samples and Analytical Parameters

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Station ID	Sample ID	Matrix	VOC (EPA Method 8260B)	SVOC and PAH (EPA Methods 3510C/8270C)	SVOC and PAH (EPA Methods 3550B/8270C)	Target Analyte List Metals (EPA Method 6010B;6020;7470A)	Target Analyte List Metals (EPA Method 6010B;7471A)	Target Analyte List Metals Filtered (EPA Method 6010B;6020;7470A)	OP Pesticides (EPA Method 8141A)	OC Pesticides (EPA Method 3510CB/8081A)	OC Pesticides (EPA Method 3550/8081A)	PCBs (EPA Method 8082)	Total Organic Carbon
IR69-SW01	IR69-SW01-10A	SW	X	X		X		X	X	X		X	
IR69-SW02	IR69-SW02-10A	SW	X	X		X		X	X	X		X	
IR69-SW03	IR69-SW03-10A	SW	X	X		X		X	X	X		X	
IR69-SD01	IR69-SD01-10A	SD	X		X		X		X		X	X	X
IR69-SD02	IR69-SD02-10A	SD	X		X		X		X		X	X	X
IR69-SD03	IR69-SD03-10A	SD	X		X		X		X		X	X	X

Notes:

Analytical method in paranthesis

SW - surface water

SD - sediment

VOC - volatile organic compound

SVOC - semi-volatile organic compound

OP - organophosphate

OC - organochlorine

PCB - polychlorinated biphenyls

Table 3-3
Summary of Monitoring Well Construction Details
Supplemental Investigation Site 69, Operable Unit No. 14
MCB CamLej, North Carolina

Well Identification	Year Installed	Northing Coordinate	Easting Coordinate	Top of Casing (ft msl)	Ground Elevation (ft msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Top of Screen Elevation (ft msl)	Bottom of Screen Elevation (ft msl)	Aquifer
IR69-GW01	1984	3828962.808	276937.696	30.71	28.09	7	21	21	7	S
IR69-GW02	1984	3828977.19	277016.267	35.50	33.46	6	21	27	12	S
IR69-GW02DD	1994	3828969.239	277018.149	35.50	33.26	115	125	-82	-92	MCH
IR69-GW02DW	1994	3828977.844	277011.788	35.52	33.36	40	50	-7	-17	UCH
IR69-GW02BCH	1996	3828964.535	277016.949	35.32	33.31	220	230	-187	-197	LCH
IR69-GW03	1984	3828985.002	277075.164	35.21	33.37	6	21	27	12	S
IR69-GW03DW	1994	3828983.204	277069.632	36.05	33.86	50	60	-16	-26	UCH
IR69-GW03BCH	1996	3828987.974	277069.089	37.03	35.08	220	230	-185	-195	LCH
IR69-GW04	1984	3829101.907	277109.374	39.98	37.65	6	21	32	17	S
IR69-MW04IW	2010	3829110.586	277105.257	39.49	36.94	45	50	-8	-13	UCH
IR69-MW04DW	2010	3829104.801	277103.053	38.58	37.00	85	90	-48	-53	MCH
IR69-GW05	1984	3829159.14	277026.073	34.51	32.17	7	21	26	12	S
IR69-MW05IW	2010	3829156.622	277031.193	35.01	32.27	54	59	-22	-27	UCH
IR69-MW05DW	2010	3829154.056	277027.186	34.92	32.52	86	91	-53	-58	MCH
IR69-GW06	1984	3829166.372	276954.489	28.86	26.61	17	31	10	-4	S
IR69-GW07	1984	3829206.956	276939.141	18.08	15.79	7	21	9	-5	S
IR69-GW08	1984	3829043.732	276919.187	35.90	33.58	6	20	28	14	S
IR69-GW09	1994	3829239.736	277127.475	11.11	8.15	10	20	-2	-12	S
IR69-MW09IW	2010	3829238.436	277132.032	10.93	8.45	33	38	-25	-30	UCH
IR69-MW09DW	2010	3829236.442	277129.822	11.31	8.77	65	70	-56	-61	MCH
IR69-GW10	1994	3829108.175	277007.725	40.52	38.00	6	16	32	22	S
IR69-GW11	1994	3828989.445	277166.850	27.43	24.84	9	19	16	6	S
IR69-MW11IW	2010	3829002.422	277150.973	29.58	27.29	44	49	-17	-22	UCH
IR69-MW11DW	2010	3828996.626	277145.947	29.71	27.30	75	80	-48	-53	MCH
IR69-GW12	1994	3828922.142	277130.479	9.74	7.46	2	12	5	-5	S
IR69-GW12DW	1994	3828913.471	277130.584	7.99	6.43	48	58	-42	-52	MCH
IR69-GW13	1994	3829074.595	277192.864	36.87	34.94	3	13	32	22	S
IR69-GW13IW	1994	3829072.282	277187.973	36.77	34.56	50	60	-15	-25	UCH
IR69-MW13DW	2010	3829068.062	277193.268	37.11	34.93	85	90	-50	-55	MCH
IR69-GW14	1994	3828935.214	277015.671	33.73	31.84	3	13	29	19	S
IR69-GW14IW	1994	3828935.829	277018.769	33.78	31.69	45	60	-13	-28	UCH
IR69-GW14DW	1994	3828936.542	277021.419	33.74	31.66	110	125	-78	-93	MCH
IR69-GW15	1995	3829017.755	277022.208	35.92	34.67	3	13	32	22	S
IR69-GW15IW	1995	3829018.065	277019.803	36.05	34.64	45	60	-10	-25	UCH
IR69-GW15DW	1995	3829017.133	277016.329	35.97	34.51	110	120	-75	-85	MCH
IR69-GW15BCH	1996	3829009.207	277034.644	37.12	35.11	220	230	-185	-195	LCH
IR69-GW19IW	1996	3829027.707	277071.893	37.53	35.33	70	73	-35	-38	UCH
IR69-GW19UW	1996	3829031.214	277071.550	37.67	35.15	36	46	-1	-11	UCH
IR69-MW26IW	2010	3829053.042	276992.407	40.02	37.58	45	50	-7	-12	UCH
IR69-MW26DW	2010	3829052.352	276995.995	39.70	37.30	86	91	-49	-54	MCH
IR69-MW27IW	2010	3829161.469	277163.691	30.46	28.09	35	40	-7	-12	UCH
IR69-MW27DW	2010	3829164.803	277163.178	30.39	27.95	70	75	-42	-47	MCH
IR69-MW28IW	2010	3829067.487	277302.745	34.00	31.00	50	55	-19	-24	UCH
IR69-MW28DW	2010	3829064.574	277304.799	33.64	31.06	81	86	-49	-54	MCH
IR69-MW29IW	2011	NA	NA	NA	NA	55	60	NA	NA	UCH
IR69-MW30IW	2011	NA	NA	NA	NA	40	45	NA	NA	UCH
IR69-MW31IW	2011	NA	NA	NA	NA	55	60	NA	NA	UCH
IR69-MW04DD	2011	NA	NA	NA	NA	115	120	NA	NA	MCH
IR69-MW11DD	2011	NA	NA	NA	NA	116	121	NA	NA	MCH

Notes:
North American Datum of 1983 (NAD83-2007)
North American Vertical Datum of 1988 (NAVD88)
Universal Transverse Mercator (UTM) Zone 18 - Meters
ft msl - feet above mean sea level
ft bgs - feet below ground surface
NA - Information not available

S - Surficial Aquifer
UCH - Upper Castle Hayne Aquifer
MCH - Middle Castle Hayne Aquifer
LCH - Lower Castle Hayne Aquifer

TABLE 3-4
Groundwater Samples and Analytical Parameters
Supplemental Investigation Site 69, Operable Unit No. 14
MCB CamLej, North Carolina

Well/Station ID	Sample ID	VOC (EPA Method 8260B)	SVOC and PAH (EPA Methods 8270C/8270C_SIM)	Target Analyte List Metals (EPA Method 6010B)	Target Analyte List Metals - Filtered (EPA Method 6010B)	OP Pesticides (EPA Method 8141A)	OC Pesticides (EPA Method 3550B/808)	PCB (EPA Method 8082)	Natural Attenuation Indicator Parameters (NAIPs)	Microbial
IR69-GW01	IR69-GW01-10A	X	X	X		X	X	X	X	
IR69-GW02	IR69-GW02-10A	X	X	X		X	X	X	X	
IR69-GW02DD	IR69-GW02DD-10A	X	X	X		X	X	X	X	
IR69-GW02DW	IR69-GW02DW-10A	X	X	X		X	X	X	X	
IR69-GW02BCH	IR69-GW02BCH-10A	X	X	X		X	X	X	X	
IR69-GW03	IR69-GW03-10A	X	X	X		X	X	X	X	
IR69-GW03DW	IR69-GW03DW-10A	X	X	X		X	X	X	X	
IR69-GW03BCH	IR69-GW03BCH-10A	X	X	X		X	X	X	X	
IR69-GW04	IR69-GW04-10A	X	X	X		X	X	X	X	
IR69-MW04IW	IR69-GW04IW-10A	X	X	X		X	X	X	X	
IR69-MW04DW	IR69-GW04DW-10A	X	X	X		X	X	X	X	
IR69-GW05	IR69-GW05-10A	X	X	X		X	X	X	X	
IR69-MW05IW	IR69-GW05IW-10A	X	X	X		X	X	X	X	
IR69-MW05DW	IR69-GW05DW-10A	X	X	X		X	X	X	X	
IR69-GW06	IR69-GW06-10A	X	X	X		X	X	X	X	
IR69-GW07	IR69-GW07-10A	X	X	X		X	X	X	X	
IR69-GW08	IR69-GW08-10A	X	X	X		X	X	X	X	
IR69-GW09	IR69-GW09-10A	X	X	X	X	X	X	X	X	
IR69-MW09IW	IR69-GW09IW-10A	X	X	X		X	X	X	X	
IR69-MW09DW	IR69-GW09DW-10A	X	X	X		X	X	X	X	
IR69-GW10	IR69-GW10-10A	X	X	X		X	X	X	X	
IR69-GW11	IR69-GW11-10A	X	X	X	X	X	X	X	X	
IR69-MW11IW	IR69-GW11IW-10A	X	X	X		X	X	X	X	X
IR69-MW11DW	IR69-GW11DW-10A	X	X	X		X	X	X	X	X
IR69-GW12	IR69-GW12-10A	X	X	X	X	X	X	X	X	
IR69-GW12DW	IR69-GW12DW-10A	X	X	X		X	X	X	X	
IR69-GW13	IR69-GW13-10A	X	X	X	X	X	X	X	X	
IR69-MW13IW	IR69-GW13IW-10A	X	X	X		X	X	X	X	X
IR69-MW13DW	IR69-GW13DW-10A	X	X	X		X	X	X	X	X
IR69-GW14	IR69-GW14-10A	X	X	X		X	X	X	X	
IR69-GW14IW	IR69-GW14IW-10A	X	X	X		X	X	X	X	
IR69-GW14DW	IR69-GW14DW-10A	X	X	X		X	X	X	X	
IR69-GW15	IR69-GW15-10A	X	X	X		X	X	X	X	
IR69-GW15IW	IR69-GW15IW-10A	X	X	X		X	X	X	X	
IR69-GW15DW	IR69-GW15DW-10A	X	X	X		X	X	X	X	
IR69-GW15BCH	IR69-GW15BCH-10A	X	X	X		X	X	X	X	
IR69-GW19IW	IR69-GW19IW-10A	X	X	X		X	X	X	X	
IR69-GW19UW	IR69-GW19UW-10A	X	X	X		X	X	X	X	
IR69-MW26IW	IR69-GW26IW-10A	X	X	X		X	X	X	X	X
IR69-MW26DW	IR69-GW26DW-10A	X	X	X		X	X	X	X	
IR69-MW27IW	IR69-GW27IW-10A	X	X	X		X	X	X	X	
IR69-MW27DW	IR69-GW27DW-10A	X	X	X		X	X	X	X	
IR69-MW28IW	IR69-GW28IW-10A	X	X	X		X	X	X	X	
IR69-MW28DW	IR69-GW28DW-10A	X	X	X		X	X	X	X	
IR69-MW29IW	IR69-GW29IW-11A	X								
IR69-MW30IW	IR69-GW30IW-11A	X								
IR69-MW31IW	IR69-GW31IW-11A	X								
IR69-MW04DD	IR69-GW04DD-11A	X								
IR69-MW11DD	IR69-GW11DD-11A	X								

Notes:
Analytical method in parenthesis
VOC - volatile organic compound
SVOC - semi-volatile organic compound
PAH - polycyclic aromatic compound
OP - organophosphate
OC - organochlorine
PCB - polychlorinated biphenyls

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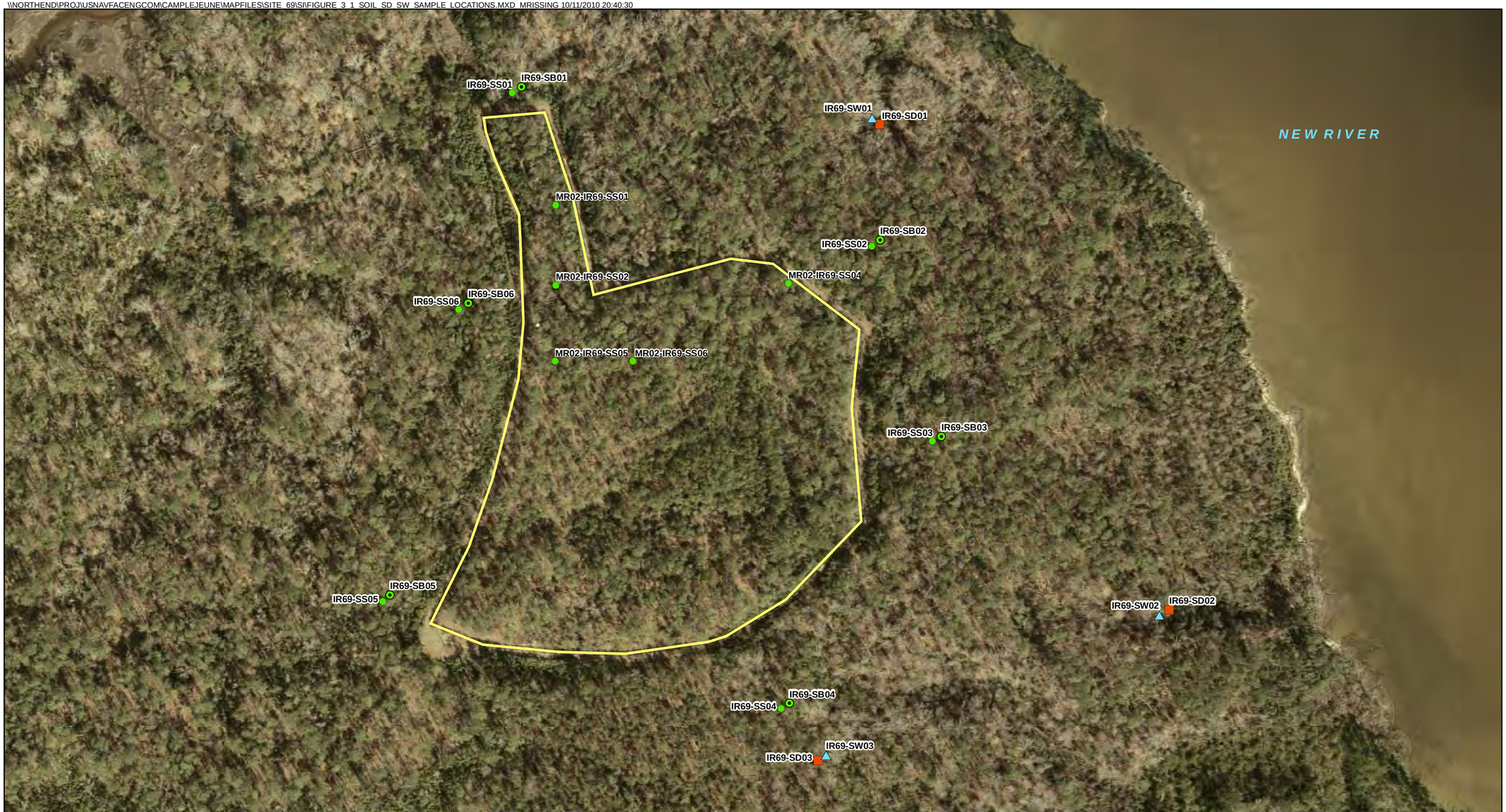

Legend

Sampling Locations

- Surface Soil
- Subsurface Soil
- Surface Water
- Sediment
- Site 69

N

0 100 200 400 Feet

1 inch = 200 feet

Figure 3-1
Surface Water, Sediment, and Soil Sample Locations
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

CH2MHILL

Generated By: *K. Rogers/RDU* Checked by: *T. Grim/CLT*

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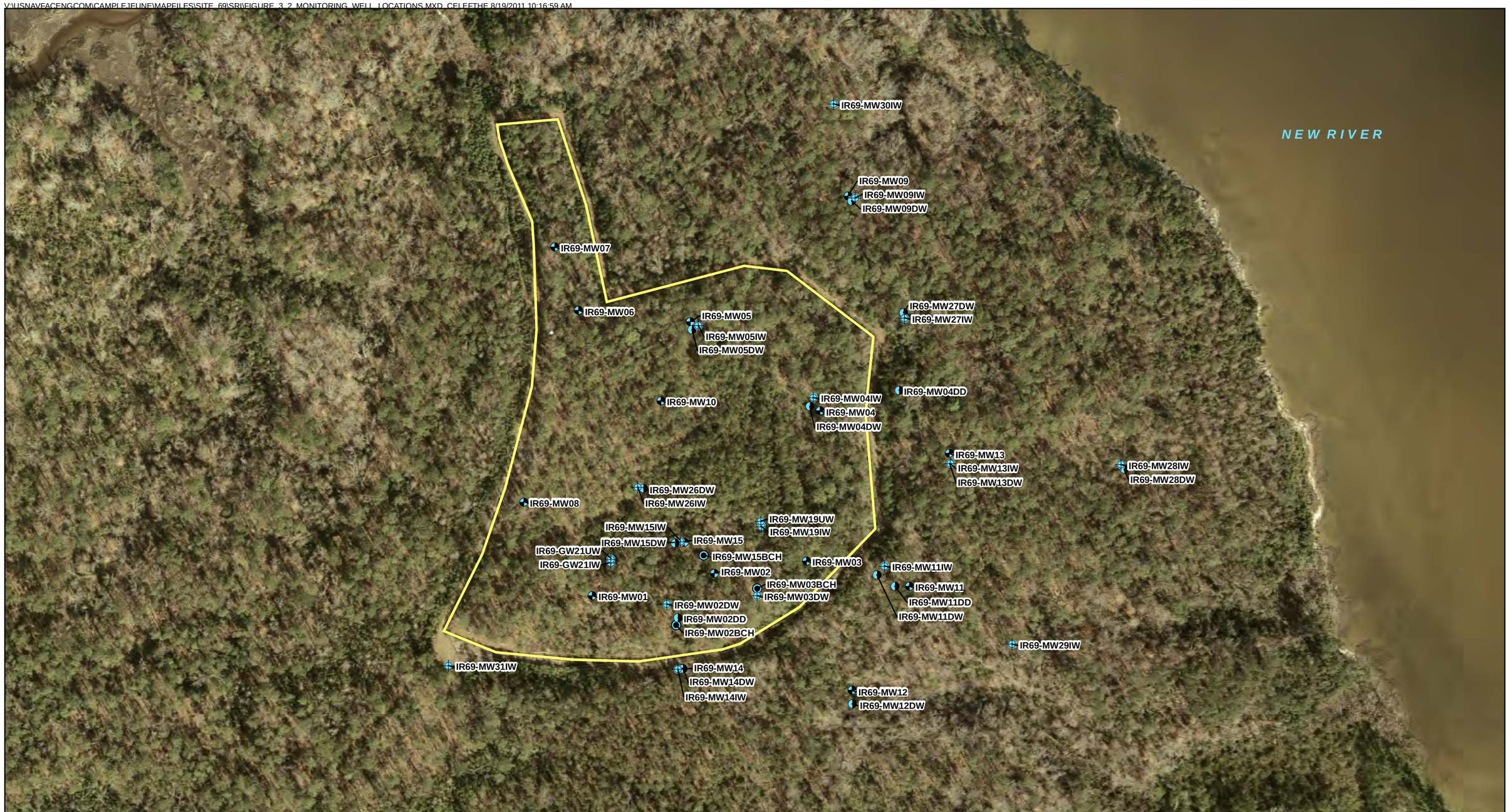

Legend

- Surficial Aquifer Well Location
- Upper Castle Hayne Aquifer Well Location
- Middle Castle Hayne Aquifer Well Location
- Lower Castle Hayne Aquifer Well Location
- Site 69 Boundary

N

0 100 200 400 Feet

1 inch = 200 feet

Figure 3-2
Monitoring Well Locations
Operable Unit No. 14 (Site 69)
Supplemental Remedial Investigation
MCB CamLej
North Carolina

CH2MHILL

SECTION 4

Physical Characteristics

This section describes the physical characteristics of the region, MCB CamLej, and Site 69 in particular.

4.1 Regional and Facility-wide Physiography, Climate, and Surface Water Hydrology

MCB CamLej lies within the Tidewater region of the Atlantic Coastal Plain Physiographic Province in North Carolina (**Figure 4-1**). This province extends from Georgia to Long Island, New York. The physiography of MCB CamLej and the surrounding area is typical of the Atlantic Coastal Plain, with stepped terraces consisting of wide, gently eastward-sloping plains separated by linear, steeper, northward- and eastward-facing scarps. The surface topography within MCB CamLej ranges from sea level to approximately 70 feet amsl, with the majority of the Base ranging between 20 and 40 feet amsl. The New River and its tributaries bisect MCB CamLej, and the land surface generally slopes toward the New River with a grade of approximately 0.5 percent.

Climatic conditions within southeastern North Carolina, including MCB CamLej, are generally characterized by short, mild winters and long, hot summers. Average annual net precipitation is approximately 50 inches. Ambient air temperatures generally range between 33 and 53 degrees Fahrenheit (°F) in the winter months and between 71°F and 88°F in the summer months. Winds are generally south to southwesterly in the summer and north to northwesterly in the winter.

4.2 Site 69 Topography, Drainage, and Surface Features

Site 69 occupies the crest of a low-lying west-east trending ridge that gently slopes toward the east and the New River. Minor tributaries of the New River border the Site to the north and south. The ground surface elevation within Site 69 ranges from approximately 20 to 38 feet amsl. Site 69 is covered with vegetation and heavily wooded, primarily with pine, dogwood, and oak. The wooded areas east of the Site boundary are bisected by numerous small streams and drainage features. The surface and outer perimeter of Site 69 is unpaved, although a dirt road leading to the Site and around the perimeter fence currently exists.

Surface runoff tends to drain east to the New River and north to northeast toward the unnamed tributary through several incised streams and wetland areas. Surface runoff from the southwestern portion of the Site drains into the Everett Creek basin and eventually to the New River. To the southeast, surface flow drains through stream channels to the New River. The surface hydrologic features of Site 69 are shown on **Figure 4-2**.

Evidence of trench disposal activities is present in the form of shallow, elongated surface depressions, and slumping associated with settlement.

4.3 Geology and Hydrogeology

4.3.1 General Regional Geologic and Hydrogeologic Framework

MCB CamLej is underlain by an eastward-thickening wedge of marine and non-marine sediments ranging in age from early Cretaceous to Holocene. These sediments extend from the Fall Line (western boundary of Atlantic Coastal Plain Physiographic Province) and dip to the southeast toward the coast. Along the coastline, several thousand feet of interlayered and unconsolidated sediments consisting of gravel, sand, silt, clay deposits, calcareous clays, shell beds, sandstone, and limestone mantle the pre-Cretaceous crystalline basement rock. Minor amounts of detrital carbonate shells and secondary minerals such as glauconite, siderite, and chlorite often distinguish these sedimentary units.

Coastal Plain sedimentation and deposition were controlled by fluctuations in sea level on a subsiding continental margin in marine and near-shore environments (Winner and Coble, 1989). Confining units associated with specific aquifers within the Coastal Plain region are composed of less permeable beds of clay and silt. Within Onslow County, seven aquifers and their associated confining units, including the surficial, Castle Hayne, Beaufort, Peedee, Black Creek, Upper Cape Fear, and Lower Cape Fear, are present in approximately 1,500 feet of sedimentary sequence that overlies the basement rock (Cardinell et al., 1993). **Table 4-1** presents a summary of the Quaternary and Tertiary geologic and hydrogeologic units of the North Carolina Coastal Plain.

Recharge of aquifers within the Coastal Plain region generally occurs within interstream areas, and has been estimated in the range of 5 to 21 inches yearly (Heath, 1989). Natural discharge of groundwater from the Coastal Plain aquifer system is generally into streams, swamps, and lakes. Evapotranspiration from the soil zone and upward leakage through confining units into streams, estuaries, swamps, and the ocean contribute to groundwater discharge. The New River estuary serves as the principal discharge area for groundwater from the Castle Hayne aquifer within the vicinity of MCB CamLej (Harned et al., 1989).

4.3.2 Site-Specific Geologic and Hydrogeologic Framework

This section presents the geological and hydrogeological characteristics of Site 69 based on SI field activities and previous investigation results. **Figure 4-3** depicts the locations of two geologic cross-sections (A-A′ and B-B′) shown by **Figures 4-4** and **4-5**. These interpretations are based upon previous investigations conducted by Baker and supplemented with the 2010 field data collected by CH2M HILL. Groundwater elevations were collected in March 2010 and are provided on **Table 4-2**. Potentiometric surface maps for each aquifer are provided in **Figures 4-6** through **4-9**.

Geology at Site 69 consists of three distinct geologic formations (undifferentiated sediments, the Belgrade Formation, and the River Bend Formation), which correspond to the surficial aquifer, Castle Hayne confining unit, and Castle Hayne aquifer, respectively. The following is a detailed description of the geologic formations and corresponding aquifers:

- Undifferentiated Sediments (surficial aquifer): Consist mostly of fine-grained sand with lesser amounts of clay and silt, extending to a depth of 6 to 18 feet bgs. Sands are light brown or pale brown in color, loose, and poorly graded. Monitoring wells screened

from 15 to 25 feet bgs are considered to represent conditions within the surficial aquifer. Groundwater elevations in the surficial aquifer, measured in March 2010, ranged from 3.56 feet amsl (in monitoring well IR69-GW09) to 34.04 feet amsl (in monitoring well IR69-GW10) (**Table 4-2**). **Figure 4-6** presents the potentiometric surface of the water table (surficial aquifer) and indicates that shallow groundwater flows radially outward from the center of Site 69 toward drainage features to the northeast, southeast, and the New River to the east. The average hydraulic gradient was calculated to be 0.042 feet per foot (ft/ft).

- Belgrade Formation (Castle Hayne confining unit): Consists mostly of moderate to high plasticity silty clays with lesser amounts of sand. The unit is mostly bluish gray. The silty clay unit appears to be laterally continuous across the Site. The unit ranges in thickness from 12 feet near the New River, as observed in monitoring wells IR69-GW09DW and IR69-GW28DW, to 30 feet in the central portion of the Site as observed in monitoring well IR69-GW27 (**Figures 4-4** and **4-5**).

- River Bend Formation (upper Castle Hayne aquifer): Consists mostly of fine to medium-grained bluish gray sands and silty sand. Abundant shell fragments (mostly bivalves and gastropods) were encountered in the upper River Bend deposits, up to 10 feet thick, but decreased in frequency with depth. Cemented sands were found to occur as laterally discontinuous lenses. This unit ranges in thickness from 18 to 38 feet. Monitoring wells screened from 33 to 75 feet bgs are considered to represent conditions in the upper Castle Hayne aquifer network. Groundwater elevations in the upper Castle Hayne aquifer, measured in March 2010, ranged from 3.21 feet amsl (in IR69-MW09IW) to 8.88 feet amsl (in IR69-GW14IW) (**Table 4-2**). Groundwater in the upper Castle Hayne aquifer generally flows toward the northeast with an average hydraulic gradient of 0.006 ft/ft (**Figure 4-7**).

- River Bend Formation (marker bed): Consists of a fossiliferous limestone unit that separates the upper and middle Castle Hayne aquifers (**Figure 4-4** and **4-5**). This limestone unit is light bluish gray in color with moderate to strong cementation and appears to be laterally continuous across the Site. The limestone unit ranges in thickness from 2 to 8 feet.

- River Bend Formation (middle Castle Hayne aquifer): Consists mostly of dark greenish gray, fine-grained, silty sand with a greater percentage of silt than the upper portion of the River Bend Formation. Monitoring wells screened from 48 to 125 feet bgs are considered to represent conditions in the middle Castle Hayne aquifer. Groundwater elevations measured in March 2010 ranged from 2.91 feet amsl (in IR69-MW04DW) to 5.00 feet amsl (in IR69-GW14DW) (**Table 4-2**). The direction of groundwater flow appears to be to the northeast with an average hydraulic gradient of 0.002 ft/ft (**Figure 4-8**).

- River Bend Formation (lower Castle Hayne aquifer): Consists of alternating layers of sand, silt, and limestone, similar to the middle portion of the River Bend Formation (**Figure 4-4** and **4-5**). The lower River Bend section was not observed during the SI field effort and limited information is available as only three monitoring wells are screened in the lower Castle Hayne aquifer (from 220 to 230 feet bgs). The total depth of the River Bend Formation (and Castle Hayne aquifer) is unknown, as data on geologic conditions

deeper than 230 feet bgs are unavailable and a confining or differentiating unit at the bottom of the Castle Hayne aquifer has not been encountered at Site 69. Groundwater elevations measured in March 2010 ranged from 7.57 feet amsl (in IR69-GW03BCH) to 7.74 feet amsl (in IR69-GW02BCH) (**Table 4-2**). Based on measurements from the three lower Castle Hayne aquifer monitoring wells, groundwater flows to the east with an average hydraulic gradient of 0.001 ft/ft (**Figure 4-9**)

Vertical hydraulic potentials were calculated between the surficial and Castle Hayne aquifers using the water level data measured between adjacent wells screened in the respective aquifers. The vertical hydraulic potentials were calculated by dividing the difference in water-level elevations by the distance between the center points of the screened intervals of the two wells. The vertical hydraulic potential calculations are summarized in **Table 4-3**. Based on the March 2010 water-level data, a downward potential exists, ranging from 0.008 to 0.817 ft/ft, between all monitoring well pairs except IR69-GW02DW/IR69-GW02DD, which has a slight upward potential of 0.0278 ft/ft.

Previous investigations included in-situ aquifer testing ('slug tests') (Baker). The testing utilized monitoring wells IR69-GW09, IR69-GW10, IR69-GW12, IR69- GW02DW, IR69-GW12DW, and IR69-GW15IW. The geometric mean hydraulic conductivity calculated for the surficial aquifer was 0.32 foot per day (ft/day) (1.12×10^{-4} centimeters per second [cm/sec]), and the geometric mean for the upper Castle Hayne aquifer was 1.3 ft/day (4.58×10^{-4} cm/sec). These values were calculated using the Bouwer and Rice (1976) method for unconfined aquifers. These values are consistent with expected values of hydraulic conductivity for the well-sorted fine sands observed at the Site (Fetter, 1986).

In 1994, Baker calculated a linear seepage velocity for the surficial aquifer to be 0.06 ft/day (approximately 22 feet per year [ft/year]). The upper Castle Hayne aquifer linear seepage velocity had a geometric mean of 0.03 ft/day (approximately 11 ft/year), using an effective porosity (n_e) value of 0.33 for fine sands.

4.3.3 Regional Water Usage

Regionally in southeastern North Carolina, the Castle Hayne aquifer may be utilized as a potable source of domestic water supply, and/or for irrigation, including watering lawns or filling swimming pools. Potable water available to MCB CamLej and the surrounding residential area is provided by water supply wells that pump groundwater from the Castle Hayne aquifer. Although freshwater is present within the surficial, Castle Hayne, Beaufort, and Peedee aquifers, all of which are located below MCB CamLej, only the Castle Hayne aquifer is used by MCB CamLej as a water supply source (Cardinell et al., 1993).

The closest active water supply wells on base are located more than 2 miles from Site 69, across the New River.

Table 4-1
Hydrostratigraphic Units of the North Carolina Coastal Plain
Supplemental Investigation Site 69, Operable Unit No. 14
MCB CamLej, North Carolina

Geologic Units			Hydrogeologic Units
System	**Series**	**Formation**	**Aquifer and Confining Unit**
Quaternary	Holocene/Pleistocene	Undifferentiated	Surficial Aquifer
Tertiary	Pliocene	Pinehurst[1]	Yorktown confining unit[1]
		Waccamaw[1]	Yorktown Aquifer[1]
	Miocene	Yorktown[1]	Yorktown Aquifer[1]
			Pungo River confining unit[1]
		Pungo River[1]	Pungo River Aquifer[1]
		Belgrade	Castle Hayne confining unit
	Oligocene	Belgrade	Castle Hayne confining unit
		River Bend	Castle Hayne Aquifer
	Eocene	Castle Hayne	Castle Hayne Aquifer

Notes:

[1] Geologic and hydrogeologic units not present beneath MCB Camp Lejeune.

Source: Modified from Harned et al., 1989.

Table 4-2
Summary of Groundwater Elevations
Supplemental Investigation Site 69, Operable Unit No. 14
MCB CamLej, North Carolina

Well Identification	Date (mm/dd/yy)	DTW (ft btoc)	TOC (ft msl)	Well Depth (ft btoc)	Water Elevation (ft msl)	Aquifer
IR69-GW01	03/19/10	3.80	30.71	22.81	26.91	S
IR69-GW02	03/19/10	4.62	35.50	20.15	30.88	S
IR69-GW02DW	03/19/10	27.14	35.52	50.92	8.38	MCH
IR69-GW02DD	03/19/10	30.68	35.50	128.91	4.82	UCH
IR69-GW02BCH	03/19/10	27.58	35.32	232.38	7.74	LCH
IR69-GW03	03/19/10	5.25	35.21	19.38	29.96	S
IR69-GW03DW	03/19/10	27.78	36.05	62.70	8.27	UCH
IR69-GW03BCH	03/19/10	29.46	37.03	230.30	7.57	LCH
IR69-GW04	03/19/10	6.33	39.98	18.65	33.65	S
IR69-MW04IW	03/19/10	33.63	39.49	50.18	5.86	UCH
IR69-MW04DD	03/15/11	35.63	NM	120.33	NM	MCH
IR69-MW04DW	03/19/10	35.67	38.58	92.30	2.91	MCH
IR69-GW05	03/19/10	9.73	34.57	23.11	24.84	S
IR69-MW05IW	03/19/10	29.81	35.01	62.01	5.20	UCH
IR69-MW05DW	03/19/10	30.87	34.92	93.20	4.05	MCH
IR69-GW06	03/19/10	12.41	28.86	33.15	16.45	S
IR69-GW07	03/19/10	10.72	18.08	22.82	7.36	S
IR69-GW08	03/19/10	7.92	35.90	22.15	27.98	S
IR69-GW09	03/19/10	7.55	11.11	23.26	3.56	S
IR69-MW09IW	03/19/10	7.72	10.93	40.44	3.21	UCH
IR69-MW09DW	03/19/10	8.18	11.31	72.73	3.13	MCH
IR69-GW10	03/19/10	6.48	40.52	18.58	34.04	S
IR69-GW11	03/19/10	5.56	27.43	21.63	21.87	S
IR69-MW11IW	03/19/10	23.37	29.58	52.03	6.21	UCH
IR69-MW11DD	03/15/11	26.20	NM	122.22	NM	MCH
IR69-MW11DW	03/19/10	25.53	29.71	82.25	4.18	MCH
IR69-GW12	03/19/10	3.85	9.74	15.50	5.89	S
IR69-GW12DW	03/19/10	3.56	7.99	58.80	4.43	UCH
IR69-GW13	03/19/10	4.35	36.87	14.61	32.52	S
IR69-GW13IW	03/19/10	32.71	37.11	63.10	4.40	UCH
IR69-MW13DW	03/19/10	32.80	36.77	91.21	3.97	MCH
IR69-GW14	03/19/10	5.29	33.73	15.10	28.44	S
IR69-GW14IW	03/19/10	24.90	33.78	63.38	8.88	UCH
IR69-GW14DW	03/19/10	28.74	33.74	127.08	5.00	MCH
IR69-GW15	03/19/10	2.22	35.97	14.59	33.75	S
IR69-GW15IW	03/19/10	28.23	36.05	60.80	7.82	UCH
IR69-GW15DW	03/19/10	31.38	35.97	121.85	4.59	MCH
IR69-GW15BCH	03/19/10	29.41	37.12	251.30	7.71	LCH
IR69-GW19IW	03/19/10	30.13	37.53	75.65	7.40	UCH
IR69-GW19UW	03/19/10	30.15	37.67	48.03	7.52	UCH
IR69-MW26IW	03/19/10	33.09	40.02	51.65	6.93	UCH
IR69-MW26DW	03/19/10	34.98	39.70	93.10	4.72	MCH
IR69-MW27IW	03/19/10	25.57	30.46	41.85	4.89	UCH
IR69-MW27DW	03/19/10	26.69	30.39	77.55	3.70	MCH
IR69-MW28IW	03/19/10	30.72	34.00	54.95	3.28	UCH
IR69-MW28DW	03/19/10	30.61	33.64	88.55	3.03	MCH
IR69-MW29IW	03/15/11	29.09	NM	61.11	NM	UCH
IR69-MW30IW	03/15/11	18.97	NM	45.33	NM	UCH
IR69-MW31IW	03/15/11	24.57	NM	59.23	NM	UCH

Notes:
ft bTOC - feet below top of casing
ft msl - feet above mean sea level
DTW - Depth to Water
TOC - Top of Well Casing
NM - Not Measured

S - Surficial aquifer
UCH - Upper Castle Hayne aquifer
MCH - Middle Castle Hayne aquifer
LCH - Lower Castle Hayne aquifer

Table 4-3
Vertical Hydraulic Gradient Calculations
Supplemental Investigation Site 69, Operable Unit No. 14
MCB CamLej, North Carolina

Well ID	Date	DTW (ft bTOC)	TOC (ft msl)	Well Depth (ft)	Water Elevation (ft msl)	Screen Interval (ft)	Center Point of Screen (ft)	Vertical Gradient
GW02	03/19/10	4.62	35.50	20.15	30.88	6 to 21	13.5	**DOWN**
GW02DW	03/19/10	27.14	35.52	50.92	8.38	40 to 50	45	-0.7143
GW02DW	03/19/10	27.14	35.52	50.92	8.38	40 to 50	45	**DOWN**
GW02DD	03/19/10	30.68	35.50	128.91	4.82	115 to 125	120	-0.1130
GW02DD	03/19/10	30.68	35.50	128.91	4.82	115 to 125	120	**UP**
GW02BCH	03/19/10	27.58	35.32	232.38	7.74	220 to 230	225	0.0278
GW03	03/19/10	5.25	35.21	19.38	29.96	6 to 21	13.5	**DOWN**
GW03DW	03/19/10	27.78	36.05	62.70	8.27	50 to 60	55	-0.5227
GW03DW	03/19/10	27.78	36.05	62.70	8.27	50 to 60	55	**DOWN**
GW03BCH	03/19/10	29.46	37.03	230.30	7.57	220 to 230	225	-0.0041
GW04	03/19/10	6.33	39.98	18.65	33.65	6 to 21	13.5	**DOWN**
MW04IW	03/19/10	33.63	39.49	50.18	5.86	45 to 50	47.5	-0.8174
MW04IW	03/19/10	33.63	39.49	50.18	5.86	45 to 50	47.5	**DOWN**
MW04DW	03/19/10	35.67	38.58	92.30	2.91	85 to 90	87.5	-0.0738
GW13	03/19/10	4.35	36.87	14.61	32.52	3 to 13	8	**DOWN**
GW13IW	03/19/10	32.71	37.11	63.10	4.40	50 to 60	55	-0.5983
GW13IW	03/19/10	32.71	37.11	63.10	4.40	50 to 60	55	**DOWN**
MW13DW	03/19/10	32.80	36.77	91.21	3.97	85 to 90	87.5	-0.0132
MW26IW	03/19/10	33.09	40.02	51.65	6.93	45 to 50	47.5	**DOWN**
MW26DW	03/19/10	34.98	39.70	93.10	4.72	86 to 91	88.5	-0.0539
MW27IW	03/19/10	25.57	30.46	41.85	4.89	35 to 40	37.5	**DOWN**
MW27DW	03/19/10	26.69	30.39	77.55	3.70	70 to 75	72.5	-0.0340
MW28IW	03/19/10	30.72	34.00	54.95	3.28	50 to 55	52.5	**DOWN**
MW28DW	03/19/10	30.61	33.64	88.55	3.03	81 to 86	83.5	-0.0081

Notes:
DTW - depth to water
bgs - below ground surface
TOC - top of casing
msl - mean sea level

Source: USGS Report by Cardinell, A.P., S.A. Berg, and O.B. Lloyd, Jr. (1993)

Figure 4-1
Physiographic Provinces of Eastern North Carolina
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

CH2MHILL

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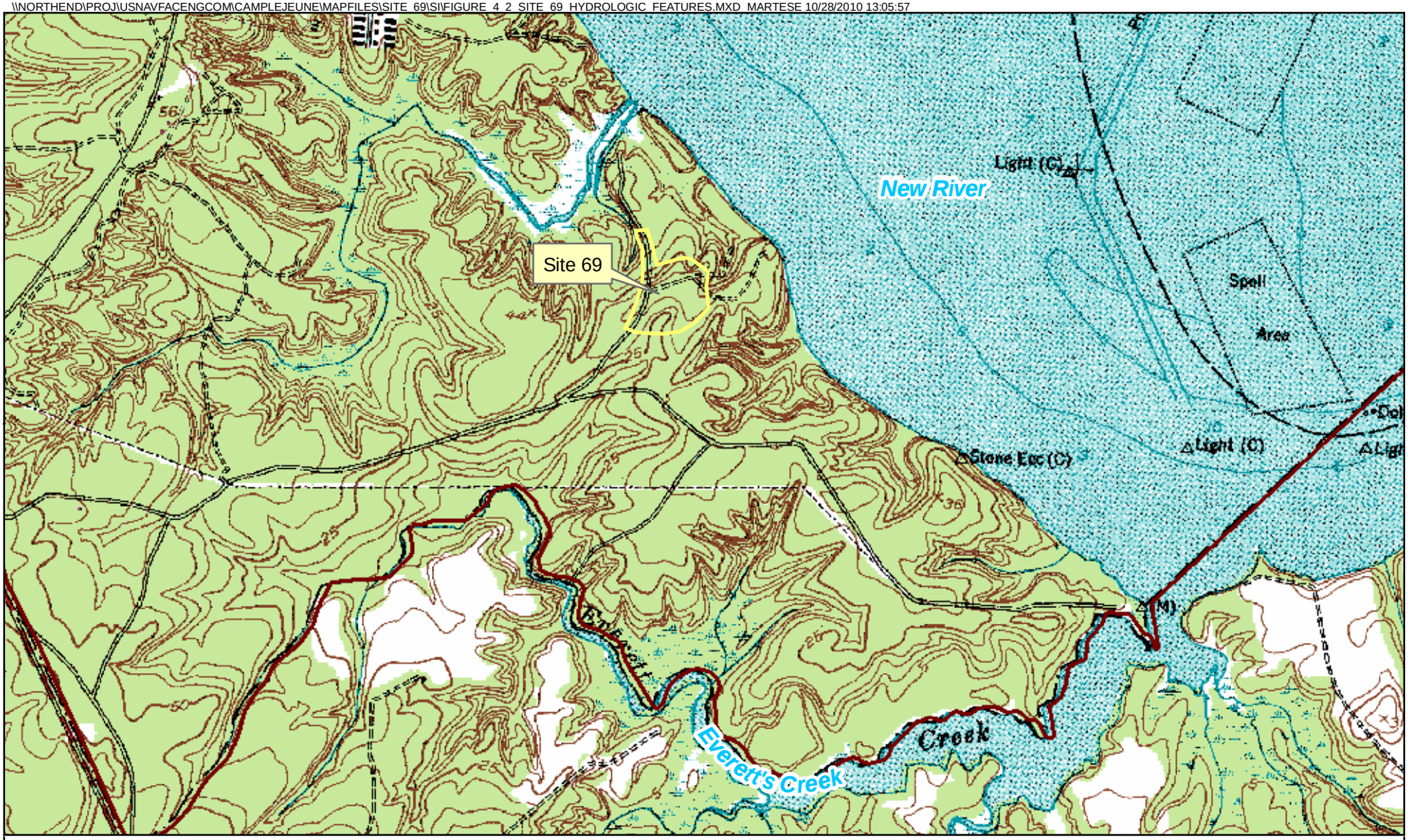

Legend

— Topographic Contour

Site 69 Boundary

N

0 750 1,500 3,000 Feet

1 inch = 1,500 feet

USGS 15-min quadrangle
Sneads Ferry, NC
Quad sheet 034077E4

Figure 4-2
Hydrologic Features
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

CH2MHILL

Generated By: ***K. Rogers/RDU*** Checked by: ***T. Grim/CLT***

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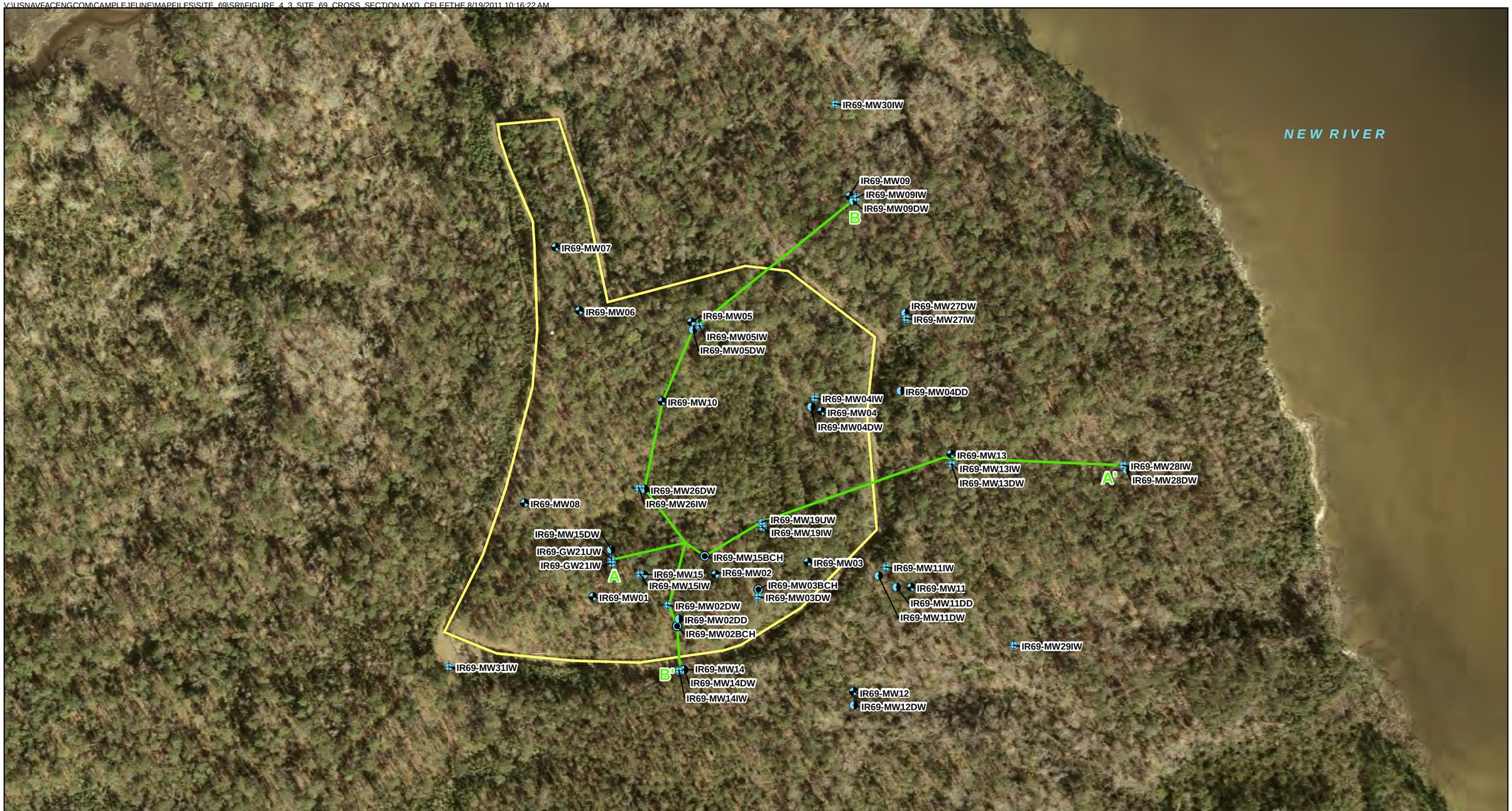


Legend

- Surficial Aquifer Well Location
- Upper Castle Hayne Aquifer Well Location
- Middle Castle Hayne Aquifer Well Location
- Lower Castle Hayne Aquifer Well Location
- Cross Section
- Site 69 Boundary

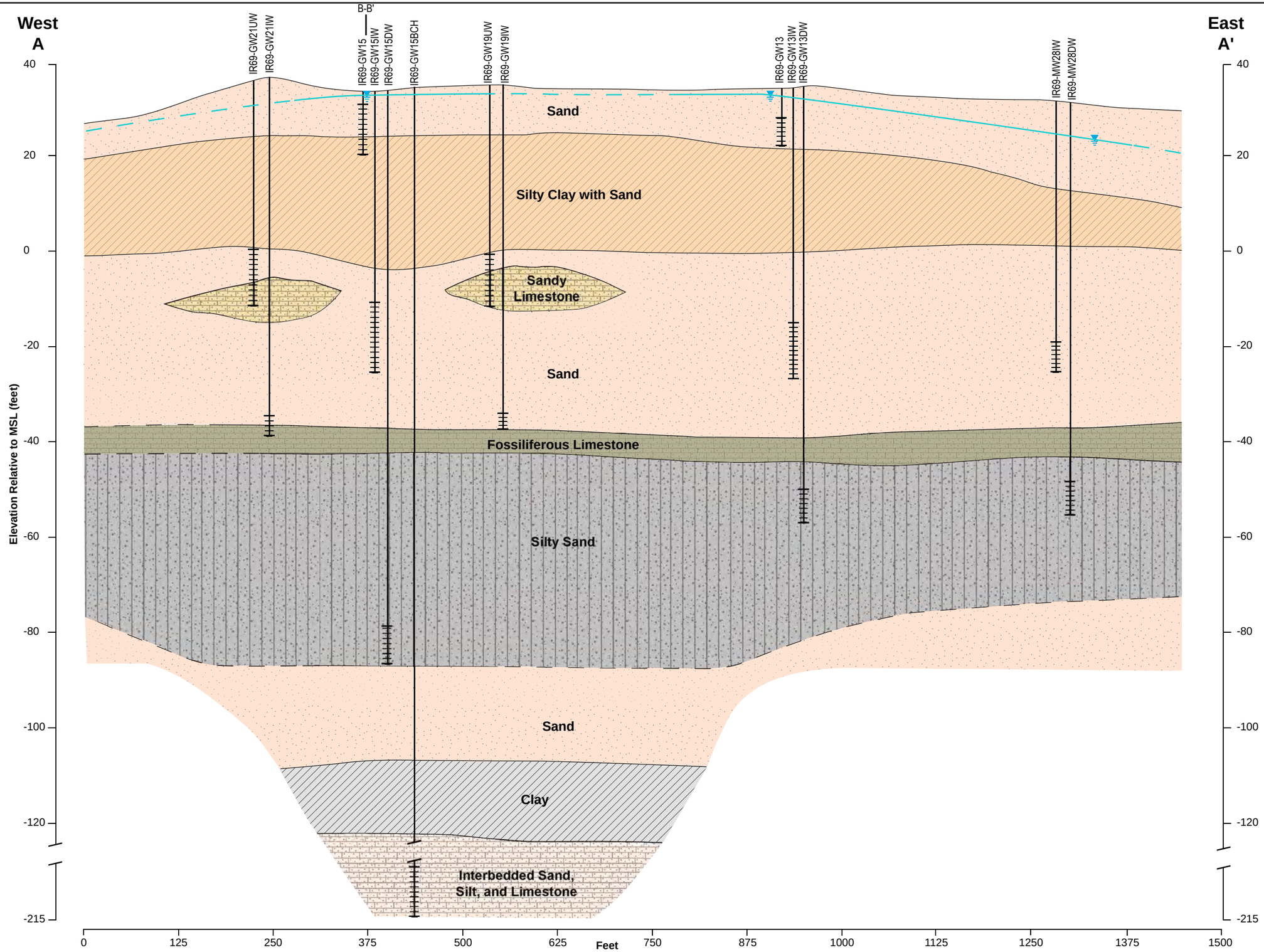
N

0 100 200 400 Feet

1 inch = 200 feet

Figure 4-3
Hydrogeological Cross Section Layout
Operable Unit No. 14 (Site 69)
Supplemental Remedial Investigation
MCB CamLej
North Carolina

CH2MHILL



Horizontal : 1" = 125'
Vertical: 1" = 20'
V.E. = 6.25x

LEGEND

- Sand
- Silty clay with sand
- Silty Sand
- Fossiliferous Limestone and Cemented Sand
- Sandy Limestone
- Interbedded Sand, Silt, and Limestone
- Clay
- Screened Interval
- Geologic Contact (dashed where inferred)
- Water Table (dashed where inferred)

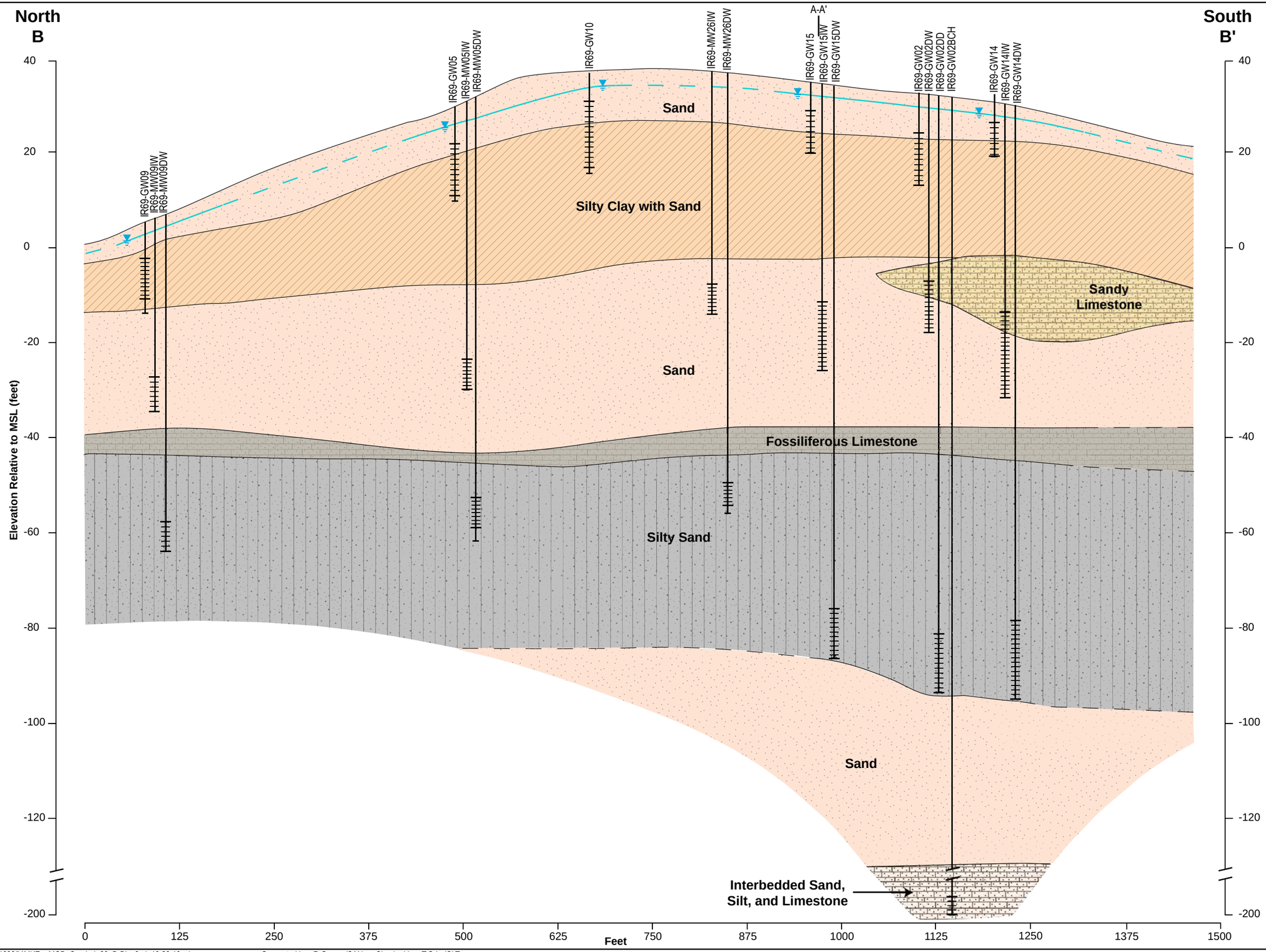
NOTE

1) The depth and thickness of the subsurface strata indicated on this section (profile) were generalized from and interpolated between test locations. Information on actual subsurface conditions apply only to the specific locations indicated. Subsurface conditions and water levels at other locations may differ from conditions occurring at the indicated locations.
2) All water levels were measured during March 2010.

Figure 4-4
Hydrogeological Cross Section A-A'
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

CH2MHILL

ES060710163354MKE MCB_CamLej_69_A-A'_v5.ai 10.125.10 sls Generated by: R.Gomez/SAN Checked by: T.Grim/CLT



Horizontal : 1" = 125'
Vertical: 1" = 20'
V.E. = 6.25x

LEGEND

- Sand
- Silty clay with sand
- Silty Sand
- Fossiliferous Limestone and Cemented Sand
- Sandy Limestone
- Interbedded Sand, Silt, and Limestone
- Clay
- Screened Interval
- Geologic Contact (dashed where inferred)
- Water Table (dashed where inferred)

NOTE

1) The depth and thickness of the subsurface strata indicated on this section (profile) were generalized from and interpolated between test locations. Information on actual subsurface conditions apply only to the specific locations indicated. Subsurface conditions and water levels at other locations may differ from conditions occurring at the indicated locations.
2) All water levels were measured during March 2010.

Figure 4-5
Hydrogeological Cross Section B-B'
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

CH2MHILL

ES060710163354MKE MCB_CamLej_69_B-B'_v6.ai 10.28.10 sls Generated by: R.Gomez/SAN Checked by: T.Grim/CLT

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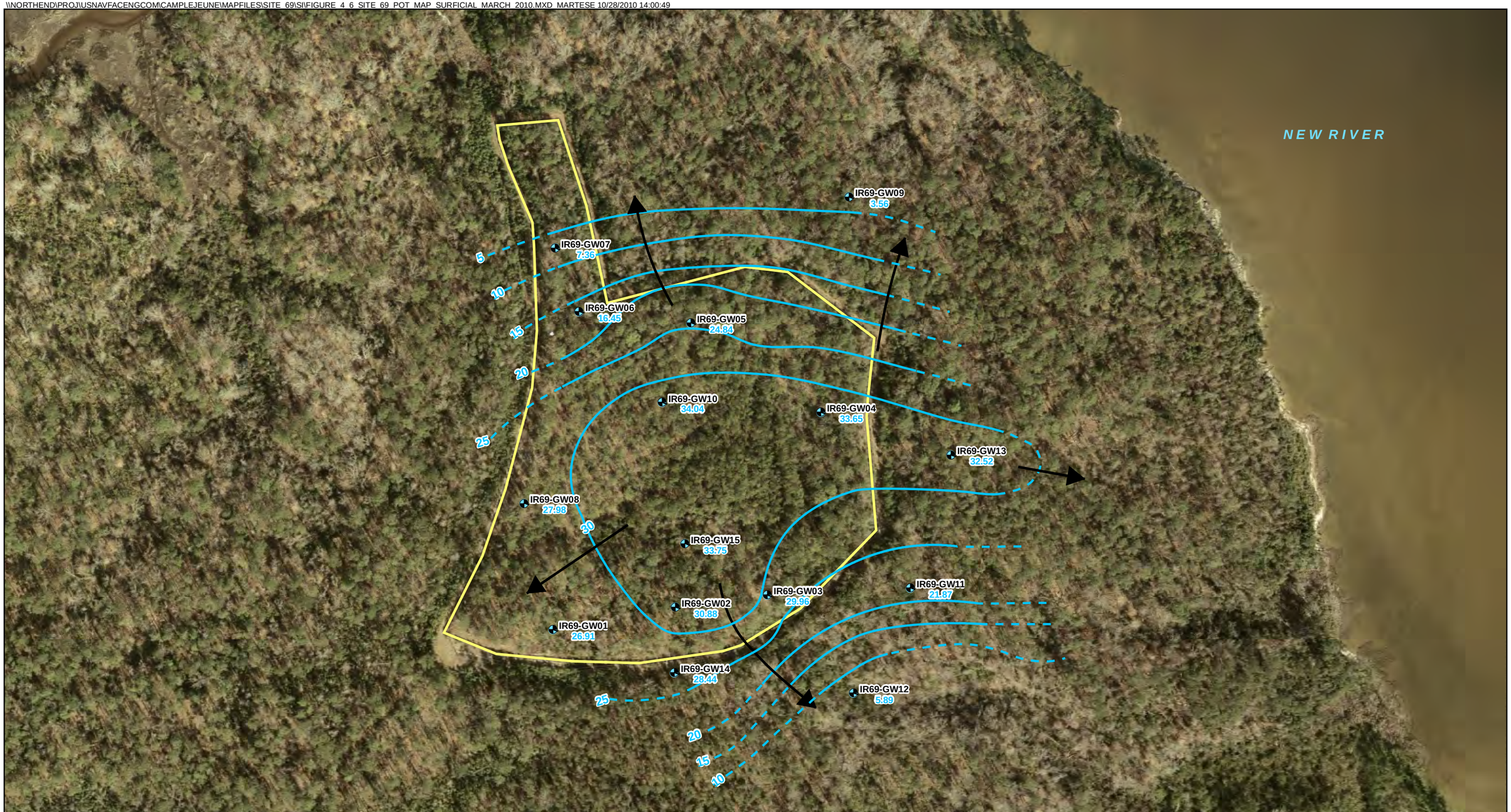


Legend

- Surficial Aquifer Well
- Groundwater Flow Direction (dashed where inferred)
- Potentiometric Contour (5 foot interval, dashed where inferred)
- Site 69 Boundary
- 30.88 Water level elevation

Notes:

- Water level elevations are reported in feet above mean sea level
- Potentiometric surface contours have been interpolated between monitoring well locations. Actual conditions may differ from those shown on this figure.
- Water levels were measured on March 19, 2010.

N

0 100 200 400 Feet

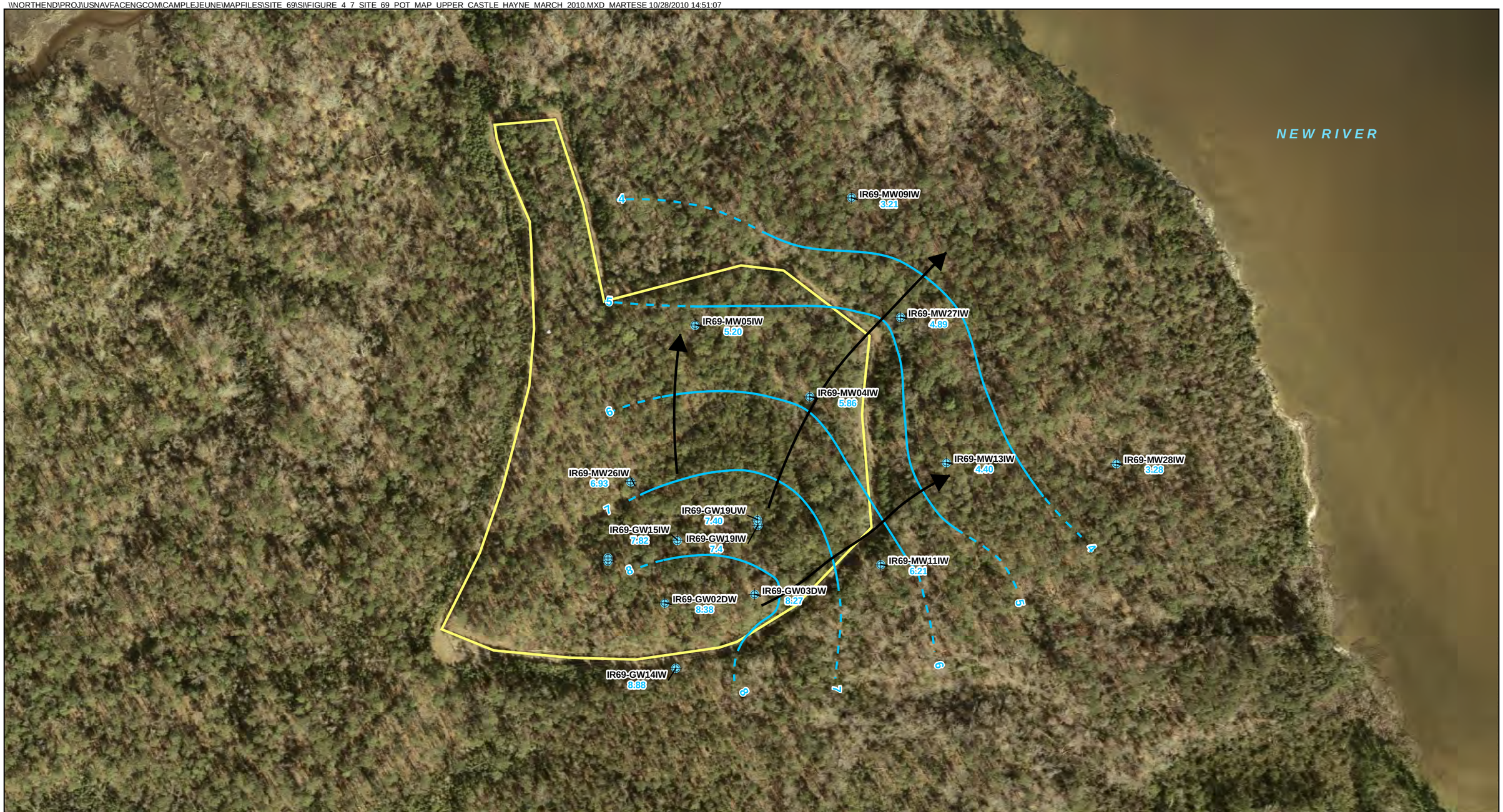
1 inch = 200 feet

Figure 4-6
Potentiometric Surface Map - Surficial Aquifer - March 2010
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

CH2MHILL

Generated By: ***Roger Gomez/SAN*** Checked by: ***David Lubell/RDU***

\\NORTHEND\PROJ\USNAVFACENGCOM\CAMPLEJEUNE\MAPFILES\SITE_69\SI\FIGURE_4_7_SITE_69_POT_MAP_UPPER_CASTLE_HAYNE_MARCH_2010.MXD MARTESE 10/28/2010 14:51:07



Legend

- Upper Castle Hayne Aquifer Well
- Groundwater Flow Direction
- Potentiometric Contour (1 foot interval, dashed where inferred)
- Site 69 Boundary
- 8.38 Water level elevation

Notes:

- Water level elevations are reported in feet above mean sea level
- Potentiometric surface contours have been interpolated between monitoring well locations. Actual conditions may differ from those shown on this figure.
- Water levels were measured on March 19, 2010.

N

0 100 200 400 Feet

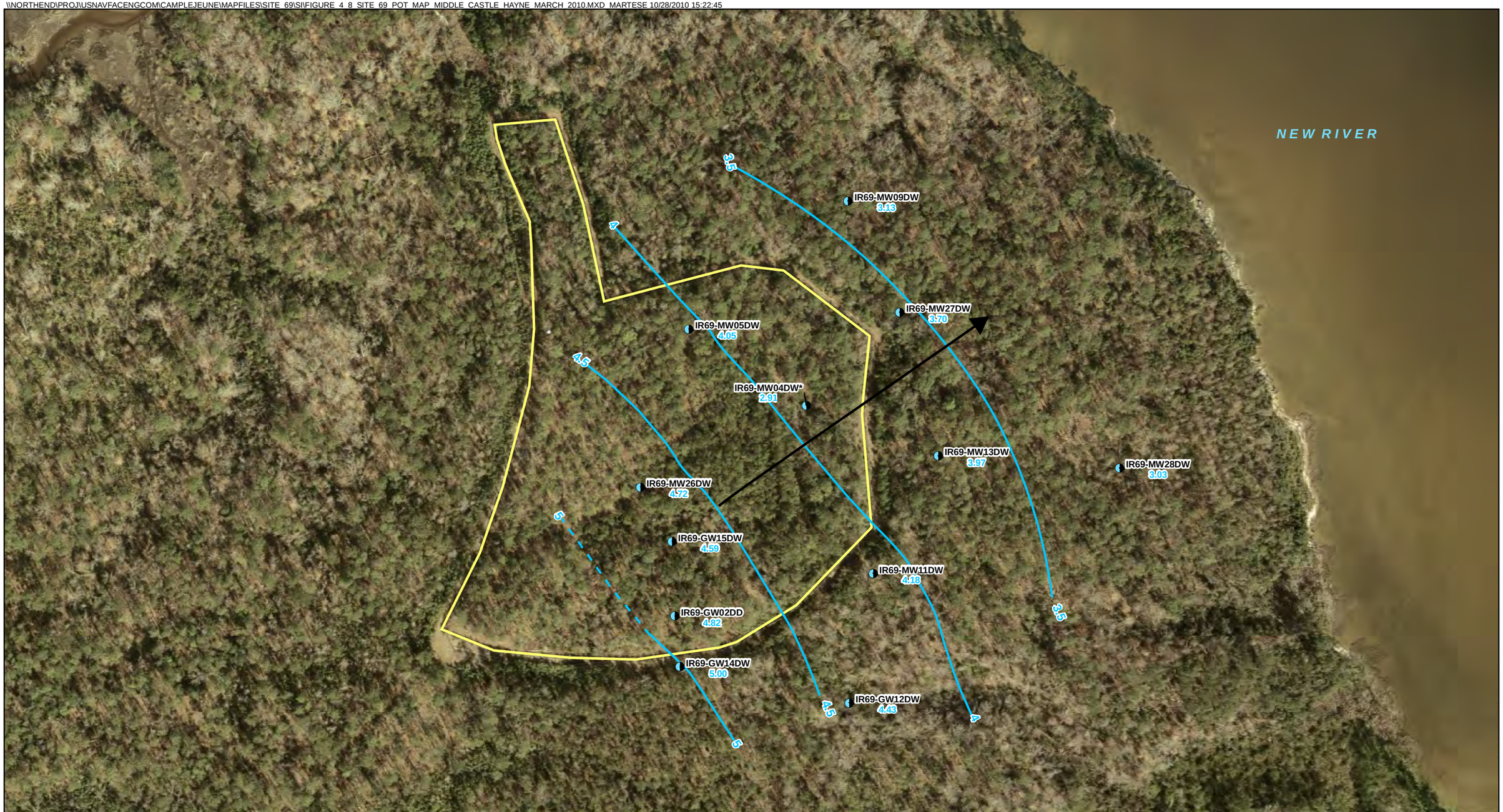
1 inch = 200 feet

Figure 4-7
Potentiometric Surface Map - Upper Castle Hayne Aquifer - March 2010
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

CH2MHILL

Generated By: ***Roger Gomez/SAN*** Checked by: ***David Lubell/RDU***

\\NORTHEND\PROJ\USNAVFACENGCOM\CAMPLEJEUNE\MAPFILES\SITE_69\SI\FIGURE_4_8_SITE_69_POT_MAP_MIDDLE_CASTLE_HAYNE_MARCH_2010.MXD MARTESE 10/28/2010 15:22:45



Legend

- Middle Castle Hayne Aquifer Well
- Groundwater Flow Direction
- Potentiometric Contour (0.5 foot interval, dashed where inferred)
- Site 69 Boundary
- 4.82 Water level elevation

Notes:

- Water level elevations are reported in feet above mean sea level
- Potentiometric surface contours have been interpolated between monitoring well locations. Actual conditions may differ from those shown on this figure.
- Water levels were measured on March 19, 2010.

* Groundwater elevation not used

N

0 100 200 400 Feet

1 inch = 200 feet

Figure 4-8
Potentiometric Surface Map - Middle Castle Hayne Aquifer - March 2010
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

CH2MHILL

Generated By: ***Roger Gomez/SAN*** Checked by: ***David Lubell/RDU***

\\NORTHEND\PROJ\USNAVFACENGCOM\CAMPLEJEUNE\MAPFILES\SITE_69\SI\FIGURE_4_9_SITE_69_POT_MAP_LOWER_CASTLE_HAYNE_MARCH_2010.MXD MRISSING 10/12/2010 10:40:32

Legend

- Lower Castle Hayne Aquifer Well
- Groundwater Flow Direction
- Potentiometric Contour (0.1 foot interval, dashed where inferred)
- Site 69 Boundary
- 30.88 Water level elevation

Notes:
- Water level elevations are reported in feet above mean sea level
- Potentiometric surface contours have been interpolated between monitoring well locations. Actual conditions may differ from those shown on this figure.
- Water levels were measured on March 19, 2010.

N

0 100 200 400 Feet

1 inch = 200 feet

Figure 4-9
Potentiometric Surface Map - Lower Castle Hayne Aquifer - March 2010
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

CH2MHILL

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SECTION 5

Nature and Extent of Contamination

This section discusses the nature and extent of contamination at Site 69 and is organized in two sections. Section 5.1 discusses how the data are presented and evaluated, and defines the various criteria used to compare the concentrations of analytes found in site media. Section 5.2 presents the results of the sampling activities.

5.1 Data Presentation and Evaluation

5.1.1 Data Presentation

The laboratory analytical data for surface water, sediment, soil, and groundwater samples collected during the March 2010 and March 2011 field investigations are presented in **Tables 5-1** through **5-8**.

These tables identify results that exceed selected regulatory and human-health based criteria. This comparison is not a means of screening out potential contaminants from further consideration; that step is performed in the HHRA in Section 7. The purpose of this comparison is to help focus the subsequent discussions concerning nature and extent on those constituents that are likely to be most significant.

Figures are also presented, where appropriate, to show analyte detections in soil, groundwater, surface water, and sediment exceeding relevant comparison criteria. Additionally, contaminant isoconcentration maps are presented in plan and cross-sectional views to illustrate the distribution of the primary groundwater contaminants across the Site.

Laboratory analytical results, chain-of-custody forms, and data validation reports for the field data collected during the SI are provided in **Appendix E**.

5.1.2 Regulatory Comparison Criteria

Analytical results for soil, groundwater, sediment, and surface water samples collected during the SI were compared against regulatory standards or other applicable criteria. As discussed in Section 5.1.1, this comparison was performed to evaluate the nature and extent of contamination but not to eliminate compounds from further consideration.

Groundwater results were compared to the NCGWQS and (in the case of metals) Base background criteria. In accordance with the NCGWQS, when the maximum contaminant level (MCL) for a constituent was more stringent than the NCGWQS, the MCL was referenced instead of the NCGWQS. If no NCGWQS or MCL values were available, then the results were compared to the USEPA Adjusted Tapwater RSL, and if those values were not available, then the results were compared to the Project Action Limits (PALs) identified in the Site-Specific Work Plan (CH2M HILL, 2010).

Surface soil, subsurface soil, and sediment analytical data were compared to the NC SSLs and USEPA adjusted Residential Soil RSLs for Chemical Contaminants at Superfund Sites.

Surface water analytical data were compared to the NCSWQS. If a constituent did not have an applicable NCSWQS, the constituent was compared to the PALs identified in the Site-Specific Work Plan (CH2M HILL, 2010).

Tables 5-1 through **5-8** list the chemical-specific regulatory criteria used to evaluate results for each medium type. The following is a brief description of the regulatory criteria:

- **NCGWQS**—The State of North Carolina, through rules of Subchapter 2L of NCAC Title 15A, establishes a series of classifications and water quality standards that are appropriate for the purpose of classifying groundwater in the state. NCGWQS are enforceable standards intended to provide guidance in preventing groundwater pollution above naturally occurring levels of specified chemical constituents and are based upon what is considered naturally occurring. The goal is to preserve and protect present and anticipated uses of groundwater (NCDENR, 2010b).
- **MCLs for Groundwater**—MCLs are enforceable standards promulgated under the Safe Drinking Water Act for public water supplies consumed by a minimum of 25 persons. MCLs are designed for the protection of human health, based on laboratory or epidemiological studies. They are designed to prevent adverse human health effects associated with a 70-year lifetime exposure for an average adult (70kg) consuming 2 L of water per day. Contaminants exceeding MCLs must be treated or removed from the public water supply prior to its potable use (USEPA, 2009b).
- **NCSWQS**—The State of North Carolina, through the rules of Subchapter 2B of the NCAC Title 15A, established a series of surface water classifications and standards that are enforceable and are intended to provide guidance in preventing surface water pollution above naturally occurring levels of chemical constituents**.** The goal of the NCSWQS is to preserve and protect present and future uses of surface water.
- **NC SSLs**—The Federal Remediation Branch (FRB) within the NCDENR Superfund Section of the Division of Waste Management is responsible for oversight of NPL sites and NPL-caliber sites under special agreements with the USEPA. The FRB provides the SSLs as guidelines for achieving criteria that are protective of groundwater (NCDENR, 2010a).
- **USEPA RSLs**—The USEPA Region 9 Preliminary Remediation Goals (PRGs) have been combined with similar risk-based screening levels used by USEPA Regions 3 and 6 into the RSLs for Chemical Contaminants at Superfund Sites table. The RSLs, adjusted for non-carcinogens to account for exposure to multiple constituents, are human health risk based goals for assessing industrial and residential properties (USEPA, 2011a).

5.1.3 Comparison to Background Concentrations

To identify constituents present in groundwater and soil that are reflective of a potential site-related release, concentrations of naturally occurring and anthropogenic compounds were compared to twice the mean background metals concentrations established for MCB CamLej (Baker, 2001; 2002).

5.2 Results

The results of the March 2010 and March 2011 SI are summarized in the following sections. Summary tables are provided for constituents that exceeded comparison criteria for each medium. The detection rate indicates all instances where the constituent was detected at a concentration above laboratory reporting limits. The exceedance rate indicates all instances where at least one comparison criterion was exceeded or, in the case of metals in soil and groundwater, where the Base background and at least one comparison criterion was exceeded.

5.2.1 Surface Soil

Eleven surface soil samples were collected at Site 69, five in the northern portion inside the fence and six around the perimeter. Laboratory analytical results are presented in **Table 5-1** and exceedances of Adjusted Residential and Industrial RSLs, NC SSLs, and twice the mean Base background concentration are presented on **Figure 5-1.**

VOCs and SVOCs were not detected in any surface soil sample at concentrations exceeding the applicable soil screening criteria. Pesticides and metals were reported at concentrations that exceed applicable soil screening levels, as summarized below:

Chemical	Detection Rate	Exceedance Rate	Maximum Concentration	Location of Maximum Concentration	Screening Criteria			
					2X Mean Base Background	NC SSL	Adjusted Industrial Soil RSL	Adjusted Residential Soil RSL
Pesticides (µg/kg)								
alpha-BHC	5/11	4/11	3.3 J	MR02-IR69-SS01	NC	1.2	270	77
beta-BHC	1/11	1/11	2 J	MR02-IR69-SS02	NC	1.2	960	270
delta-BHC	4/11	1/11	2.1 J	MR02-IR69-SS02	NC	1.2	960	270
gamma-BHC	4/11	1/11	8.4	IR69-SS04	NC	1.8	2,100	520
Heptachlor epoxide	1/11	1/11	1.6 J	MR02-IR69-SS06	NC	0.82	190	53
Total Metals (mg/kg)								
Arsenic	6/11	1/11	1.3 J	IR69-IS01	0.626	5.8	1.6	0.39
Chromium	8/11	1/11	8.8	IR69-IS01	6.05	3.8	5.6	0.29
Iron	11/11	1/11	4,960	IR69-IS01	3,245	150	72,000	5,500
Manganese	11/11	2/11	347	IR69-IS05	13.7	65	2,300	180

BHC – benzene hexachloride; mg/kg = milligrams per kilogram
J - analyte detected, value may or may not be accurate or precise
NC – no screening criteria established

Pesticide exceedances were generally within one order of magnitude of the most conservative screening value and did not exceed Residential or Industrial RSLs. The highest concentrations of pesticides were detected in samples collected from the northern portion of Site 69, with the exception of IR69-SS04. Pesticides were not detected at concentrations above screening criteria in the collocated subsurface soil samples. Chromium and iron were within the same order of magnitude as Base background concentrations. Arsenic and manganese were reported at higher concentrations than the Base background concentrations but were generally within the same order of magnitude as the NC SSL and adjusted Industrial RSLs.

5.2.2 Subsurface Soil

Six subsurface soil samples were collected around the perimeter of Site 69. Laboratory analytical results are presented in **Table 5-2,** and exceedances of Adjusted Residential and Industrial RSLs, NC SSLs, and twice the mean Base background concentration are presented on **Figure 5-1.**

VOCs, SVOCs, and pesticides were not detected at concentrations exceeding applicable soil screening criteria. Metals were detected at concentrations exceeding applicable screening criteria, as shown below:

Chemical	Detection Rate	Exceedance Rate	Maximum Concentration	Location of Maximum Concentration	Screening Criteria			
					2X Mean Base Background	NC SSL	Adjusted Industrial Soil RSL	Adjusted Residential Soil RSL
Total Metals (mg/kg)								
Aluminum	6/6	4/6	20,600	IR69-IS05	10,369	NC	99,000	7,700
Arsenic	5/6	5/6	4.8	IR69-IS04	2.12	5.8	1.6	0.39
Chromium	6/6	4/6	29.6	IR69-IS05	14.5	3.8	5.6	0.29
Iron	6/6	5/6	13,800	IR69-IS05	5,439	150	72,000	5,500

NC – no screening criteria established
mg/kg = milligrams per kilogram

Aluminum, arsenic, and chromium were reported at concentrations within one order of magnitude of Base background concentrations. Iron was detected at concentrations one order of magnitude greater than the Base background concentration. The maximum metals concentrations were typically detected in subsurface soil sample IR69-SB05, collected along the southwest perimeter of Site 69.

5.2.3 Surface Water

Surface water samples were collected from drainage features leading into the New River to the south, southeast, and northeast of Site 69. Analytical results and regulatory criteria exceedances are provided in **Table 5-3**, and a summary of exceedances is provided on **Figure 5-2**.

VOCs, SVOCs, and pesticides were not detected at concentrations exceeding the NCSWQS or PALs. Five metals were detected at concentrations exceeding the NCSWQS or PALs:

Chemical	Detection Rate	Exceedance Rate	Maximum Concentration	Location of Maximum Concentration	Screening Criteria/Standards		
					NCSWQS	PAL	PAL Reference
Total Metals (µg/L)							
Lead	3/3	3/3	2.9 J	IR69-SW02	NC	1.32	USEPA Region IV 11/01
Selenium	3/3	2/3	6.2 J	IR69-SW02	NC	5	NCSWQS Freshwater Aquatic Life
Silver	1/3	1/3	1 J*	IR69-SW01	NC	0.012	USEPA Region IV 11/01
Thallium	1/3	1/3	6.9 J	IR69-SW02	0.24	NC	
Zinc	1/3	1/3	113*	IR69-SW03	NC	50	NCSWQS Freshwater Aquatic Life

J – analyte present, value may or may not be accurate or precise
NC – no screening criteria established
*Dissolved metal concentration was higher than total metal concentration

Dissolved metals were analyzed for during the SI and the maximum value between dissolved and total metals was selected for the maximum concentration where applicable. The maximum concentrations of lead and selenium were within the same order of magnitude as the PAL. Thallium exceeded the NCSWQS in surface water sample IR69-SW02 but was not detected in any filtered metals samples. The maximum concentrations of silver and zinc were both detected in samples analyzed for dissolved metals. Zinc was also detected at the same location at a slightly lower concentration (104 µg/L). Silver was only reported in the dissolved metals analytical results from a duplicate sample collected at IR69-SW01.

5.2.4 Sediment

Sediment samples were collocated with surface water samples in the drainage features to the south, southeast, and northeast of Site 69. Laboratory analytical results from March 2010 are presented in **Table 5-4,** and exceedances of Residential and/or Industrial RSLs, NC SSLs, and twice the mean Base background concentrations for surface soil are shown on **Figure 5-3**.

VOCs, SVOCs, pesticides, and metals were detected in sediment samples at concentrations exceeding applicable screening criteria:

Chemical	Detection Rate	Exceedance Rate	Maximum Concentration	Location of Maximum Concentration	Screening Criteria			
					2X Mean Base Background*	NC SSL	Adjusted Industrial Soil RSL	Adjusted Residential Soil RSL
VOCs (µg/kg)								
VC	1/3	1/3	6 J	IR69-SD01	NC	0.19	1,700	60
SVOCs (µg/kg)								
benzo(a)pyrene	3/3	2/3	37	IR69-SD01	NC	59	210	15
Pesticides (µg/kg)								
beta-BHC	2/3	1/3	2.3 J	IR69-SD01	NC	1.2	960	270
delta-BHC	1/3	1/3	6.7 J	IR69-SD01	NC	1.2	960	270
Dieldrin	2/3	2/3	2.7 J	IR69-SD01	NC	0.81	110	30
gamma-BHC	1/3	1/3	2 J	IR69-SD03	NC	1.8	2,100	520
Heptachlor epoxide	1/3	1/3	3.7 J	IR69-SD01	NC	0.82	190	53
Monocrotophos	1/3	*NA*	420 J	IR69-SD03	NC	NC	NC	NC
Total Metals (mg/kg)								
Aluminum	3/3	1/3	8,650	IR69-SD02	5,487	NC	99,000	7,700
Antimony	2/3	1/3	5.3 J	IR69-SD02	0.447	NC	41	3.1
Chromium	3/3	2/3	9	IR69-SD02	6.05	3.8	5.6	0.29
Manganese	3/3	1/3	98.2	IR69-SD01	13.7	65	2,300	180

BHC- benzene hexachloride
J - analyte detected, value may or may not be accurate or precise
NC – no screening criteria established
*2X mean Base background for surface soil

The SVOC, pesticide, and metals concentrations in the sediment are generally low (within one order of magnitude of the most conservative screening value) and, with the exception of chromium, do not exceed Industrial RSLs. Benzo(a)pyrene, aluminum, antimony, and

chromium were the only constituents that exceeded the Residential RSLs. One organophosphorous pesticide, monocrotophos, was detected in the sample collected at IR69-SD03 at a concentration of 420 J µg/kg. There are no screening values for monocrotophos, and the value is qualified with a J qualifier (detected value may or may not be accurate or precise). Monocrotophos was not detected in any other sediment samples or any other media at Site 69; however, since pesticides were reportedly buried at Site 69, and the reported concentration of monocrotophos is relatively high, it may be a site-related contaminant.

5.2.5 Groundwater

As discussed in Section 3, the groundwater monitoring wells have been grouped as follows: the surficial aquifer (wells screened from 10 to 25 feet bgs), upper Castle Hayne aquifer (wells screened from 33 to 73 feet bgs), middle Castle Hayne aquifer (wells screened from 75 to 130 feet bgs), and lower Castle Hayne aquifer (wells screened from220 to 230 feet bgs). The following is a summary of exceedances in samples from each aquifer.

Surficial Aquifer

Laboratory analytical data for surficial aquifer groundwater samples are presented in **Table 5-5**. Groundwater isoconcentration maps for chlorinated ethanes (1,1,2,2-PCA, 1,1,2-TCA, and 1,2-dichloroethane [1,2-DCA]) and TCE, cis-1,2-DCE, and VC are shown on **Figures 5-4** through **5-7,** respectively. The following constituents exceeded NCGWQS:

Chemical	Detection Rate	Exceedance Rate	Maximum Concentration	Location of Maximum Concentration	Screening Criteria/Standards	
					2X Mean Base Background	NCGWQS
VOCs (µg/L)						
1,1,2,2-PCA	4/15	2/15	9.8	IR69-GW02	NC	0.2
1,1,2-TCA	3/15	1/15	7.8	IR69-GW02	NC	5
1,2-DCA	4/15	4/15	13	IR69-GW15	NC	0.4
cis-1,2-DCE	6/15	2/15	180	IR69-GW03	NC	70
TCE	6/15	1/15	3.5	IR69-GW03	NC	3
VC	4/15	4/15	20	IR69-GW02	NC	0.03
PCBs (µg/L)						
Aroclor 1260	1/15	1/15	1.2	IR69-GW15	NC	0.5
Pesticides (µg/L)						
alpha-BHC	1/15	1/15	0.077	IR69-GW03	NC	0.02
beta-BHC	2/15	1/15	0.19 J	IR69-GW03	NC	0.02
delta-BHC	2/15	1/15	1.5	IR69-GW03	NC	0.02
heptachlor epoxide	1/15	1/15	0.079 J	IR69-GW15	NC	0.004
Total Metals (µg/L)						
Iron	14/15	3/15	29,100	IR69-GW15	5,999	300
Manganese	15/15	1/15	800	IR69-GW15	214	50
Zinc	10/15	2/15	6,840	IR69-GW04	42.1	1,000

BHC – benzene hexachloride
J – analyte present, value may or may not be accurate of precise
NC – no screening criteria established

Upper Castle Hayne Aquifer

Laboratory analytical data for upper Castle Hayne aquifer groundwater samples are presented in **Table 5-6**. Groundwater isoconcentration maps for 1,2-DCA, TCE, cis-1,2-DCE, and VC are shown on **Figures 5-8** through **5-11**, respectively. The following constituents exceeded NCGWQS:

Chemical	Detection Rate	Exceedance Rate	Maximum Concentration	Location of Maximum Concentration	Screening Criteria/Standards	
					2X Mean Base Background	NCGWQS
VOCs (µg/L)						
1,1-DCE	4/17	1/17	11	IR69-GW15IW	NC	7
1,2-DCA	5/17	3/17	19	IR69-GW15IW	NC	0.4
Benzene	3/17	1/17	1.2	IR69-GW19UW	NC	1
cis-1,2-DCE	11/17	5/17	51,000	IR69-GW15IW	NC	70
trans-1,2-DCE	8/17	1/17	750	IR69-GW15IW	NC	100
TCE	5/17	4/17	100 J	IR69-GW15IW	NC	3
VC	8/17	8/17	5,500	IR69-GW15IW	NC	0.03
Pesticides (µg/L)						
Gamma chlordane	1/14	1/14	0.18	IR69-GW15IW	NC	0.1
Heptachlor epoxide	1/14	1/14	0.12 J	IR69-GW15IW	NC	0.004
Total Metals (µg/L)						
Chromium	5/14	1/14	15	IR69-MW28IW	3.13	10
Iron	14/14	3/14	14,700	IR69-GW19UW	5,999	300
Thallium	1/14	1/14	5.6 J	IR69-MW28IW	3.78	2

J – analyte present, value may or may not be accurate or precise
NC – no screening criteria established

Middle Castle Hayne Aquifer

Laboratory analytical data for middle Castle Hayne samples are presented in **Table 5-7**. Groundwater isoconcentration maps for VC are shown on **Figure 5-12**. The following constituents exceeded the NCGWQS:

Chemical	Detectio n Rate	Exceedance Rate	Maximum Concentration	Location of Maximum Concentration	Screening Criteria/Standards	
					2X Mean Base Background	NCGWQS
VOCs (µg/L)						
VC	2/14	2/14	1.4	IR69-GW11DW	NC	0.03
Pesticides (µg/L)						
Dieldrin	1/14	1/14	0.026 J	IR69-GW15DW	NC	0.002
Heptachlor epoxide	1/12	1/12	0.031 J	IR69-GW15DW	NC	0.004
Total Metals (µg/L)						
Chromium	9/12	3/12	21.5	IR69-GW11DW	3.13	10
Iron	12/12	1/12	6,760	IR69-GW15DW	5,999	300

J – analyte present, value may or may not be accurate or precise
NC – no screening criteria established

Lower Castle Hayne Aquifer

Laboratory analytical data for lower Castle Hayne aquifer samples are presented in **Table 5-8**. No analytes were detected at concentrations exceeding the NCGWQS in samples collected in the lower Castle Hayne aquifer.

5.2.6 Groundwater Summary

Groundwater in the surficial and upper Castle Hayne aquifers has been impacted by two groups of CVOCs and their degradation products: chlorinated ethanes (1,1,2,2-PCA, 1,1,2-TCA, and 1,2-DCA), and chlorinated ethenes (TCE, cis- and trans-1,2-DCE, and VC). Exceedances in the surficial aquifer were reported for samples collected from the south-central portion of Site 69 (IR69-GW02, IR69-GW03, and IR69-GW15) and in the sample collected from monitoring well IR69-GW04. The lateral distribution of chlorinated ethanes within the surficial aquifer is shown on **Figure 5-4**. The lateral distribution of chlorinated ethenes within the surficial aquifer is shown on **Figures 5-5** through **5-7**.

The predominant CVOCs in the upper Castle Hayne aquifer are chlorinated ethenes, primarily cis-1,2-DCE and VC. As in the surficial aquifer, the greatest concentrations were detected in samples collected in the south-central portion of Site 69 (IR69-GW15IW, IR69-GW19UW, and IR69-GW19IW) in the vicinity of the greatest density of geophysical anomalies, with concentrations decreasing in samples collected from downgradient wells to the northeast and east. CVOCs were more prevalent and detected at higher concentrations in samples collected from upper Castle Hayne aquifer wells than the surficial aquifer wells. The concentrations of all CVOCs reported in the sample collected from IR69-GW15IW, installed through the buried waste material, were at least two to three orders of magnitude higher than all other samples collected from the upper Castle Hayne aquifer.

The lateral distribution of chlorinated ethanes in the upper Castle Hayne aquifer is shown on **Figure 5-8**. The lateral distribution of chlorinated ethenes in the upper Castle Hayne aquifer is shown on **Figures 5-9** through **5-11**.

VC was the only CVOC detected in the middle Castle Hayne aquifer. There were only two detections of VC in the middle Castle Hayne aquifer (IR69-GW04DW and IR69-GW11DW), suggesting that the lateral distribution of VC in the middle Castle Hayne aquifer is located between IR69-GW04DW and IR69-GW11DW, as shown on **Figure 5-12**. The concentration of VC reported in the sample collected from monitoring well IR69-GW11DW was an order of magnitude greater than the NCGWQS. VC was not detected in the groundwater samples collected from monitoring wells IR69-GW04DD and IR69-GW11DD, suggesting that the vertical distribution of VC in the middle Castle Hayne aquifer has been defined.

Cross-sectional views of the Site 69 contaminant distribution (**Figures 5-13** through **5-20**) show that the vertical extents of 1,2-DCA, TCE, cis-1,2-DCE, and VC, have been delineated to their respective NCGWQS.

The greatest concentrations of pesticides and metals exceeding NCGWQS in the surficial aquifer and upper Castle Hayne aquifer were also reported in samples collected from monitoring wells located in the south-central portion of Site 69 (IR69-GW02, IR69-GW03, and IR69-GW15 well clusters). Concentrations of pesticides that exceed the NCGWQS were detected in the surficial and upper and middle Castle Hayne aquifers. Pesticides were detected in samples collected from IR69-GW02, IR69-GW03, IR69-GW04, and IR69-GW15 in

the surficial aquifer, and in samples from IR69-GW15IW and IR69-GW15DW in the upper and middle Castle Hayne aquifers. PCBs were detected in the sample collected from surficial aquifer monitoring well IR69-GW15.

Concentrations of metals that exceeded twice the mean Base background concentrations and NCGWQS were detected in all aquifers. Chromium was detected within one order of magnitude of the NCGWQS and manganese was within one order of magnitude of the background concentrations. Iron concentrations were five times higher than background concentration in the sample collected from monitoring well IR69-GW15.

5.3 Natural Attenuation

NA is a combination of physical (dilution, volatilization, and adsorption), biological (aerobic and anaerobic biodegradation), and chemical processes (abiotic transformation) that naturally reduce the toxicity, mobility, volume, mass, or concentration of constituents. Physical processes are discussed in more detail in Section 6. Biodegradation is likely the most important destructive attenuation mechanism at Site 69. In general, biodegradation occurs when sufficient amounts of electron acceptors, electron donors, and nutrients are available in groundwater. Microorganisms preferentially use electron acceptors, which provide the most energy. DO is consumed first as the prime electron acceptor; nitrate is the next preferred electron acceptor; followed by manganese (IV), ferric iron [Fe(III)], sulfate, and carbon dioxide. As each electron acceptor is used and depleted, the ORP of the groundwater system is driven downward (more negative).

Biodegradation of CVOCs typically occurs via reductive dechlorination, in which microorganisms use the contaminant as an electron acceptor through an electron transfer process. Reductive dechlorination occurs in a series of reactions in which the parent compound (e.g., TCE, 1,1,2,2-PCA) is reduced to daughter compounds, each reaction forming a daughter compound with sequentially fewer chlorine atoms. The reaction optimally proceeds within sulfate-reducing and methanogenic conditions; however, reductive dechlorination of tetrachloroethene (PCE) and TCE may also occur under denitrifying and iron-reducing conditions (USEPA, 1998). The reduced daughter products of TCE (especially VC) can be aerobically oxidized or anaerobically oxidized to carbon dioxide. CVOCs may also be transformed under abiotic mechanisms. For example, 1,1,1-TCA is abiotically transformed to 1,1-DCE through the process of dehydrohalogenation and acetic acid through the process of hydrolysis.

5.3.1 Indicator Parameters

Indicator parameters are used to provide qualitative evidence of conditions favorable for biodegradation and reductive dechlorination and to provide semi-quantitative evidence of biodegradation. Among these parameters are a loss of other electron acceptors (DO, nitrate, sulfate), the production of metabolic byproducts (nitrite, ferrous iron, sulfide, and methane), an increase in alkalinity, sufficient organic carbon source(s), a neutral pH, and a reduced groundwater environment (USEPA, 1998). A decrease in parent compound concentrations and/or mass, the detection of daughter products (DCE, VC, ethane, and ethene), and an increase in chloride provide semi-quantitative evidence that reductive dechlorination is occurring at Site 69. During the March 2010 groundwater sampling event, field measurements and samples were collected from 44 monitoring wells to evaluate the

geochemical characteristics of the surficial aquifer and the upper, middle, and lower Castle Hayne aquifers. Field measurements included DO, ORP, ferrous iron, nitrate, and nitrite. Groundwater samples were submitted for laboratory analysis of the following geochemical parameters: alkalinity, chloride, sulfate, sulfide, TOC, total iron, methane, ethane, and ethene. Microbial analysis was also conducted on samples from upper and middle Castle Hayne aquifer monitoring wells to assess the presence of dehalogenating bacteria (*Dehalococcoides* [DHC], *Desulfuromonas sp.*, and *Dehalobacter sp.*) within and outside of the contaminant plume. Microbial analysis results are provided in **Appendix E** with the laboratory analytical results.

A summary of NAIPs from the March 2010 monitoring well sampling event is provided in **Table 5-9.** A more detailed discussion of NA processes is provided below.

Surficial Aquifer

The geochemistry of groundwater upgradient of the plume, within the plume, and downgradient of the plume can provide evidence of favorable conditions for biodegradation. Therefore, NAIPs in the surficial aquifer were evaluated based on their location in reference to the contaminant plume. IR69-GW02, IR69-GW03, IR69-GW04, and IR69-GW15 are located within the contaminant plume. All other wells are sidegradient and/or downgradient. A summary of NAIPs measured in the surficial aquifer is provided below:

	Measured Range				Favorable Indicators or Condition for Reductive Dechlorination*
	Plume Area	Detection Rate	Non-Plume Area	Detection Rate	
Temperature (°C)	10.89 - 13.48	4/4	9.75 - 16.42	11/11	> 20 °C
DO (mg/L)	0.24 - 0.68	4/4	0.14 - 4.61	11/11	<0.5
pH (SU)	4.58 - 5.33	4/4	4.21 - 5.26	11/11	6 to 8
ORP (mV)	-26.1 to 168.0	4/4	22.0 – 354.1	11/11	<50
Fe(II) (mg/L)	1.0 - 4.4	4/4	0.0 - 2.1	8/11	>1
Sulfide (mg/L)	Not detected	0/4	0. 8	1/11	>1
Nitrite (mg/L)	0.066 - 0.198	3/4	0.099	2/11	presence
Methane (µg/L)	17 - 150	4/4**	0.3 - 16	11/11**	>500
Chloride (mg/L)	23 - 48	4/4	7 - 20.8	10/11	> 2X background
Alkalinity (mg/L)	15.2 - 32.1	2/4	9.82 - 20.8	2/11	> 2X background
Sulfate (mg/L)	4.7 - 150	4/4	5.5 - 22	11/11	<20
Nitrate (mg/L)	Not detected	0/4	Not detected	0/11	<1
TOC (mg/L)	2.2 - 12	4/4	0.54 - 4.5	11/11	> 20
Ethene (µg/L)	0.1 - 0.6	2/4	Not detected	0/11	>10
Ethane (µg/L)	Not detected	0/4	Not detected	0/11	>100

*Source: USEPA, 1998
** methane was detected in all samples at concentrations below blank concentrations
°C = degrees Celsius; Fe(II) = ferrous iron; mg/L = milligrams per liter; mV = millivolt; SU = standard units

Indicator parameters suggest that conditions in the CVOC plume area of the surficial aquifer are somewhat favorable for reductive dechlorination. The surficial aquifer is naturally more aerobic and oxidizing than the deeper aquifers at the Site. Within the plume

area, groundwater is more reduced and DO is typically below 0.5 mg/L. While the presence of low levels of nitrite provides evidence of denitrification, the lack of nitrate indicates that this is not a significant process in groundwater. On the contrary, the presence of ferrous iron and methane provides strong evidence of iron reduction, particularly in plume area wells, which had the highest concentrations. Based on the distribution of sulfate in the surficial aquifer, some sulfate reduction may be occurring. The lack of sulfide may be due to precipitation with dissolved iron. Sulfate was present at one monitoring well (IR69-GW15) located within the plume at a concentration (150 mg/L) that might compete with reductive dechlorination. However, since this elevated concentration was only present at one monitoring well, it may not have a significant impact. Elevated alkalinity levels at IR69-GW03 and IR69-GW15 are suggestive of biological activity.

The presence of daughter products (1,1,2-TCA, 1,2-DCA, cis-1,2-DCE, VC, and low level detections of ethene) are evidence that reductive dechlorination is occurring. Historical data trends from samples collected from monitoring well IR69-GW02 show an overall decrease in TCE and DCE and an increase in VC (**Figure 5-21**). In addition, chloride levels within the plume area were more than double the background levels. The very low concentrations of ethene and a lack of ethane may suggest that the reaction is stalling at VC; however, additional monitoring of VC trends is needed to determine this. Due to the aerobic nature of the aquifer, DCE and VC can be oxidized if these contaminants were to migrate further downgradient. While these NAIPs are indicative of biological activity, the lack of a strong carbon source, as indicated by low TOC concentrations, low pH values, and low temperature, may limit the rates of CVOC degradation.

Upper Castle Hayne Aquifer

As with the surficial aquifer, NAIPs in the upper Castle Hayne aquifer were evaluated based on their location in reference to the contaminant plume. IR69-GW14IW is the upgradient well. Monitoring wells IR69-GW02DW, IR69-GW04IW, IR69-MW11IW, IR69-GW15IW, IR69-GW19UW, and IR69-GW19IW are located within the plume, while the remaining wells are sidegradient and/or downgradient. A summary of NAIPs measured in the upper Castle Hayne aquifer is provided below:

	Measured Range				Favorable Indicators or Conditions for Reductive Dechlorination*
	Plume Area	Detection Rate	Non-Plume Area	Detection Rate	
Temperature (°C)	17.07 - 17.90	6/6	16.33 - 17.98	9/9	> 20
DO (mg/L)	0.14 - 1.08	6/6	0.08 - 0.94	9/9	<0.5
pH (SU)	6.75 - 7.97	6/6	7.35 - 8.34	9/9	6 to 8
ORP (mV)	-189.4 to -137.3	6/6	-191.0 to -93.4	9/9	<50
Fe(II) (mg/L)	1.75 - 4.2	3/6	0.4 – 2.5	6/9	>1
Sulfide (mg/L)	Not detected	0/6	0.4 - 0.6	2/9	>1
Nitrite (mg/L)	0.0825 - 0.165	2/6	0.033 - 0.099	4/9	presence
Methane (µg/L)	3 - 74	6/6**	0.6 - 49	9/9**	>500
Chloride (mg/L)	6.2 - 170	6/6	4.7 - 18.1	9/9	> 2X background
Alkalinity (mg/L)	61.4 - 203	6/6	101 - 219	9/9	> 2X background
Sulfate (mg/L)	10 - 37	2/6	8.3 - 370	8/9	<20
Nitrate (mg/L)	Not detected	0/6	4.4 - 8.8	2/9	<1
TOC (mg/L)	0.54 - 4.3	5/6	0.45 - 3.1	9/9	> 20

	Measured Range				Favorable Indicators or Conditions for Reductive Dechlorination*
	Plume Area	Detection Rate	Non-Plume Area	Detection Rate	
Ethene (µg/L)	0.3 - 63	4/6	0.03 - 0.2	3/9	>10
Ethane (µg/L)	0.03 - 5	3/6	0.2	1/9	>100

*Source: USEPA, 1998
** methane was detected in all samples at concentrations below blank concentrations

NAIPs suggest that conditions in the CVOC plume area of the upper Castle Hayne aquifer are favorable for reductive dechlorination. This aquifer appears to be naturally under anaerobic and somewhat reduced conditions, with DO typically below 0.5 mg/L and ORP below -100 millivolts (mV). DO and ORP levels within the plume are comparable to those measured outside of the plume extents. Similar to the surficial aquifer, denitrification does not appear to be a significant process. Other geochemical data indicate that iron reduction, sulfate reduction, and methanogenesis are proceeding, with the strongest evidence at IR69-GW15IW. Even though sulfide was not detected in the plume area wells, it likely precipitated with dissolved iron and the depletion of sulfate is strong evidence for reduction. At the downgradient plume well, IR-GW04IW, geochemical data suggested only a low rate of methanogenesis. However, this was the only well with alkalinity concentrations twice the background value, indicating that some biological activity is occurring. Within the upper Castle Hayne aquifer, pH levels are favorable for microbial activity.

With the exception of IR69-GW19IW, CVOC daughter products were detected in all monitoring wells located within the plume and constitute the majority of the CVOC molar mass. Historical data trends of CVOC concentrations in samples collected from IR69-GW15IW show a decrease in TCE and an increase in daughter products (**Figure 5-21**). However, the concentrations of cis-1,2-DCE (greater than 10,000 µg/L) coupled with the relatively low historical TCE concentrations (in the 100- to 1,000-µg/L range) suggest that cis-1,2-DCE may be a source compound rather than a degradation product. Ethene was detected or estimated in the majority of plume wells, with a maximum of 63 µg/L in source well IR69-GW15IW, providing evidence of full reductive dechlorination. Ethane was also estimated in several plume area wells. Chloride was reported at twice the background level at IR69-GW02DW, IR69-GW04IW, and IR69-GW15IW, with the highest concentration reported at IR69-GW15IW, further indicating that dechlorination is occurring in the source area. However, TOC concentrations were measured below 5 mg/L, suggesting the lack of a strong carbon source.

Microbial analysis was performed on samples collected from plume wells IR69-GW11IW and IR69-GW15IW, and non-plume well IR69-GW27IW. The population of DHC was five orders of magnitude higher in the sample collected from IR69-GW15IW than in all samples collected from other monitoring wells. Populations of *Desulfuromonas spp.* were slightly higher in IR69-GW15IW than in the two other samples and populations of *Dehalobacter spp.* and *Desulfitobacterium spp.* were comparable among all samples. The presence of DHC in such a comparatively large population in combination with elevated concentrations of degradation products indicates that significant degradation is occurring in the vicinity of IR69-GW15IW.

Middle Castle Hayne Aquifer

In the middle Castle Hayne aquifer, NAIPs were evaluated based on their location in reference to the contaminant plume. IR69-GW14DW is the upgradient well. Monitoring wells IR69-GW04DW and IR69-MW11DW exhibited exceedances of VC. No other CVOCs exceeded applicable standards in this aquifer; however, CVOCs were detected in samples collected from IR69-MW26DW, which is retained as a plume well. The remaining monitoring wells are sidegradient and/or downgradient of the isolated VC plume. A summary of NAIPs measured in the middle Castle Hayne aquifer is provided below:

	Measured Range				Favorable Indicators or Conditions for Reductive Dechlorination*
	Plume Area	Detection Rate	Non-Plume Area	Detection Rate	
Temperature (°C)	17.94 - 18.72	3/3	16.43 - 20.81	8/8	> 20
DO (mg/L)	2.24 - 10.31	3/3	0.12 - 0.73	8/8	<0.5
pH (SU)	7.59 - 8.37	3/3	7.24 - 8.32	8/8	6 to 8
ORP (mV)	-185.3 to 60.3	3/3	-215.4 to -72.9	8/8	<50
Fe(II) (mg/L)	0.2 - 0.6	2/3	1.0 - 3.4	5/8	>1
Sulfide (mg/L)	0.4	1/3	Not detected	0/8	>1
Nitrite (mg/L)	0.066	1/3	0.03 - 0.099	3/8	presence
Methane (µg/L)	0.7 - 2	3/3**	1 - 34	8/8**	>500
Chloride (mg/L)	11 - 12	3/3	6.1 - 41	8/8	> 2X background
Alkalinity (mg/L)	172 - 217	3/3	151 - 249	8/8	> 2X background
Sulfate (mg/L)	17 - 170	3/3	1.7 - 59	7/8	<20
Nitrate (mg/L)	Not detected	0/3	Not detected	0/8	<1
TOC (mg/L)	0.56 - 2.5	3/3	0.84 - 18	8/8	> 20
Ethene (µg/L)	0.2	1/3	0.1 – 0.2	2/8	>10
Ethane (µg/L)	0.3	1/3	0.06 - 0.4	3/8	>100

*Source: USEPA, 1998
** methane was detected in all samples at concentrations below blank concentrations

Favorable indicator parameters for reductive dechlorination are limited in the middle Castle Hayne aquifer. Positive indicators include DO and ORP, suggesting that this aquifer is generally anaerobic and under predominantly reducing conditions. Although isolated zones of DO greater than 1 mg/L are observed, including at contaminated well IR69-GW04DW, this may be attributed to field equipment error. pH levels are generally favorable for microbial activity. Other geochemical data provide evidence of low rates of methanogenesis; however, other oxidation-reduction reactions appear to be limited. Sulfate was present at one well (IR69-GW04DW) at a concentration (170 mg/L) and might compete with reductive dechlorination. Alkalinity values are consistent across the aquifer, providing no indication of zones of increased biological activity.

VC is the only CVOC detected in the middle Castle Hayne aquifer above its NCGWQS, indicating that reductive dechlorination or migration of VC from the upper Castle Hayne aquifer is occurring. Since favorable indicator parameters for reductive dechlorination are limited here, migration is the more likely source of VC in the middle Castle Hayne aquifer. Ethene and ethane were estimated at low levels outside of the VOC plume, providing some evidence of degradation. However, chloride levels were consistent across the aquifer and

provided no additional support for reductive dechlorination. Low TOC concentrations (typically below 3 mg/L) may limit the rates of reductive dechlorination.

Microbial analyses were performed on samples collected from non-plume wells IR69-GW15DW and IR69-MW27DW. The populations of all dechlorinating bacteria were approximately one order of magnitude higher in the sample from IR69-GW15DW, and DHC populations were comparable to those in non-plume wells in the upper Castle Hayne aquifer. The population of *Desulfuromonas* was three orders of magnitude higher in the sample from IR69-GW15DW than in all other wells. Nevertheless, VC in the middle Castle Hayne aquifer may also be degrading via aerobic and/or anaerobic oxidation. This would support the low concentrations of VC observed in the aquifer. Isolated zones of more aerobic groundwater were measured in the aquifer, which may be facilitating oxidation, a faster reaction than reductive dechlorination. Samples were not analyzed for carbon dioxide, which is an oxidative daughter product.

Summary

Analysis of CVOCs and NAIPs indicates that NA is currently occurring in the surficial, and upper and middle Castle Hayne aquifers. Degradation products, including ethene and ethane, are present in each aquifer and constitute the majority of the VOC mass. Geochemical parameters suggest that subsurface conditions are somewhat favorable for reductive dechlorination in the surficial aquifer, very favorable in the upper Castle Hayne aquifer, and limited in the middle Castle Hayne aquifer. The more favorable indicators were observed within the higher concentration areas of the groundwater plume. Microbial analysis conducted in the upper and middle Castle Hayne aquifers provided evidence that the appropriate microorganisms were present in groundwater and that their population sizes were elevated within the groundwater plume. Factors which may limit the rates of reductive dechlorination include the low native organic carbon available for an electron donor, low pH values and temperatures in the surficial aquifer, and isolated zones of high sulfate concentrations, which may result in competitive exclusion of dechlorinating bacteria. Nevertheless, oxidation of DCE and/or VC may be occurring in the surficial and middle Castle Hayne aquifers in more aerobic zones and would be consistent with the limited extent of the CVOC plume in these aquifers.

Table 5-1
Surface Soil Analytical Results
Supplemental Investigation Site 69, Operable Unit No. 14
MCB CamLej, North Carolina

Station ID	Camp Lejeune Background SS 2X Mean	NCSSLs (January, 2010)	Adjusted Industrial Soil RSLs (June, 2011)	Adjusted Residential Soil RSLs (June 2011)	IR69-IS01		IR69-IS02	IR69-IS03	IR69-IS04	IR69-IS05	IR69-IS06	MR02-IR69-SS01		MR02-IR69-SS02	MR02-IR69-SS04	MR02-IR69-SS05	MR02-IR69-SS06
Sample ID					IR69-SS01-10A	IR69-SS01D-10A	IR69-SS02-10A	IR69-SS03-10A	IR69-SS04-10A	IR69-SS05-10A	IR69-SS06-10A	MR02-IR69-SS01-10A	MR02-IR69-SS01D-10A	MR02-IR69-SS02-10A	MR02-IR69-SS04-10A	MR02-IR69-SS05-10A	MR02-IR69-SS06-10A
Sample Date					03/04/10	03/04/10	02/28/10	03/04/10	03/04/10	03/04/10	03/04/10	03/04/10	03/04/10	03/13/10	03/13/10	03/13/10	03/13/10
Chemical Name																	
Volatile Organic Compounds (µg/kg)																	
1,2,4-Trichlorobenzene	--	2,200	27,000	6,200	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 U	7.1 U	5.6 U	6.6 U	340 U	5.4 UJ	4.7 UJ	1.1 J
2-Butanone	--	16,000	20,000,000	2,800,000	25 J	23 J	9.2 U	14 U	110 J	27 J	18 UJ	14 U	16 U	850 U	13 U	12 R	31 UJ
Acetone	--	24,000	63,000,000	6,100,000	410 J	560 J	93	230 J	470 J	840	520 J	360 J	390 J	850 U	210 J	420 J	730 J
Cyclohexane	--	--	120,000	120,000	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 U	7.1 U	5.6 U	6.6 U	340 U	0.44 J	0.44 J	13 UJ
Ethylbenzene	--	8,100	27,000	5,400	6.2 U	6.3 U	3.7 U	5.5 U	3.3 J	8.5 U	7.1 U	5.6 U	6.6 U	340 U	5.4 UJ	4.7 UJ	13 UJ
m- and p-Xylene	--	6,000	250,000	59,000	12 U	13 U	7.3 U	11 U	11 J	17 U	14 U	11 U	13 U	680 U	11 UJ	9.4 UJ	25 UJ
Methyl acetate	--	--	29,000,000	7,800,000	110 J	230 J	87	5.2 J	27 J	170	18 J	9.9 J	54 J	710	4.7 J	35 J	350
Toluene	--	5,500	820,000	500,000	6.2 U	6.3 U	3.7 U	5.5 U	58	8.5 U	7.1 U	8.8 U	6.6 U	340 U	5.4 U	4.7 U	13 U
Xylene, total	--	6,000	260,000	63,000	6.2 U	6.3 U	3.7 U	5.5 U	14 J	8.5 U	7.1 U	5.6 U	6.6 U	340 U	5.4 UJ	4.7 UJ	13 UJ
Semivolatile Organic Compounds (µg/kg)																	
2-Methylnaphthalene	--	1,600	370,000	31,000	1.9 J	1.4 J	9.5 U	2.2 J	1.8 J	1.6 J	1.2 J	1.9 J	1.4 J	2 J	11 U	1.9 J	3.6 J
Acenaphthene	--	8,400	3,300,000	340,000	1 J	13 U	9.5 U	1.9 J	1.5 J	16 U	4.6 J	2.1 J	1.8 J	0.8 J	1.8 J	2.3 J	1.5 J
Acenaphthylene	--	11,000	3,300,000	340,000	13 U	13 U	9.5 U	11 U	11 U	16 U	12 U	11 U	0.93 J	10 U	1.1 J	9.9 U	1.1 J
Anthracene	--	660,000	17,000,000	1,700,000	13 U	1.2 J	9.5 U	1.6 J	0.99 J	16 U	1.6 J	1.4 J	1.1 J	0.68 J	1.6 J	9.9 U	1.7 J
Benzaldehyde	--	--	1,200,000	780,000	100 J	59 J	38 J	86 J	62 J	82 J	140 J	110 J	78 J	74 J	91 J	36 J	170 J
Benzo(a)anthracene	--	180	2,100	150	2.6 J	3 J	1.2 J	11 U	0.88 J	2.4 J	12 U	1.8 J	3.2 J	3 J	2.1 J	1 J	0.81 J
Benzo(a)pyrene	--	59	210	15	1.6 J	1.5 J	3.2 J	1.8 J	1.9 J	1.4 J	1.9 J	4.1 J	3.7 J	1.8 J	7.3 J	1.6 J	1.8 J
Benzo(b)fluoranthene	--	600	2,100	150	1.4 J	2.5 J	3 J	3.2 J	2.1 J	2.1 J	5.7 J	2.1 J	2 J	3.2 J	4.9 J	2.7 J	6.2 J
Benzo(g,h,i)perylene	--	360,000	1,700,000	170,000	0.7 J	1.1 J	1.8 J	11 U	11 U	16 U	0.64 J	0.82 J	0.62 J	10 U	11 U	9.9 U	1.7 J
Benzo(k)fluoranthene	--	5,900	21,000	1,500	1.8 J	2.7 J	2 J	3.3 J	2.3 J	1.8 J	3.2 J	2 J	1.8 J	2.8 J	3.9 J	1.9 J	3.3 J
bis(2-Ethylhexyl)phthalate	--	7,200	120,000	35,000	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	200 J	200 U	310
Caprolactam	--	18,000	31,000,000	3,100,000	260 U	260 U	200 UJ	230 U	230 U	81 J	250 U	220 U	220 U	200 U	220 U	200 U	210 U
Chrysene	--	18,000	210,000	15,000	1.9 J	2.9 J	2.5 J	1.3 J	1.6 J	2.2 J	12 U	1.8 J	2.1 J	3 J	4.2 J	2.6 J	3.4 J
Fluoranthene	--	330,000	2,200,000	230,000	2.4 J	5.8 J	3.2 J	11 U	2.6 J	4.7 J	12 U	11 U	3.9 J	4.1 J	5.7 J	3.9 J	4 J
Fluorene	--	56,000	2,200,000	230,000	13 U	0.83 J	9.5 U	11 U	0.86 J	16 U	12 U	1.2 J	0.99 J	0.59 J	1.1 J	0.56 J	10 U
Indeno(1,2,3-cd)pyrene	--	2,000	2,100	150	0.84 J	1.4 J	2.1 J	11 U	0.75 J	1.1 J	1 J	1.2 J	0.97 J	0.86 J	11 U	9.9 U	2.1 J
Naphthalene	--	210	18,000	3,600	2.6 J	1.9 J	9.5 U	3.2 J	2.6 J	1.7 J	2 J	2.6 J	1.7 J	10 U	11 U	9.9 U	10 U
Phenanthrene	--	57,000	17,000,000	1,700,000	2.8 J	4.3 J	3.4 J	3.8 J	3.1 J	3.1 J	3.6 J	3 J	3.9 J	3.2 J	5.5 J	4.4 J	6 J
Pyrene	--	220,000	1,700,000	170,000	1.6 J	4.4 J	2.7 J	1.2 J	2 J	3.6 J	12 U	2 J	3.5 J	3.5 J	4.4 J	2.8 J	2.7 J
Pesticide/Polychlorinated Biphenyls (µg/kg)																	
4,4'-DDD	--	240	7,200	2,000	25 UJ	3.5 NJ	3.8 U	1.4 NJ	8.9 UJ	1.9 NJ	1.2 NJ	21 UJ	2.7 NJ	20 U	21 U	1.9 NJ	2 NJ
4,4'-DDE	--	--	5,100	1,400	99 NJ	110 NJ	1.7 NJ	2 NJ	3.8 NJ	1.3 NJ	1.8 NJ	73 NJ	73 NJ	56 NJ	2.5 NJ	22 NJ	2.9 NJ
4,4'-DDT	--	340	7,000	1,700	45 J	56 J	3.8 R	1.6 J	1.7 J	4.8 J	3.7 J	36 J	39 J	24 J	4.6 J	15 J	3.3 J
Aldrin	--	--	100	29	1.8 J	13 U	2	4.7 U	0.49 J	1.2 J	2 J	11 U	11 U	10 U	11 U	0.22 J	1 J
alpha-BHC	--	1.2	270	77	13 UJ	13 UJ	2 U	4.7 UJ	2.8 J	3.3 UJ	3.1 J	1.4 J	3.3 J	10 U	11 U	0.58 J	3.1 J
alpha-Chlordane	--	68	6,500	1,600	1.5 J	13 U	1.4 J	4.7 U	0.8 J	1.1 J	0.61 J	1.8 J	2.5 J	10 J	11 U	1.2 J	2 J
beta-BHC	--	1.2	960	270	6.4 UJ	6.4 UJ	0.98 U	2.3 UJ	2.3 UJ	1.6 UJ	2.5 UJ	5.5 UJ	5.5 UJ	2 J	5.5 U	1 U	1.1 U
delta-BHC	--	1.2	960	270	13 UJ	13 UJ	2 U	0.55 J	4.6 UJ	3.3 UJ	4.9 UJ	11 UJ	11 UJ	2.1 J	11 UJ	0.98 J	1.2 J
Endosulfan I	--	5,600	370,000	37,000	13 U	13 U	2 U	2.3 J	0.75 J	3.3 U	4.9 U	11 U	11 U	10 U	1.5 J	0.27 J	1.7 J
Endosulfan II	--	5,600	370,000	37,000	25 U	25 U	3.8 U	9 U	8.9 U	6.3 U	1.9 J	21 U	21 U	20 U	21 U	1.2 J	4.1 U
Endosulfan sulfate	--	5,600	370,000	37,000	11 J	9.7 J	2.8 J	30 J	8.1 J	26 J	25	21 U	17 J	12 J	43 J	3.8 J	11 J
Endrin	--	810	18,000	1,800	25 U	25 U	3.8 U	9 U	8.9 U	3.9 J	9.6 U	21 U	21 U	20 U	21 U	0.87 J	1.5 J
Endrin aldehyde	--	810	18,000	1,800	25 U	25 U	3.8 U	9 U	25	3.1 J	9.6 U	21 U	21 U	20 U	21 U	2.2 J	3.1 J
Endrin ketone	--	810	18,000	1,800	13 J	18 J	3.8 UJ	6.5 J	11 J	9.7 J	3.2 J	7.2 J	20 J	11 J	9 J	2.5 J	5.2 J
gamma-BHC (Lindane)	--	1.8	2,100	520	13 U	13 U	2 U	4.7 U	8.4	3.3 U	1.8 J	11 U	11 U	10 U	1.4 J	2 U	1.6 J
gamma-Chlordane	--	68	6,500	1,600	13 U	13 U	2 U	4.7 U	1.3 J	1.9 J	0.96 J	11 U	11 U	2.1 J	3.9 J	2.2 J	2.5 J
Heptachlor	--	6.6	380	110	13 U	13 U	1.4 J	0.52 J	4.6 U	1.1 J	1.4 J	11 U	11 U	1.5 J	11 U	2 U	1.1 J
Heptachlor epoxide	--	0.82	190	53	13 U	13 U	2 U	4.7 U	4.6 U	3.3 U	4.9 U	11 U	11 U	10 U	11 U	2 U	1.6 J
Methoxychlor	--	22,000	310,000	31,000	130 UJ	130 UJ	20 UJ	47 UJ	11 J	4.9 J	49 UJ	110 UJ	110 UJ	100 UJ	110 UJ	20 UJ	21 UJ

Station ID	Camp Lejeune Background SS 2X Mean	NCSSLs (January, 2010)	Adjusted Industrial Soil RSLs (June, 2011)	Adjusted Residential Soil RSLs (June 2011)	IR69-IS01		IR69-IS02	IR69-IS03	IR69-IS04	IR69-IS05	IR69-IS06	MR02-IR69-SS01		MR02-IR69-SS02	MR02-IR69-SS04	MR02-IR69-SS05	MR02-IR69-SS06
Sample ID					IR69-SS01-10A	IR69-SS01D-10A	IR69-SS02-10A	IR69-SS03-10A	IR69-SS04-10A	IR69-SS05-10A	IR69-SS06-10A	MR02-IR69-SS01-10A	MR02-IR69-SS01D-10A	MR02-IR69-SS02-10A	MR02-IR69-SS04-10A	MR02-IR69-SS05-10A	MR02-IR69-SS06-10A
Sample Date					03/04/10	03/04/10	02/28/10	03/04/10	03/04/10	03/04/10	03/04/10	03/04/10	03/04/10	03/13/10	03/13/10	03/13/10	03/13/10
Chemical Name																	
Total Metals (mg/kg)																	
Aluminum	5,487	--	99,000	7,700	6,200	5,700	1,100	230	1,310	6,390	3,590	3,550	3,760	2,970	1,480	1,320	1,460
Antimony	0.447	--	41	3.1	0.47 J	1.4 U	1.1 J	1.4 U	1.3 U	1.9 U	1.4 U	2 UJ	2.7 UJ	2.2 UJ	2.5 UJ	2 UJ	2.4 UJ
Arsenic	0.626	5.8	1.6	0.39	1.3 J	0.76 J	1.1 U	1.4 U	1.3 U	1.9 U	1.4 U	0.45 J	0.44 J	0.45 J	0.51 J	0.24 J	0.42 J
Barium	14.5	580	19,000	1,500	29 J	26.9 J	4.6 J	2.8 J	10.3 J	64.5	31	30.8 J	29.6 J	13.7 J	21.4 J	6.9 J	5 J
Beryllium	0.103	--	200	16	0.12 J	0.1 J	0.57 U	0.69 U	0.66 U	0.15 J	0.08 J	0.98 U	1.3 U	1.1 U	1.2 U	1 U	1.2 U
Cadmium	0.033	3	80	7	0.09 J	0.07 J	0.57 U	0.69 U	0.66 U	0.97 U	0.7 U	0.69 U	0.94 U	0.76 U	0.87 U	0.7 U	0.85 U
Calcium	6,360	--	--	--	1,030 J	1,490 J	572 UJ	356 J	547 J	3,860	1,120	980 U	1,300 U	1,100 U	1,200 U	1,000 U	1,200 U
Chromium	6.05	3.8	5.6	0.29	**8.8**	**8**	0.96 J	0.55 J	1.8	4.4	2.2	2.2	2.7 U	2.3	2.5 U	2 U	2.4 U
Cobalt	0.294	--	30	2.3	0.5 J	0.44 J	0.57 U	0.69 U	0.66 U	0.15 J	0.12 J	9.8 U	13 U	11 U	12 U	10 U	12 U
Copper	4.83	700	4,100	310	4	4.9	0.9	2.1	1.3	3.8	2.8	4.9 U	6.7 U	5.4 U	6.2 U	5 U	6.1 U
Iron	3,245	150	72,000	5,500	4,960	4,090	606	174	544	2,160	909	1,030	1,110	977	559	587	797
Lead	12.3	270	800	400	8.8	7.5	3.9	2.3	6.8	15.9	8	7.4	7.7	8.4	5.3	2.9	3.2
Magnesium	238	--	--	--	468 J	473 J	572 U	76.8 J	107 J	551 J	248 J	980 U	1,300 U	1,100 U	1,200 U	1,000 U	1,200 U
Manganese	13.7	65	2,300	180	49.3 J	81.1 J	24.8 J	16.1	15.6	347	87.3	57.2	48.4	60.4	34.3	47.5	27.5
Mercury	0.081	1	31	2.3	0.07 J	0.18 J	0.03 J	0.04 J	0.08	0.31	0.11	0.03 J	0.04 J	0.02 J	0.04 J	0.19 U	0.03 J
Nickel	1.21	130	2,000	150	1.7	1.5	0.57 UJ	0.69 U	0.35 J	2.2	1.6	7.9 UJ	11 UJ	8.6 UJ	9.9 UJ	8.1 UJ	9.7 UJ
Potassium	116	--	--	--	500 J	533 J	62.6 J	48 J	107 J	238 J	164 J	197 J	170 J	107 J	101 J	74.3 J	91.8 J
Selenium	0.563	2.1	510	39	0.86	0.7 U	0.57 U	0.69 U	0.66 U	0.97 U	0.7 U	0.11 J	1.3 U	0.13 J	1.2 U	1 U	1.2 U
Sodium	80.9	--	--	--	215 J	205 J	41.8 J	162 J	151 J	262 J	197 J	980 U	1,300 U	1,100 U	1,200 U	1,000 U	1,200 U
Thallium	0.36	--	1	0.078	1.5 U	1.4 U	1.1 U	1.4 U	1.3 U	1.9 U	1.4 U	0.05 J	0.04 J	0.03 J	0.62 U	0.5 U	0.61 U
Vanadium	8.9	--	520	39	12.1	10.5	2.1 J	0.69 J	3.2	7.1	3.3	3.9 J	4.2 J	3.9 J	2.6 J	2.1 J	2.9 J
Zinc	10.8	1,200	31,000	2,300	10.4	10.2	2.3	3.5	3.2	14.3	10.6	14.4	13.3	11.1	5 U	4 U	4.8 U

Notes:

Shading indicates exceedance of two times the mean base background concentration for surface soil

Bold box indicates exceedance of NC SSLs

Bold text indicates exceedance of Adjusted Industrial Soil RSLs

Underline indicates exceedance of Adjusted Residential Soil RSLs

RSLs were adjusted for noncarcinogens to account for exposure to multiple constituents

J - Analyte present, value may or may not be accurate or precise

NJ - Qualitative identification questionable due to poor resolution, presumptively present at approximate quantity

R - Unreliable Result

U - The material was analyzed for, but not detected

UJ - Analyte not detected, quantitation limit may be inaccurate

mg/kg - Milligrams per kilogram

µg/kg - Micrograms per kilogram

Table 5-2
Subsurface Soil Analytical Results
Supplemental Investigation Site 69, Operable Unit No. 14
MCB CamLej, North Carolina

Station ID	Camp Lejeune Background SB 2X Mean	NCSSLs (January, 2010)	Adjusted Industrial Soil RSLs (June, 2011)	Adjusted Residential Soil RSLs (June, 2011)	IR69-IS01		IR69-IS02	IR69-IS03	IR69-IS04	IR69-IS05	IR69-IS06
Sample ID					IR69-SB01-01-02-10A	IR69-SB01D-01-02-10A	IR69-SB02-08-10-10A	IR69-SB03-04-05-10A	IR69-SB04-06-07-10A	IR69-SB05-06-07-10A	IR69-SB06-06-07-10A
Sample Date					03/07/10	03/07/10	02/28/10	03/16/10	03/07/10	03/07/10	03/07/10
Chemical Name											
Volatile Organic Compounds (µg/kg)											
Acetone	--	24,000	63,000,000	6,100,000	19 U	26 U	9.8 U	44	11 U	41 J	12 UJ
Carbon disulfide	--	3,800	370,000	82,000	4.7 U	4.7 U	2.5 U	0.53 J	4.3 U	5.3 U	4.8 U
Methyl acetate	--	--	29,000,000	7,800,000	3 J	4.5 J	2.5 U	63	2.5 J	5.3 UJ	4.8 UJ
Semivolatile Organic Compounds (µg/kg)											
Benzo(b)fluoranthene	--	600	2,100	150	10 U	9.9 U	10 U	0.79 J	11 U	12 U	11 U
Benzo(k)fluoranthene	--	5,900	21,000	1,500	10 U	0.52 J	10 U	10 U	11 U	12 U	11 U
bis(2-Ethylhexyl)phthalate	--	7,200	120,000	35,000	210 U	200 U	200 U	210 U	220 U	540	220 U
Caprolactam	--	18,000	31,000,000	3,100,000	210 U	200 U	200 UJ	210 U	61 J	150 J	220 U
Phenanthrene	--	57,000	17,000,000	1,700,000	10 U	9.9 U	1.7 J	10 U	11 U	12 U	11 U
Pesticide/Polychlorinated Biphenyls (µg/kg)											
4,4'-DDD	--	240	7,200	2,000	4.1 UJ	3.9 UJ	2.3 NJ	0.6 NJ	4.2 UJ	4.8 UJ	0.44 J
4,4'-DDE	--	--	5,100	1,400	4.2 J	6 J	4 U	4.1 U	4.2 UJ	4.8 UJ	4.3 UJ
4,4'-DDT	--	340	7,000	1,700	2.4 J	4.5 J	4 R	4.1 R	4.2 R	4.8 R	4.3 UJ
alpha-Chlordane	--	68	6,500	1,600	2.4 J	1.8 J	2 U	0.32 J	2.2 U	0.64 J	2.2 U
beta-BHC	--	1.2	960	270	0.45 J	1 UJ	1 U	1.1 U	1.1 UJ	1.2 UJ	0.77 J
Endosulfan I	--	5,600	370,000	37,000	0.22 J	0.2 J	2 U	2.1 U	2.2 U	2.5 U	2.2 U
Endosulfan sulfate	--	5,600	370,000	37,000	4.1 U	3.9 U	4 U	0.85 J	0.81 J	4.8 U	4.3 U
Endrin	--	810	18,000	1,800	1.1 J	0.72 J	1.1 J	4.1 U	4.2 U	4.8 U	4.3 U
gamma-Chlordane	--	68	6,500	1,600	2.1 U	2 U	2 U	0.49 J	2.2 U	2.5 U	2.2 U
Heptachlor	--	6.6	380	110	0.55 J	0.45 J	2 UJ	0.32 J	0.45 J	0.57 J	2.2 U
Total Metals (mg/kg)											
Aluminum	10,369	--	99,000	7,700	15,900	12,800	4,100	3,490	14,500	20,600	13,100
Antimony	0.36	--	41	3.1	0.36 J	1.1 U	1.2 J	1.4 J	0.42 J	0.47 J	0.58 J
Arsenic	2.12	5.8	1.6	0.39	**3.7**	**2.6**	**2.8**	1.2 U	**4.8**	**4.6**	**3.5**
Barium	16.6	580	19,000	1,500	19.9 J	17.9 J	24.1 UJ	1.6 J	10.5 J	32.8	14.9 J
Beryllium	0.165	--	200	16	0.21 J	0.17 J	0.1 J	0.6 U	0.12 J	0.29 J	0.13 J
Cadmium	0.023	3	80	7	0.18 J	0.27 J	0.6 U	0.6 U	0.15 J	0.36 J	0.07 J
Calcium	441	--	--	--	122 J	129 J	602 U	597 U	51.4 J	754	38.8 J
Chromium	14.5	3.8	5.6	0.29	**24.1**	**18.1**	**8.7**	3.8	**21**	**29.6**	**19.6**
Cobalt	0.822	--	30	2.3	1.3	1.1	0.6 U	0.6 U	0.41 J	1	0.46 J
Copper	2.56	700	4,100	310	3.4	2.8	1	0.31 J	4.5	5.3	3.1
Iron	5,439	150	72,000	5,500	13,300	10,200	5,670	262	12,200	13,800	8,670
Lead	8.49	270	800	400	6.8	5.6	3.4	2.7	6.3	6.8	6.5
Magnesium	363	--	--	--	1,080	842	602 U	32.4 J	594 U	975	622 U
Manganese	9.25	65	2,300	180	20.3	18.4	3.9	0.98 J	11.1	17.5	11.8
Mercury	0.071	1	31	2.3	0.15	0.02 J	0.04 U	0.03 J	0.04 U	0.03 J	0.08
Nickel	2.27	130	2,000	150	3.4	3	0.47 J	0.43 J	1.1	3.3	1.4
Potassium	361	--	--	--	1,160 J	883 J	262 J	59.6 J	885 J	1,370 J	872 J
Selenium	0.505	2.1	510	39	0.71	0.54 U	0.34 J	0.6 UJ	0.58 J	0.71	0.62 U
Sodium	68.3	--	--	--	571 U	544 U	602 U	73.2 J	594 U	677 U	622 U
Vanadium	17.2	--	520	39	30.4	23	13.1	1.5 J	22.6	39	22.5
Zinc	6.59	1,200	31,000	2,300	10.9	9.1	4.3	2.4 U	5.5	10.2	6.1

Notes:
Shading indicates exceedance of two times the mean base background concentration for subsurface soil
Bold box indicates exceedance of NC SSLs
Bold text indicates exceedance of Adjusted Industrial Soil RSLs
Underline indicates exceedance of Adjusted Residential Soil RSLs
RSLs were adjusted for noncarcinogens to account for exposure to multiple constituents
J - Analyte present, value may or may not be accurate or precise
NJ - Qualitative identification questionable due to poor resolution, presumptively present at approximate quantity
R - Unreliable Result
U - The material was analyzed for, but not detected
UJ - Analyte not detected, quantitation limit may be inaccurate
mg/kg - Milligrams per kilogram
µg/kg - Micrograms per kilogram

Table 5-3
Surface Water Analytical Results
Supplemental Investigation Site 69, Operable Unit No. 14
MCB CamLej, North Carolina

Station ID	**NC2B-SW-Human Health & Water Supply[1]**	**PAL[2]**	**PAL Reference**	IR69-SW01		IR69-SW02	IR69-SW03
Sample ID				IR69-SW01-10A	IR69-SW01D-10A	IR69-SW02-10A	IR69-SW03-10A
Sample Date				03/14/10	03/14/10	03/15/10	03/15/10
Chemical Name							
Volatile Organic Compounds (µg/l)							
Carbon disulfide	--	1000	USEPA Tapwater RSL Adjusted	0.5 UJ	0.5 UJ	0.036 J	0.027 J
cis-1,2-Dichloroethene	--	330	ECOTOX & RAIS 1/07	1.2	1.2	0.5 U	0.099 J
trans-1,2-Dichloroethene	--	140	NRWQC 06/ECOTOX & RAIS 1/07	0.058 J	0.068 J	0.5 U	0.5 U
Semivolatile Organic Compounds (µg/l)							
No Detections							
Pesticide/Polychlorinated Biphenyls (µg/l)							
No Detections							
Total Metals (µg/l)							
Aluminum	6,500	--	--	200 U	200 U	200 U	474
Barium	1,000	--	--	26.5 J	23.6 J	20 J	32.3 J
Calcium	--	--	--	2,370 J	3,420 J	4,300 J	3,060 J
Iron	--	1000	NC/ECOTOX 1/09	31.7 J	96.5 J	101	752
Lead	--	1.32	USEPA Region IV 11/01	**2.5 J**	3 U	**2.9 J**	**2.3 J**
Magnesium	--	--	--	1,930 J	2,150 J	5,000 U	1,210 J
Manganese	200	--	--	10.2 J	17.1 J	18.4	27.5
Potassium	--	--	--	553 J	652 J	2,080 J	708 J
Selenium	--	5	NC2B - Freshwater Aquatic Life	**5.5 J**	4 J	**6.2 J**	5 UJ
Sodium	--	--	--	13,300	15,500	56,800	7,720
Thallium	0.24	--	--	10 U	10 U	6.9 J	10 U
Vanadium	--	18	USEPA Tapwater RSL Adjusted	20 U	20 U	20 U	0.71 J
Zinc	--	50	NC2B - Freshwater Aquatic Life	20 U	20 U	20 U	**104**
Dissolved Metals (µg/l)							
Aluminum, Dissolved	6,500	--	NRWQC 06/RAIS 1/09	200 U	200 U	121 J	329
Calcium, Dissolved	--	--	--	2,460 J	3,390 J	5,000 U	3,210 J
Iron, Dissolved	--	1000	NC/ECOTOX 1/09	79 J	100 U	62.3 J	408
Magnesium, Dissolved	--	--	--	1,900 J	2,110 J	5,190	1,190 J
Manganese, Dissolved	200	200	--	10.7 J	17.9 J	19.2	29.4
Potassium, Dissolved	--	--	--	5,000 U	5,000 U	2,840 J	5,000 U
Silver, Dissolved	--	0.012	USEPA Region IV 11/01	5 U	**1 J**	5 U	5 U
Sodium, Dissolved	--	--		15,100	16,200	65,800	8,080
Zinc, Dissolved	--	50	NC2B - Freshwater Aquatic Life	20 U	20 U	20 U	**113**

Notes:

Bold box indicates exceedance of NC2B-SW-Human Health + Water Supply

Bold text indicates the exceedance of Project Action Limits

[1] - NC2B-SW-Human Health and NC2B-SW-Water Supply were combined to show the most conservative criteria

[2] Project Action Limits (PALs) were used when NC2B standards were unavailable

J - Analyte present, value may or may not be accurate or precise

U - The material was analyzed for, but not detected

UJ - Analyte not detected, quantitation limit may be inaccurate

µg/l - Micrograms per liter

References:

NC2B - North Carolina Administrative Code Title 15A, Subchapter 2B, Classifications and Water Quality Standards

NRWQC 06 - EPA's 2006 National Recommended Water Quality Criteria; 11/02 Human Health Calculation Matrix

RAIS - Risk Assessment Information System; Toxicity & Chemical Specific Factors database

Table 5-4
Sediment Analytical Results
Supplemental Investigation Site 69, Operable Unit No. 14
MCB CamLej, North Carolina

Station ID	Camp Lejeune Background SS 2X Mean	NCSSLs (January, 2010)	Adjusted Industrial Soil RSLs (June, 2011)	Adjusted Residential Soil RSLs (June, 2011)	IR69-SD01		IR69-SD02	IR69-SD03
Sample ID					IR69-SD01-10A	IR69-SD01D-10A	IR69-SD02-10A	IR69-SD03-10A
Sample Date					03/14/10	03/14/10	03/15/10	03/15/10
Chemical Name								
Volatile Organic Compounds (µg/kg)								
1,4-Dichlorobenzene	--	70	12,000	2,400	23 U	22 U	1.1 J	4.8 UJ
2-Butanone	--	16,000	20,000,000	2,800,000	58 U	54 U	66 J	12 UJ
Acetone	--	24,000	63,000,000	6,100,000	540 J	290 J	760 J	110 J
Carbon disulfide	--	3,800	370,000	82,000	17 J	13 J	9.2 J	4.8 UJ
Chloromethane	--	15	50,000	12,000	2.5 J	1.7 J	20 UJ	4.8 UJ
cis-1,2-Dichloroethene	--	360	200,000	16,000	51 J	27 J	20 UJ	4.8 UJ
Cyclohexane	--	--	120,000	120,000	1.8 J	1.7 J	20 UJ	4.8 UJ
m- and p-Xylene	--	6,000	250,000	59,000	0.77 J	43 U	40 UJ	9.6 UJ
Methyl acetate	--	--	29,000,000	7,800,000	95 J	57 J	570 J	65
Trichloroethene	--	18	10,000	2,500	2.8 J	1.9 J	20 UJ	4.8 UJ
Vinyl chloride	--	0.19	1,700	60	6 J	22 UJ	20 UJ	4.8 UJ
Semivolatile Organic Compounds (µg/kg)								
2-Methylnaphthalene	--	1,600	370,000	31,000	10 J	8.4 J	8.5 J	1.3 J
Acenaphthene	--	8,400	3,300,000	340,000	4.3 J	35 U	35 U	11 U
Anthracene	--	660,000	17,000,000	1,700,000	14 J	5.1 J	3.8 J	11 U
Benzaldehyde	--	--	1,200,000	780,000	130 J	240 J	400 J	230 U
Benzo(a)anthracene	--	180	2,100	150	17 J	2.6 J	2.9 J	11 U
Benzo(a)pyrene	--	59	210	15	32 J	37	18 J	0.84 J
Benzo(b)fluoranthene	--	600	2,100	150	24 J	9.6 J	7 J	11 U
Benzo(g,h,i)perylene	--	360,000	1,700,000	170,000	36 U	35 U	5.9 J	11 U
Benzo(k)fluoranthene	--	5,900	21,000	1,500	17 J	6.1 J	4.7 J	11 U
bis(2-Ethylhexyl)phthalate	--	7,200	120,000	35,000	400 J	710 U	710 U	230 U
Chrysene	--	18,000	210,000	15,000	18 J	6.1 J	4.9 J	11 U
Fluoranthene	--	330,000	2,200,000	230,000	25 J	9.2 J	6.9 J	11 U
Fluorene	--	56,000	2,200,000	230,000	5.4 J	35 U	2.4 J	11 U
Indeno(1,2,3-cd)pyrene	--	2,000	2,100	150	36 U	35 U	3.1 J	11 UJ
Phenanthrene	--	57,000	17,000,000	1,700,000	21 J	9.7 J	8.4 J	2 J
Pyrene	--	220,000	1,700,000	170,000	22 J	6.8 J	5.3 J	0.76 J
Pesticide/Polychlorinated Biphenyls (µg/kg)								
4,4'-DDD	--	240	7,200	2,000	13 J	4 NJ	13 NJ	4.4 U
4,4'-DDE	--	--	5,100	1,400	7.8 J	9.2 NJ	14 NJ	0.65 NJ
4,4'-DDT	--	340	7,000	1,700	5.5 J	14 R	69 R	4.5 J
Aldrin	--	--	100	29	2.3 J	2.2 J	35 U	2.3 U
alpha-Chlordane	--	68	6,500	1,600	7.4 U	6 J	35 UJ	0.98 J
beta-BHC	--	1.2	960	270	2.3 J	3.5 U	18 U	0.48 J
delta-BHC	--	1.2	960	270	3.6 J	6.7 J	35 UJ	2.3 UJ
Dieldrin	--	0.81	110	30	2.7 J	1.8 J	69 U	1.1 J
Endosulfan I	--	5,600	370,000	37,000	13 J	6.6 J	35 U	0.99 J
Endosulfan sulfate	--	5,600	370,000	37,000	10 J	8.8 J	170 J	2.9 J
Endrin	--	810	18,000	1,800	14 U	14 U	69 U	0.97 J
Endrin aldehyde	--	810	18,000	1,800	14 U	4.7 J	560 NJ	4.4 U

Table 5-4
Sediment Analytical Results
Supplemental Investigation Site 69, Operable Unit No. 14
MCB CamLej, North Carolina

Station ID	Camp Lejeune Background SS 2X Mean	NCSSLs (January, 2010)	Adjusted Industrial Soil RSLs (June, 2011)	Adjusted Residential Soil RSLs (June, 2011)	IR69-SD01		IR69-SD02	IR69-SD03
Sample ID					IR69-SD01-10A	IR69-SD01D-10A	IR69-SD02-10A	IR69-SD03-10A
Sample Date					03/14/10	03/14/10	03/15/10	03/15/10
Endrin ketone	--	810	18,000	1,800	7.4 J	4.9 J	130 J	1.3 J
gamma-BHC (Lindane)	--	1.8	2,100	520	7.4 U	7.1 U	35 U	2 J
gamma-Chlordane	--	68	6,500	1,600	9.1 J	2.5 J	4.5 J	1.1 J
Heptachlor	--	6.6	380	110	6 J	5 J	35 U	0.34 J
Heptachlor epoxide	--	0.82	190	53	3.7 J	2.1 J	35 U	2.3 U
Methoxychlor	--	22,000	310,000	31,000	74 U	71 UJ	150 J	23 UJ
Monocrotophos	--	--	--	--	1,900 U	1,800 U	1,600 R	420 J
Total Metals (mg/kg)								
Aluminum	5,487	--	99,000	7,700	7,470	6,540	8,650	469
Antimony	0.447	--	41	3.1	4.1 U	3.9 U	5.3 J	1.5 J
Barium	14.5	580	19,000	1,500	36.5 J	32.6 J	18.6 J	1.8 J
Beryllium	0.103	--	200	16	0.27 J	0.21 J	0.67 J	0.64 U
Calcium	6,360	--	--	--	3,970	3,830	2,350	643 U
Chromium	6.05	3.8	5.6	0.29	**8.8**	**7.4**	**9**	0.75 J
Cobalt	0.294	--	30	2.3	0.69 J	0.38 J	2.1 U	0.64 U
Copper	4.83	700	4,100	310	9.5	7.7	4.2	0.95
Iron	3,245	150	72,000	5,500	3100	2700	2000	114
Lead	12.3	270	800	400	12.4	11.5	13.7	1.7
Magnesium	238	--	--	--	2,070 U	1,930 U	1,320 J	21.8 J
Manganese	13.7	65	2,300	180	98.2	85.2	9.4	0.81 J
Mercury	0.081	1	31	2.3	0.19	0.09 J	0.14 U	0.04 U
Nickel	1.21	130	2,000	150	3.8	2.9	4.3	0.64 U
Potassium	116	--	--	--	2,070 UJ	1,930 UJ	520 J	24.8 J
Selenium	0.563	2.1	510	39	2.1 U	1.9 U	0.94 J	0.64 UJ
Sodium	80.9	--	--	--	2,070 U	1,930 U	1,400 J	69.7 J
Vanadium	8.9	--	520	39	12.7	10.9	10.2	0.7 J
Zinc	10.8	1,200	31,000	2,300	14.4 J	9.6 J	17	11.6
Wet Chemistry								
Total organic carbon (TOC) (mg/kg)	--	--	--	--	180,300	184,800	146,200	13,530

Notes:
Shading indicates exceedance of two times the mean base background
Bold box indicates exceedance of NC SSLs
Bold text indicates exceedance of Adjusted Industrial Soil RSLs
Underline indicates exceedance of Adjusted Residential Soil RSLs
RSLs were adjusted for noncarcinogens to account for exposure to multiple constituents
J - Analyte present, value may or may not be accurate or precise
R - Unreliable Result
U - The material was analyzed for, but not detected
UJ - Analyte not detected, quantitation limit may be inaccurate
mg/kg - Milligrams per kilogram
µg/kg - Micrograms per kilogram
Wet Chemistry was not validated

Table 5-5
Surficial Aquifer Analytical Results
Supplemental Investigation Site 69, Operable Unit No. 14
MCB CamLej, North Carolina

Station ID	Camp Lejeune Background GW 2X Mean	NCGWQS (January, 2010)	IR69-GW01		IR69-GW02	IR69-GW03		IR69-GW04	IR69-GW05		IR69-GW06	IR69-GW07		IR69-GW08		IR69-GW09	IR69-GW10	IR69-GW11	IR69-GW12	IR69-GW13	IR69-GW14	IR69-GW15
Sample ID			IR69-GW01-10A	IR69-GW01D-10A	IR69-GW02-10A	IR69-GW03-10A	IR69-GW03D-10A	IR69-GW04-10A	IR69-GW05-10A	IR69-GW05D-10A	IR69-GW06-10A	IR69-GW07-10A	IR69-GW07D-10A	IR69-GW08-10A	IR69-GW08D-10A	IR69-GW09-10A	IR69-GW10-10A	IR69-GW11-10A	IR69-GW12-10A	IR69-GW13-10A	IR69-GW14-10A	IR69-GW15-10A
Sample Date			03/08/10	03/08/10	03/02/10	03/07/10	03/07/10	03/14/10	03/08/10	03/08/10	03/09/10	03/09/10	03/09/10	03/08/10	03/08/10	03/01/10	03/08/10	03/01/10	02/27/10	03/01/10	02/28/10	03/07/10
Chemical Name																						
Volatile Organic Compounds (µg/l)																						
1,1,2,2-Tetrachloroethane	--	0.2	0.5 U	0.5 U	9.8	0.18 J	3.1 U	0.17 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.9
1,1,2-Trichloroethane	--	5	0.5 U	0.5 U	7.8	0.39 J	0.5 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.3
1,1-Dichloroethane	--	6	0.5 U	0.5 U	0.5 U	0.043 J	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	--	7	0.5 U	0.5 U	0.21 J	0.42 J	0.53 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	--	70	0.5 UJ	0.5 UJ	0.5 U	0.5 U	3.1 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.13 J
1,2-Dichloroethane	--	0.4	0.5 U	0.5 U	1.7	0.76	0.72 J	0.48 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	13
1,3-Dichlorobenzene	--	200	0.5 UJ	0.5 U	0.5 U	0.5 UJ	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.14 J	0.5 U	0.5 U	0.5 U	0.5 U	0.55
1,4-Dichlorobenzene	--	6	0.5 UJ	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.3
Benzene	--	1	0.5 U	0.5 U	0.5 U	0.58	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	--	700	0.5 U	0.5 U	0.041 J	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.031 J	0.5 U	0.14 J
Chlorobenzene	--	50	0.5 U	0.5 U	0.5 U	7.1	7.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.3
Chloroform	--	70	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	1.3	0.5 U	0.5 U	1.5	0.5 U	0.5 U	0.64	0.66	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	--	70	0.5 U	0.5 U	110 J	180	170	3.1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	6.5	0.5 U	0.5 U	0.8	0.5 U	0.5 U	2.1
Cyclohexane	--	--	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.27 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	--	0.7	0.5 U	0.5 U	0.19 J	0.5 U	3.1 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Toluene	--	600	0.5 U	0.5 U	0.5 U	0.73	3.1 U	8.3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	--	100	0.5 U	0.5 U	23	3.2	3.9	0.67	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.56	0.5 U	0.5 U	0.14 J	0.5 U	0.5 U	0.78
Trichloroethene	--	3	0.5 U	0.5 U	2.3	3.2	3.5	0.38 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.29 J	0.5 U	0.5 U	0.38 J
Vinyl chloride	--	0.03	0.5 U	0.5 U	20	5.2	4.8	0.21 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	12
Semivolatile Organic Compounds (µg/l)																						
2-Methylnaphthalene	--	30	0.2 U	0.2 U	0.016 J	0.13 J	0.12 J	0.019 J	0.2 U	0.2 U	0.21 U	0.22 U	0.22 U	0.21 U	0.22 U	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Acenaphthylene	--	200	0.2 U	0.2 U	0.2 U	0.2 U	0.01 J	0.2 U	0.2 U	0.2 U	0.21 U	0.22 U	0.22 U	0.21 U	0.22 U	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Fluoranthene	--	300	0.2 U	0.013 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	0.012 J	0.22 U	0.21 U	0.22 U	0.2 U	0.011 J	0.2 U	0.2 U	0.2 U	0.2 U	0.013 J
Phenanthrene	--	200	0.2 U	0.037 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	0.22 U	0.22 U	0.21 U	0.22 U	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Pyrene	--	200	0.2 U	0.018 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	0.016 J	0.22 U	0.21 U	0.22 U	0.2 U	0.015 J	0.2 U	0.2 U	0.2 U	0.2 U	0.018 J
Pesticide/Polychlorinated Biphenyls (µg/l)																						
4,4'-DDT	--	0.1	0.1 U	0.1 U	0.1 U	0.0052 J	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U
alpha-BHC	--	0.02	0.05 U	0.05 U	0.05 U	0.077	0.075	0.05 U	0.05 U	0.05 U	0.056 U	0.056 U	0.054 U	0.053 U	0.056 U	0.05 U	0.054 U	0.05 U	0.05 U	0.05 U	0.05 U	0.054 U
Aroclor-1260	--	0.5	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	1 U	1 U	1 U	0.98 U	1 U	0.93 U	1 U	0.93 U	0.93 U	0.93 U	0.93 U	1.2
beta-BHC	--	0.02	0.05 U	0.05 U	0.012 J	0.19 J	0.14 J	0.05 U	0.05 U	0.05 U	0.056 U	0.056 U	0.054 U	0.053 U	0.056 U	0.05 U	0.054 U	0.05 U	0.05 U	0.05 U	0.05 U	0.054 U
delta-BHC	--	0.02	0.05 U	0.05 U	0.05 U	1.5	1.4	0.012 J	0.05 U	0.05 U	0.056 U	0.056 U	0.054 U	0.053 U	0.056 U	0.05 U	0.054 U	0.05 U	0.05 U	0.05 U	0.05 U	0.054 U
Endrin	--	2	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.029 J
gamma-Chlordane	--	0.1	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.033 J	0.05 U	0.05 U	0.056 U	0.056 U	0.054 U	0.053 U	0.056 U	0.05 U	0.054 U	0.05 U	0.05 U	0.05 U	0.05 U	0.06 J
Heptachlor epoxide	--	0.004	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.056 U	0.056 U	0.054 U	0.053 U	0.056 U	0.05 U	0.054 U	0.05 U	0.05 U	0.05 U	0.05 U	0.079 J
Methoxychlor	--	40	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.32 J	0.5 U	0.5 U	0.56 U	0.56 U	0.54 U	0.53 U	0.56 U	0.5 U	0.54 U	0.5 U	0.5 U	0.5 U	0.5 U	0.54 U
Total Metals (µg/l)																						
Aluminum	1,886	--	480 J	466 J	515	942 J	704 J	1,040 J	153 J	136 J	200 U	200 UJ	200 UJ	499	200 U	1,770	668 J	765	800	1,130	348	790
Arsenic	5.77	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	2.9 J
Barium	86.2	700	82.6 J	85.5 J	21.6 J	46.3 J	45.9 J	62.9 J	22.2 J	19.7 J	20.7 J	27.5 J	27.7 J	12.6 J	200 U	43.9 J	16.8 J	33.3 J	22 J	6.9 J	10.5 J	97.2 J
Calcium	69,078	--	13,500	14,100	7,900	7,390	7,360	1,490 J	1,820 J	1,640 J	5,000 U	3,710 J	3,740 J	5,000 U	5,000 U	5,230	963 J	1,080 J	5,000 U	942 J	4,080 J	65,200
Chromium	3.13	10	10 U	10 U	1.8 J	1.9 J	1.5 J	1.6 J	10 U	10 U	1.8 J	10 U	10 U	10 U	10 U	3.1 J	1.3 J	10 U	10 U	1.1 J	10 U	2.4 J
Cobalt	3.4	--	5 U	5 U	5 U	1.7 J	1.5 J	2.8 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.8 J	5 U	5 U	5 U	5 U	5 U	0.78 J
Copper	2.76	1,000	5 U	2.3 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Iron	5,999	300	711	687	4,200	13,600	12,300	7,550	244 J	120 J	100 U	38.1 J	49.5 J	254	100 U	1,740	2,180	217	5,120	1,470	287	29,100
Lead	2.8	15	3 U	3 U	3 U	1.8 J	1.8 J	2.5 J	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	2.2 J	3 U	3.1	3 U	3 U	2.5 J
Manganese	214	50	23.9	24.2	152	130	129	147	38.4	36.1	2.5 J	3 J	3.1 J	4.3 J	10 U	41.6	6.2 J	5 J	18.7	9.9 J	16.3	800
Nickel	7.97	100	5 U	5 U	1.4 J	5 U	5 U	4.2 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2.4 J	5 U	5 U	5 U	5 U	5 U	5 U
Potassium	3,277	--	715 J	722 J	150 J	5,000 U	5,000 U	180 J	113 J	109 J	5,000 U	1,210 J	1,210 J	5,000 U	5,000 U	784 J	175 J	326 J	363 J	47.6 J	159 J	5,000 U
Selenium	3.14	20	5 U	5 U	3.8 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	3.9 J	5 U	5 UJ	5 UJ	5 UJ	5 UJ	5 U
Sodium	22,508	--	27,700	29,800	21,400	12,500	12,200	6,150	5,020	5,000 U	8,590	8,220	8,440	6,150	5,000 U	14,400	6,090	11,200	8,620	6,970	7,220	24,300
Vanadium	4.72	--	20 U	20 U	26	4.8 J	3.3 J	3.4 J	20 U	20 U	20 U	20 U	20 U	20 U	20 U	2.1 J	11.6 J	20 U	1.7 J	1.8 J	20 U	2.5 J
Zinc	42.1	1,000	4.3 J	8.5 J	35.8 J	4,760	4,660	6,840	3.6 J	2.8 J	2.7 J	1.7 J	1.6 J	72.7	20 U	20 UJ	3.3 J	20 UJ	75.9 J	20 UJ	20 UJ	20 U

Table 5-5
Surficial Aquifer Analytical Results
Supplemental Investigation Site 69, Operable Unit No. 14
MCB CamLej, North Carolina

Station ID	Camp Lejeune Background GW 2X Mean	NCGWQS (January, 2010)	IR69-GW01		IR69-GW02	IR69-GW03		IR69-GW04	IR69-GW05		IR69-GW06	IR69-GW07		IR69-GW08		IR69-GW09	IR69-GW10	IR69-GW11	IR69-GW12	IR69-GW13	IR69-GW14	IR69-GW15
Sample ID			IR69-GW01-10A	IR69-GW01D-10A	IR69-GW02-10A	IR69-GW03-10A	IR69-GW03D-10A	IR69-GW04-10A	IR69-GW05-10A	IR69-GW05D-10A	IR69-GW06-10A	IR69-GW07-10A	IR69-GW07D-10A	IR69-GW08-10A	IR69-GW08D-10A	IR69-GW09-10A	IR69-GW10-10A	IR69-GW11-10A	IR69-GW12-10A	IR69-GW13-10A	IR69-GW14-10A	IR69-GW15-10A
Sample Date			03/08/10	03/08/10	03/02/10	03/07/10	03/07/10	03/14/10	03/08/10	03/08/10	03/09/10	03/09/10	03/09/10	03/08/10	03/08/10	03/01/10	03/08/10	03/01/10	02/27/10	03/01/10	02/28/10	03/07/10
Chemical Name																						
Dissolved Metals (µg/l)																						
Aluminum, Dissolved	1,886	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	200 U	NA	773	296	413	NA	NA
Barium, Dissolved	86.2	700	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.1 J	NA	33.5 J	22.5 J	6.8 J	NA	NA
Calcium, Dissolved	69,078	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5,000 U	NA	5,000 U	1,660 J	5,000 U	NA	NA
Chromium, Dissolved	3.13	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	NA	1.2 J	10 U	10 U	NA	NA
Iron, Dissolved	5,999	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	NA	128	4,850	1,150	NA	NA
Lead, Dissolved	2.8	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3 U	NA	3.1	3 U	3 U	NA	NA
Manganese, Dissolved	214	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.7 J	NA	4.9 J	19.2 J	9.5 J	NA	NA
Nickel, Dissolved	7.97	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.2 J	NA	5 U	5 U	5 U	NA	NA
Potassium, Dissolved	3,277	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	552 J	NA	259 J	312 J	37.5 J	NA	NA
Sodium, Dissolved	22,508	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	13,400	NA	9,780	8,800	6,780	NA	NA
Zinc, Dissolved	42.1	1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	20 U	NA	20 U	80	20 U	NA	NA
Wet Chemistry																						
Alkalinity (mg/l)	--	--	10 U	10 U	10 U	32.1	15.6	10 U	10 U	10 U	10 U	9.82 J	9.57 J	10 U	10 U	10 U	20.8	10 U	10 U	10 U	10 U	15.2
Chloride (mg/l)	--	250	1 U	1 U	33.9 D	43	43	23 D	7.2	7.4	10	12	13	7	6.9	20.8 D	8.1	13.4 D	14.3 D	7.02 D	8.4 D	48 D
Ethene (ug/l)	--	--	2 U	2 U	0.1 J	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.6 J
Sulfate (mg/l)	--	250	22	22	11.5 D	7.5	9.9	4.7 D	6.9	6.5	8	6	6.1	5.5	5.5	10 D	6.6	13.4 D	8.45 D	6.18 D	7.63 D	150 D
Sulfide (mg/l)	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.8 J	1 U	1 U	1 U
Total organic carbon (TOC) (mg/l)	--	--	2.8	3.6	3.4	2.2	2.1	5	0.89 J	0.87 J	0.7 J	0.61 J	0.63 J	0.54 J	0.52 J	2.4	0.63 J	1.3	4.5	4.3	2.3	12

Notes:
Shading indicates exceedance of two times the mean base background concentration for Groundwater
Bold box indicates exceedance of NCGWQS
RSLs were adjusted for noncarcinogens to account for exposure to multiple constituents
* - The MCL-Groundwater value is reported in place of the NCGWQS where the MCL value is more conservative.
NA - Not analyzed
D - Compound identified in an analysis at a secondary dilution factor
J - Analyte present, value may or may not be accurate or precise
U - The material was analyzed for, but not detected
UJ - Analyte not detected, quantitation limit may be inaccurate
mg/l - Milligrams per liter
µg/l - Micrograms per liter
Wet Chemistry was not validated

Table 5-6
Upper Castle Hayne Aquifer Analytical Results
Supplemental Investigation Site 69, Operable Unit No. 14
MCB CamLej, North Carolina

Station ID	Camp Lejeune Background GW 2X Mean	NC2LGW (January, 2010)	IR69-MW02DW	IR69-MW03DW	IR69-MW04IW	IR69-MW05IW	IR69-MW09IW	IR69-MW11IW	IR69-MW13IW	IR69-MW14IW	IR69-MW15IW	IR69-MW19IW	IR69-MW19UW	IR69-MW26IW	IR69-MW27IW	IR69-MW28IW	IR69-MW29IW	IR69-MW30IW	IR69-MW31IW	
Sample ID			IR69-GW02DW-10A	IR69-GW03DW-10A	IR69-GW04IW-10A	IR69-GW05IW-10A	IR69-GW09IW-10A	IR69-GW11IW-10A	IR69-GW13IW-10A	IR69-GW14IW-10A	IR69-GW15IW-10A	IR69-GW19IW-10A	IR69-GW19UW-10A	IR69-GW26IW-10A	IR69-GW27IW-10A	IR69-GW28IW-10A	IR69-GW29IW-11A	IR69-GW30IW-11A	IR69-GW31IW-11A	IR69-GW31IWD-11A
Sample Date			03/02/10	03/07/10	03/15/10	03/14/10	03/06/10	03/13/10	03/01/10	02/28/10	03/06/10	03/16/10	03/16/10	03/16/10	03/06/10	03/18/10	03/15/11	03/15/11	03/15/11	03/15/11
Chemical Name																				
Volatile Organic Compounds (µg/l)																				
1,1-Dichloroethene	--	7	0.12 J	0.5 U	0.5 U	0.5 U	0.5 U	0.28 J	0.5 U	0.5 U	**11**	0.5 U	1.2	1.3 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	--	70	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	8.5	0.5 U	0.5 U	1.3 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	--	0.4	0.41 J	0.5 U	0.16 J	0.5 U	0.5 U	0.12 J	0.5 U	0.5 U	**19**	0.5 U	0.58	1.3 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	--	200	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	1 J	0.5 U	0.5 U	1.3 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	--	4,000	2.5 R	2.5 U	2.5 R	2.5 R	2.5 R	2.5 R	0.31 J	2.5 R	2.5 R	2.5 R	2.5 R	6.3 R	2.5 R	2.5 R	2.5 U	2.5 U	2.5 U	2.5 U
Acetone	--	6,000	2.5 R	2.5 U	11 R	2.5 R	2.5 R	2.5 R	2.5 R	2.5 R	3.3 R	4.6 R	4.2 R	8 R	2.5 R	13 J	29 U	55	17 U	26 U
Benzene	--	1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2	1.3 U	0.5 U	0.032 J	0.5 U	0.5 U	0.59 J	0.57 J
Carbon disulfide	--	700	0.5 U	0.5 U	0.093 J	0.5 U	0.035 J	0.5 U	0.5 U	0.5 U	0.03 J	0.5 UJ	0.5 UJ	0.11 J	0.2 J	0.084 J	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	--	50	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.59	1.3 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	--	70	0.5 U	0.5 U	6.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	2.9	7.8	8.8	3.3	0.5 U	0.5 U
cis-1,2-Dichloroethene	--	70	**620**	0.5 U	**210**	0.5 U	67	**510**	67	0.5 U	**51,000**	19	**570**	45	0.5 U	0.5 U	0.72 J	0.5 U	0.41 J	0.44 J
Methylene chloride	--	5	0.5 U	0.5 U	3.3 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.3 U	0.5 U	0.65 U	1.3 J	2.5 U	2.5 U	2.5 U
Toluene	--	600	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.3 U	0.5 U	0.5 U	0.5 U	0.29 J	0.38 J	0.37 J
trans-1,2-Dichloroethene	--	100	11	0.5 U	13	0.5 U	0.089 J	9.3	0.5 U	0.5 U	**750**	0.082 J	5.2	0.28 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	--	3	0.5 U	0.5 U	0.37 J	0.5 U	0.5 U	**6.5**	0.5 U	0.5 U	**100 J**	**20**	**52**	1.3 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	--	0.03	**72**	0.5 U	**12**	0.5 U	0.38 J	**11**	**2.2**	0.5 U	**5,500**	0.5 U	**18**	**4.5**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Semivolatile Organic Compounds (µg/l)																				
Dimethyl phthalate	--	--	5 U	5 U	1.7 J	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	0.58 J	5.4 U	5.3 U	NA	NA	NA	NA
Di-n-butylphthalate	--	700	5 U	5 U	3.9 J	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	2 J	5.4 U	5.3 U	NA	NA	NA	NA
Fluoranthene	--	300	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	0.2 U	0.2 U	0.012 J	0.21 U	NA	NA	NA	NA
Pyrene	--	200	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	0.2 U	0.2 U	0.011 J	0.21 U	NA	NA	NA	NA
Pesticide/Polychlorinated Biphenyls (µg/l)																				
alpha-Chlordane	--	0.1	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.038 J	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA
Aroclor-1260	--	0.5	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.34 J	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	NA	NA	NA	NA
Endosulfan I	--	40	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.036 J	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA
Endrin	--	2	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.16	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA
gamma-Chlordane	--	0.1	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.18	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA
Heptachlor epoxide	--	0.004	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.12 J	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA
Explosives (µg/l)																				
No Detections			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals (µg/l)																				
Aluminum	1,886	--	200 U	200 U	234	200 UJ	171 J	200 UJ	200 U	93.8 J	200 U	407	200 U	200 U	200 U	1,360	NA	NA	NA	NA
Barium	86.2	700	36.7 J	24.7 J	36.1 J	8.4 J	23.7 J	39.6 J	24.5 J	23.9 J	55.7 J	4.2 J	26.1 J	20.2 J	31.3 J	29.2 J	NA	NA	NA	NA
Calcium	69,078	--	67,600	46,000	39,200	39,600	57,400	83,400	68,800	44,100	121,000	46,000	24,800	39,500	77,300	73,600	NA	NA	NA	NA
Chromium	3.13	10	10 U	10 U	10 U	10 U	2.4 J	10 U	10 U	10 U	1 J	2.7 J	10 U	10 U	1.7 J	15	NA	NA	NA	NA
Copper	2.76	1,000	5 U	5 U	5 U	5 U	5 U	1.9 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	NA
Iron	5,999	300	3,360	628	1,390	187	1,370	7,260	3,350	2,430	10,500	1,320	14,700	314	326	2,960	NA	NA	NA	NA
Lead	2.8	15	3 U	1.8 J	4.4	3 U	2.1 J	3 U	3 U	3 U	3 U	3.5	3.7	3.1	3 U	2.1 J	NA	NA	NA	NA
Magnesium	6,363	--	5,000 U	5,000 U	2,410 J	5,000 U	5,000 U	5,000 U	5,000 U	5,000 U	5,000 U	1,700 J	1,890 J	1,840 J	5,000 U	5,000 U	NA	NA	NA	NA
Manganese	214	50	80.9	96.8	80.8	25.8	61.7	124	102	74	208	34.4	65	50.1	188	62.8	NA	NA	NA	NA
Nickel	7.97	100	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.7 J	NA	NA	NA	NA
Potassium	3,277	--	1,460 J	5,000 U	2,470 J	1,640 J	5,000 U	1,470 J	1,240 J	1,220 J	5,000 U	1,100 J	1,080 J	1,520 J	5,000 U	2,930 J	NA	NA	NA	NA
Selenium	3.14	20	5 UJ	5 U	5 UJ	5 U	5.2	5 U	5 UJ	5 UJ	5 U	5.9 J	5 UJ	5 UJ	5 U	8	NA	NA	NA	NA
Sodium	22,508	--	24,300	14,800	68,700	35,800	33,100	14,400	17,700	12,200	23,100	11,600	12,800	24,300	23,700	203,000	NA	NA	NA	NA
Thallium	3.78	2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5.6 J	NA	NA	NA	NA
Vanadium	4.72	--	20 U	20 U	20 U	20 U	0.85 J	20 U	20 U	20 U	20 U	1.7 J	20 U	20 U	20 U	4.3 J	NA	NA	NA	NA
Zinc	42.1	1,000	20 UJ	20 U	20 U	20 U	20 U	20 U	20 UJ	20 UJ	20 U	29.1	26.2	20 U	20 U	20 U	NA	NA	NA	NA
Dissolved Metals (µg/l)																				
No Detections			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Wet Chemistry																				
Alkalinity (mg/l)	--	--	96.3	143	203	135	144	179	152	101	84.7	140	61.4	143	219	144	NA	NA	NA	NA
Chloride (mg/l)	--	250	92.4 D	12	26	4.7	13	18 D	18.1 D	10.6 D	170 D	6.2	15	13	13	12	NA	NA	NA	NA
Ethane (ug/l)	--	--	0.03 J	2 U	0.1 J	2 U	2 U	2 U	2 U	2 U	5	2 U	2 U	2 U	2 U	0.2 J	NA	NA	NA	NA
Ethene (ug/l)	--	--	0.7 J	2 U	0.4 J	2 U	2 U	0.3 J	0.03 J	2 U	63	2 U	2 U	0.2 J	2 U	0.1 J	NA	NA	NA	NA
Sulfate (mg/l)	--	250	5 U	1 U	37	34	54	10 D	30.5 D	23.2 D	1 U	1 U	1 U	8.3	20	370 D	NA	NA	NA	NA
Sulfide (mg/l)	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.4 J	NA	NA	NA	NA
Total organic carbon (TOC) (mg/l)	--	--	4.3	0.45 J	3.4	0.83 J	1.8	1.8	1.2	0.49 J	2	0.54 J	1 U	1.2	2.2	3.1	NA	NA	NA	NA

Notes:
Shading indicates exceedance of two times the mean base background concentration for Groundwater
Bold box indicates exceedance of NC2LGW
* - The MCL-Groundwater value is reported in place of the NC2LGW where the MCL value is more conservative.
NA - Not analyzed
D - Compound identified in an analysis at a secondary dilution factor
J - Analyte present, value may or may not be accurate or precise
R - Unreliable Result
U - The material was analyzed for, but not detected
UJ - Analyte not detected, quantitation limit may be inaccurate
mg/l - Milligrams per liter
µg/l - Micrograms per liter

Table 5-7
Middle Castle Hayne Aquifer Analytical Results
Supplemental Investigation Site 69, Operable Unit No. 14
MCB CamLej, North Carolina

Station ID	Camp Lejeune Background GW 2X Mean	NCGWQS (January, 2010)	IR69-MW02DD	IR69-MW04DD	IR69-MW04DW	IR69-MW05DW	IR69-MW09DW	IR69-MW11DD	IR69-MW11DW	IR69-MW12DW	IR69-MW13DW	IR69-MW14DW	IR69-MW15DW	IR69-MW26DW	IR69-MW27DW	IR69-MW28DW
Sample ID			IR69-GW02DD-10A	IR69-GW04DD-11A	IR69-GW04DW-10A	IR69-GW05DW-10A	IR69-GW09DW-10A	IR69-GW11DD-11A	IR69-GW11DW-10A	IR69-GW12DW-10A	IR69-GW13DW-10A	IR69-GW14DW-10A	IR69-GW15DW-10A	IR69-GW26DW-10A	IR69-GW27DW-10A	IR69-GW28DW-10A
Sample Date			03/06/10	03/15/11	03/14/10	03/14/10	03/06/10	03/15/11	03/13/10	02/27/10	03/18/10	02/28/10	03/15/10	03/16/10	03/06/10	03/18/10
Chemical Name																
Volatile Organic Compounds (µg/l)																
1,3-Dichlorobenzene	--	200	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	1.8	0.5 U	0.5 UJ	0.5 UJ
1,4-Dichlorobenzene	--	6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	1	0.5 U	0.5 U	0.5 UJ
Acetone	--	6,000	2.5 R	48	6.2 R	2.5 R	2.5 R	38	2.9 R	2.5 R	11 R	2.5 R	5.3 R	6.1 R	2.5 R	3.2 R
Benzene	--	1	0.5 U	0.55 J	0.045 J	0.039 J	0.5 U	0.44 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	--	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.055 J	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	--	700	0.023 J	0.5 U	0.15 J	0.064 J	0.035 J	0.5 U	0.5 U	0.5 U	0.033 J	0.5 U	0.052 J	0.029 J	0.021 J	0.032 J
Chloroform	--	70	0.5 U	2.6	5.9	0.5 U	0.5 U	0.5 U	1.4	0.5 U	11	0.5 U	0.5 U	17	2.9	1.2 U
Chloromethane	--	3	0.5 U	0.5 U	0.28 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
cis-1,2-Dichloroethene	--	70	0.5 U	0.5 U	7.6	0.086 J	0.5 U	0.5 U	51	0.45 J	0.5 U	0.5 U	0.5 U	1.4	0.5 U	0.5 U
Ethylbenzene	--	600	0.5 U	1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	--	5	0.5 U	3.4 J	1.2 U	0.5 U	0.66 U	2.5 U	0.5 U	0.5 U	1.2 U	0.5 U	0.5 U	1.9 U	0.5 U	0.5 U
Toluene	--	600	0.5 U	0.56 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.6 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	--	100	0.5 U	0.5 U	0.78	0.5 U	0.5 U	0.5 U	0.45 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	--	3	0.5 U	0.5 U	0.12 J	0.5 U	0.5 U	0.5 U	0.31 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	--	0.03	0.5 U	0.5 U	0.11 J	0.5 U	0.5 U	0.5 U	1.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Semivolatile Organic Compounds (µg/l)																
2-Methylnaphthalene	--	30	0.21 U	NA	0.018 J	0.2 U	0.2 U	NA	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
bis(2-Ethylhexyl)phthalate	--	3	5.1 U	NA	2.2 J	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Diethylphthalate	--	6,000	5.1 U	NA	0.63 J	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Di-n-butylphthalate	--	700	5.1 U	NA	5.1 U	5 U	5 U	NA	5 U	5 U	2.3 J	5 U	5 U	4.8 J	5 U	5 U
Pesticide/Polychlorinated Biphenyls (µg/l)																
4,4'-DDE	--	--	0.1 U	NA	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.0071 J	0.1 U	0.1 U	0.1 U
4,4'-DDT	--	0.1	0.1 U	NA	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.056 J	0.1 U	0.1 U	0.1 U
alpha-Chlordane	--	0.1	0.05 U	NA	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.0067 J	0.05 U	0.05 U	0.05 U
delta-BHC	--	0.02	0.05 U	NA	0.02 J	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.02 J	0.05 U	0.05 U
Dieldrin	--	0.002	0.1 U	NA	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.026 J	0.1 U	0.1 U	0.1 U
Endosulfan II	--	40	0.1 U	NA	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.0073 J	0.1 U	0.1 U	0.1 U
Endosulfan sulfate	--	40	0.1 U	NA	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.012 J	0.1 U	0.1 U	0.1 U
Endrin	--	2	0.1 U	NA	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.19	0.1 U	0.1 U	0.1 U
Endrin aldehyde	--	2	0.1 U	NA	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.014 J	0.1 U	0.1 U	0.1 U
gamma-Chlordane	--	0.1	0.05 U	NA	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.094	0.05 U	0.05 U	0.05 U
Heptachlor epoxide	--	0.004	0.05 U	NA	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.031 J	0.05 U	0.05 U	0.05 U
Total Metals (µg/l)																
Aluminum	1,886	--	200 U	NA	2,410	200 UJ	39.8 J	NA	686 J	200 U	621	200 U	1,960	284	200 U	200 U
Barium	86.2	700	18.7 J	NA	14.8 J	8.8 J	10 J	NA	7.9 J	2.3 J	7.7 J	4.7 J	16.8 J	5 J	5.7 J	4.8 J
Calcium	69,078	--	88,500	NA	40,900	63,400	75,300	NA	115,000	62,400	59,600	74,300	123,000	54,700	63,900	73,900
Chromium	3.13	10	1.4 J	NA	11.5	1.1 J	2.4 J	NA	21.5	10 U	8.3 J	10 U	19.7	6.9 J	1.1 J	10 U
Copper	2.76	1,000	5 U	NA	1.8 J	5 U	5 U	NA	5 U	5 U	5 U	5 U	3.5 J	5 U	5 U	5 U
Iron	5,999	300	1,970	NA	2,170	4,060	2,740	NA	4,200	3,290	2,230	3,520	6,760	1,080	1,460	1,250
Lead	2.8	15	3 U	NA	4.1	3 U	3 U	NA	2.4 J	3 U	3.3	3 U	4.3	3.9	3 U	3 U
Magnesium	6,363	--	5,130	NA	2,480 J	5,000 U	5,000 U	NA	5,000 U	5,000 U	5,000 U	5,000 U	5,260	1,980 J	5,000 U	5,000 U
Manganese	214	50	151	NA	35.1	101	90	NA	88.1	91.1	57.6	133	162	43.3	65.2	61.1
Nickel	7.97	100	5 U	NA	1.3 J	5 U	5 U	NA	1.9 J	5 U	5 U	5 U	2.6 J	5 U	5 U	5 U
Potassium	3,277	--	5,000 U	NA	4,270 J	1,680 J	5,000 U	NA	2,460 J	1,060 J	2,450 J	914 J	1,760 J	2,090 J	5,000 U	1,450 J
Selenium	3.14	20	5 U	NA	4.4 J	5 U	5 U	NA	5 U	3.9 J	5 U	5 UJ	5 UJ	5 UJ	3.7 J	5 U
Sodium	22,508	--	27,000	NA	125,000	26,000	14,300	NA	64,200	9,970	59,600	11,900	24,700	48,000	20,000	36,000
Vanadium	4.72	--	0.74 J	NA	6.1 J	20 U	20 U	NA	7.6 J	20 U	3.3 J	20 U	6.8 J	1.6 J	0.89 J	20 U
Zinc	42.1	1,000	20 U	NA	29.4	20 U	20 U	NA	25.5	20 UJ	108	20 UJ	26.6	20 U	20 U	25.5
Wet Chemistry																
Alkalinity (mg/l)	--	--	249	NA	172	177	200	NA	217	164	198	187	244	193	151	202
Chloride (mg/l)	--	250	41	NA	11	6.1 D	15	NA	11 D	10.7 D	11	14.9 D	34	12	19	13
Ethane (ug/l)	--	--	0.06 J	NA	2 U	0.3 J	2 U	NA	0.3 J	2 U	0.4 J	2 U	2 U	2 U	2 U	2 U
Ethene (ug/l)	--	--	2 U	NA	2 U	0.1 J	2 U	NA	0.2 J	2 U	0.2 J	2 U	2 U	2 U	2 U	2 U
Sulfate (mg/l)	--	250	1 U	NA	170 D	23 D	4.6	NA	91 D	11.5 D	50	5.93 D	1.7	17	26	59
Sulfide (mg/l)	--	--	1 U	NA	0.4 J	1 U	1 U	NA	1 U	0.6 J	1 U	1 U	1 U	1 U	1 U	1 U
Total organic carbon (TOC) (mg/l)	--	--	2.8	NA	0.56 J	0.84 J	18	NA	1.2	0.56 J	2.6	0.6 J	2.4	2.5	1.1	1.8

Notes:

Shading indicates exceedance of two times the mean base background concentration for Groundwater
Bold box indicates exceedance of NCGWQS
* - The MCL-Groundwater value is reported in place of the NCGWQS where the MCL value is more conservative.
NA - Not analyzed
D - Compound identified in an analysis at a secondary dilution factor
J - Analyte present, value may or may not be accurate or precise

R - Unreliable Result
U - The material was analyzed for, but not detected
UJ - Analyte not detected, quantitation limit may be inaccurate
mg/l - Milligrams per liter
µg/l - Micrograms per liter

Table 5-8
Lower Castle Hayne Aquifer Analytical Results
Supplemental Investigation Site 69, Operable Unit No. 14
MCB CamLej, North Carolina

Station ID	Camp Lejeune Background GW 2X Mean	NCGWQS (January 2010)	IR69-MW02BCH	IR69-MW03BCH	IR69-MW15BCH
Sample ID			IR69-GW02BCH-10A	IR69-GW03BCH-10A	IR69-GW15BCH-10A
Sample Date			03/08/10	03/09/10	03/14/10
Chemical Name					
Semivolatile Organic Compounds (µg/l)					
Fluoranthene	--	300	0.21 U	0.011 J	0.2 U
Phenanthrene	--	200	0.21 U	0.039 J	0.2 U
Pyrene	--	200	0.21 U	0.014 J	0.2 U
Total Metals (µg/l)					
Aluminum	1,886	--	54.9 J	215 J	200 UJ
Antimony	3.28	6	10 U	10 U	3.7 J
Barium	86.2	700	15.5 J	7.7 J	3.4 J
Beryllium	0.308	4	5 U	5 U	1.9 J
Cadmium	0.358	2	5 U	5 U	1.7 J
Calcium	69,078	--	51,100	67,800	70,600
Chromium	3.13	10	10 U	1.4 J	2 J
Cobalt	3.4	--	5 U	5 U	1.5 J
Copper	2.76	1,000	2.4 J	5.4	35.3
Iron	5,999	300	77.7 J	**707**	159
Lead	2.8	15	2.1 J	3 U	5.4
Magnesium	6,363	--	7,080	8,160	9,610
Manganese	214	50	2.8 J	10.4	4.9 J
Nickel	7.97	100	5 U	5 U	5.2
Potassium	3,277	--	14,800	9,520	9,470
Sodium	22,508	--	59,800	56,300	52,700
Vanadium	4.72	--	0.84 J	20 U	1.9 J
Zinc	42.1	1,000	2.9 J	8.9 J	54.3
Wet Chemistry					
Alkalinity (mg/l)	--	--	204	257	273
Chloride (mg/l)	--	250	1 U	46	46
Sulfate (mg/l)	--	250	3.6	3.2	1.7
Total organic carbon (TOC) (mg/l)	--	--	3.1	3.2	3.2

Notes:

Shading indicates exceedance of two times the mean base background concentration for Groundwater

Bold box indicates exceedance of NCGWQS

RSLs were adjusted for noncarcinogens to account for exposure to multiple constituents

* - The MCL-Groundwater value is reported in place of the NCGWQS where the MCL value is more conservative.

NA - Not analyzed

J - Analyte present, value may or may not be accurate or precise

U - The material was analyzed for, but not detected

UJ - Analyte not detected, quantitation limit may be inaccurate

mg/l - Milligrams per liter

µg/l - Micrograms per liter

Wet Chemistry was not validated

Table 5-9

Summary of Natural Attenuation Indicator Parameters

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Well ID	Sample Date	Temperature (°C)	DO (mg/L)	pH (SU)	ORP (mV)	Ferrous Iron (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	TOC (mg/L)	Methane (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Iron (mg/L)	Manganese (mg/L)
Surficial Aquifer Wells																		
IR69-GW01	03/08/10	13.93	0.99	4.66	172.6	0.6	0	0.099	10 U	1 U	22	1 U	3.6	2 B	2 U	2 U	0.711	0.0242
IR69-GW02	03/02/10	12.17	0.68	4.96	-26.1	1	0	0.066	10 U	33.9 D	11.5 D	1 U	3.4	36 B	2 U	0.1 J	4.2	0.152
IR69-GW03	03/07/10	13.48	0.24	4.58	168.0	4.2	0	0.099	32.1	43	9.9	1 U	2.2	30 BD	2 U	2 U	13.6	0.13
IR69-GW04	03/14/10	13.09	0.26	4.99	98.7	2.2	0	0	10 U	23 D	4.7 D	1 U	5	150 BD	2 U	2 U	7.55	0.147
IR69-GW05	3/8-3/9/10	14.45	1.63	4.57	285.0	0.2	0	0	10 U	7.4	6.9	1 U	0.89 J	0.3 JB	2 U	2 U	0.244 J	0.0384
IR69-GW06	03/09/10	16.42	1.53	4.83	278.4	0.2	0	0	10 U	10	8	1 U	0.7 J	0.3 JB	2 U	2 U	0.100 U	0.0025 J
IR69-GW07	03/09/10	15.36	0.14	5.11	150.0	0	0	0	9.82 J	13	6.1	1 U	0.63 J	7 B	2 U	2 U	0.0495 J	0.0031 J
IR69-GW08	03/08/10	12.81	2.70	4.86	256.2	0	0	0	10 U	7	5.5	1 U	0.54 J	0.3 JB	2 U	2 U	0.254	0.0043 J
IR69-GW09	03/01/10	15.39	3.29	5.26	260.9	0	0	0	10 U	20.8 D	10 D	1 U	2.4	0.7 JB	2 U	2 U	1.74	0.0416
IR69-GW10	03/08/10	14.40	4.61	4.76	168.7	1.8	0	0	20.8	8.1	6.6	1 U	0.63 J	5 B	2 U	2 U	2.18	0.0062 J
IR69-GW11	03/01/10	13.80	0.94	4.21	354.1	0.25	0	0	10 U	13.4 D	13.4 D	1 U	1.3	0.3 JB	2 U	2 U	0.217	0.005 J
IR69-GW12	02/27/10	11.61	0.63	4.95	22.0	2.1	0	0	10 U	14.3 D	8.45 D	0.8 J	4.5	16 B	2 U	2 U	5.12	0.0187
IR69-GW13	03/01/10	11.09	0.50	4.69	65.9	1.4	0	0	10 U	7.02 D	6.18 D	1 U	4.3	9 BD	2 U	2 U	1.47	0.0099 J
IR69-GW14	02/28/10	9.75	1.93	4.95	248.1	0.2	0	0.099	10 U	8.4 D	7.63 D	1 U	2.3	0.3 JB	2 U	2 U	0.287	0.0163
IR69-GW15	03/07/10	10.89	0.28	5.33	13.5	4.4	0	0.198	15.2	48 D	150 D	1 U	12	17 B	2 U	0.6 J	29.1	0.8
Upper Castle Hayne Aquifer Wells																		
IR69-GW02DW	03/02/10	17.07	0.14	7.49	-189.4	1.75	0	0.0825	96.3	92.4 D	5 U	1 U	4.3	22 B	0.03 J	0.7 J	3.36	0.0809
IR69-GW03DW	03/07/10	17.30	0.33	7.66	-172.9	0.4	0	0	143	12	1 U	1 U	0.45 J	49 B	2 U	2 U	0.628	0.0968
IR69-MW04IW	03/15/10	17.90	1.08	7.40	-158.2	0	0	0	203	26	37	1 U	3.4	3 B	0.1 J	0.4 J	1.39	0.0808
IR69-MW05IW	03/14/10	17.98	0.13	7.99	-126.0	0	0	0	135	4.7	34	1 U	0.83 J	20 BD	2 U	2 U	0.187	0.0258
IR69-MW09IW	03/06/10	16.81	0.27	7.80	-190.6	1.5	8.8	0.066	144	13	54	1 U	1.8	1 B	2 U	2 U	1.37	0.0617
IR69-MW11IW	03/13/10	17.72	0.25	7.29	-159.5	3	0	0	179	18 D	10 D	1 U	1.8	13 B	2 U	0.3 J	7.26	0.124
IR69-GW12DW	02/27/10	16.33	0.18	7.56	-161.9	2.3	0	0	164	10.7 D	11.5 D	0.6 J	0.56 J	0.9 JB	2 U	2 U	3.29	0.0911
IR69-GW13IW	03/01/10	17.21	0.47	7.52	-191.0	2.5	4.4	0.033	152	18.1 D	30.5 D	1 U	1.2	21 BD	2 U	0.03 J	3.35	0.102
IR69-MW14IW	02/28/10	16.96	0.94	7.49	-178.1	1.75	0	0.099	101	10.6 D	23.2 D	1 U	0.49 J	1 B	2 U	2 U	2.43	0.074
IR69-GW15IW	03/06/10	17.22	0.20	7.25	-175.9	4.2	0	0.165	84.7	170 D	1 U	1 U	2	74 BD	5	63	10.5	0.208
IR69-GW19IW	03/16/10	17.37	0.25	7.97	-164.0	0	0	0	140	6.2	1 U	1 U	0.54 J	18 B	2 U	2 U	1.32	0.0344
IR69-GW19UW	03/16/10	17.29	0.46	6.75	-137.3	0	0	0	61.4	15	1 U	1 U	1 U	28 B	2 U	2 U	14.7	0.065
IR69-MW26IW	03/16/10	17.61	0.08	8.23	-135.5	0	0	0.033	143	13	8.3	1 U	1.2	40 B	2 U	0.2 J	0.314	0.0501
IR69-MW27IW	03/06/10	17.55	0.68	7.35	-93.4	0.5	0	0	219	13	20	1 U	2.2	0.6 B	2 U	2 U	0.326	0.188
IR69-MW28IW	03/18/10	17.58	0.32	8.34	-160.2	0	0	0	144	12	370 D	0.4 J	3.1	2 B	0.2 J	0.1 J	2.96	0.0628
Middle Castle Hayne Aquifer Wells																		
IR69-GW02DD	03/06/10	17.97	0.20	7.43	-139.1	1	0	0.03	249	41	1 U	1 U	2.8	32 BD	0.06 J	2 U	1.97	0.151
IR69-MW04DW	03/14/10	18.20	10.31	8.37	60.3	0.2	0	0.066	172	11	170 D	0.4 J	0.56 J	0.7 JB	2 U	2 U	2.17	0.0351
IR69-MW05DW	03/14/10	18.10	0.17	7.69	-215.4	0	0	0	177	6.1 D	23 D	1 U	0.84 J	3 B	0.3 J	0.1 J	4.06	0.101
IR69-MW09DW	03/06/10	17.13	0.12	7.64	-214.9	1.6	0	NA	200	15	4.6	1 U	18	6 B	2 U	2 U	2.74	0.09
IR69-MW11DW	03/13/10	17.94	2.70	7.59	-185.3	0.6	0	0	217	11 D	91 D	1 U	1.2	2 B	0.3 J	0.2 J	4.2	0.0881
IR69-MW13DW	03/18/10	20.81	0.57	8.32	-186.7	0	0	0	198	11	50	1 U	2.6	2 B	0.4 J	0.2 J	2.23	0.0576
IR69-MW14DW	02/28/10	16.43	0.73	7.29	-139.2	2.4	0	0.066	187	14.9 D	5.93 D	1 U	0.6 J	16 B	2 U	2 U	3.52	0.133
IR69-GW15DW	03/15/10	17.64	NA	7.37	-72.9	0	0	0	244	34	1.7	1 U	2.4	34 B	2 U	2 U	6.76	0.162
IR69-MW26DW	03/16/10	18.72	2.24	7.99	-17.4	0	0	0	193	12	17	1 U	2.5	1 B	2 U	2 U	1.08	0.0433
IR69-MW27DW	03/06/10	17.38	0.43	7.69	-179.4	1.2	0	0.099	151	19	26	1 U	1.1	3 B	2 U	2 U	1.46	0.0652
IR69-MW28DW	03/18/10	18.49	0.20	7.42	-142.9	NA	NA	NA	202	13	59	1 U	1.8	1 B	2 U	2 U	1.25	0.0611
Lower Castle Hayne Wells																		
IR69-MW02BCH	03/08/10	18.06	0.57	8.10	11.0	0	0	0.099	204	1 U	3.6	1 U	3.1	60 BD	2 U	2 U	0.0777 J	0.0028 J
IR69-MW03BCH	03/09/10	17.65	0.52	7.52	-81.8	NA	NA	NA	257	46	3.2	1 U	3.2	49 BD	2 U	2 U	0.707	0.0104
IR69-MW15BCH	03/14/10	17.55	0.58	7.71	-59.5	0	0	0	273	46	1.7	1 U	3.2	250 BD	2 U	2 U	0.159	0.0049 J

Notes:

µg/L - Micrograms per liter

mg/L - Milligrams per liter

mV - Millivolts

DO - Dissolved oxygen

ORP - Oxidation reduction potential

TOC - Total organic carbon

B - Analyte not detected above the level reported in blanks

J - Analyte present, value may or may not be accurate or precise

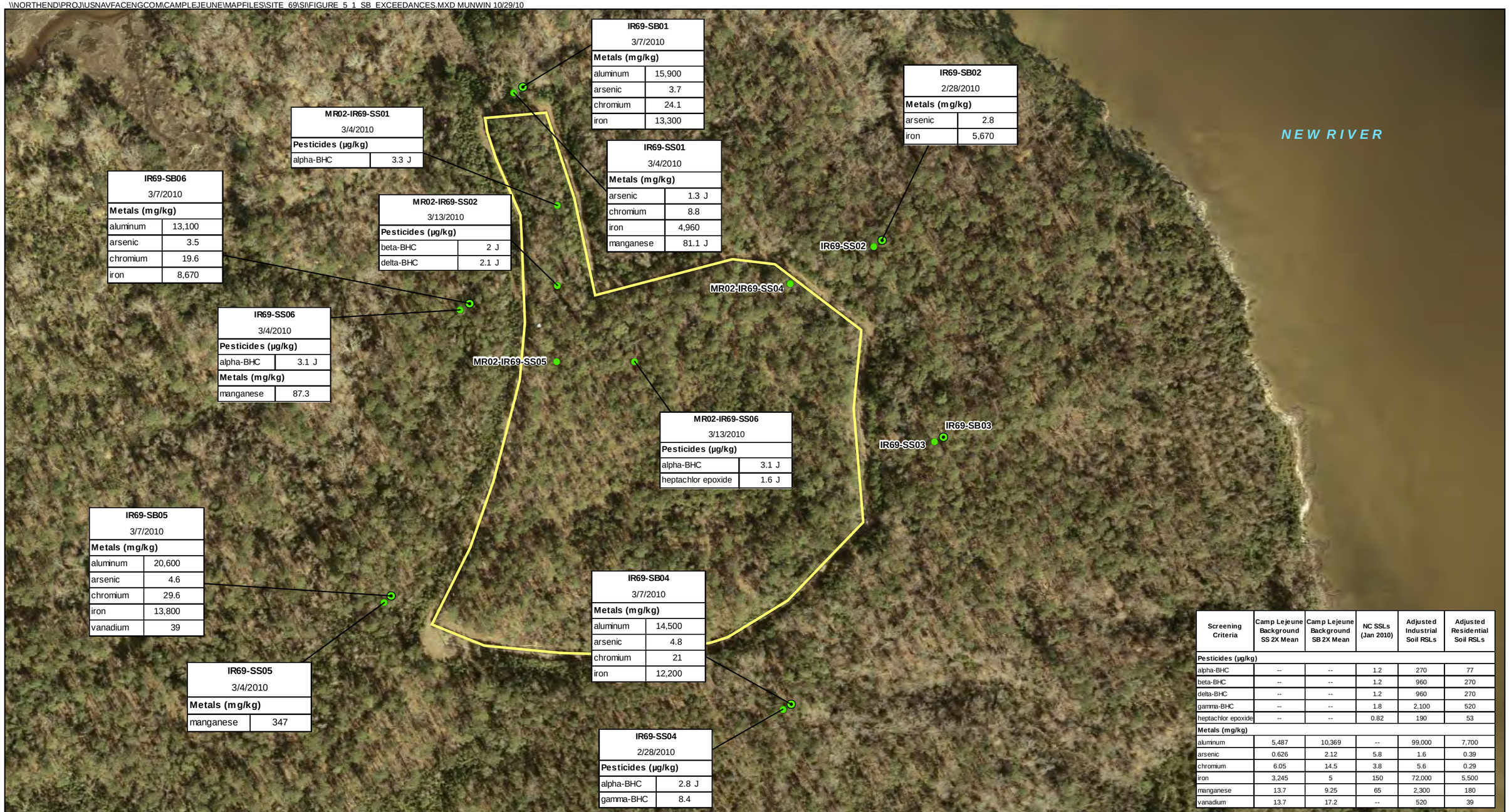
U - The material was analyzed for, but not detected

D - Compound identified in an analysis at a secondary dilution factor

NA - Not analyzed

Shading indicates plume wells

\\NORTHEND\PROJ\USNAVFACENGCOM\CAMPLEJEUNE\MAPFILES\SITE_69\SI\FIGURE_5_1_SB_EXCEEDANCES.MXD MUNWIN 10/29/10



Screening Criteria	Camp Lejeune Background SS 2X Mean	Camp Lejeune Background SB 2X Mean	NC SSLs (Jan 2010)	Adjusted Industrial Soil RSLs	Adjusted Residential Soil RSLs
Pesticides (µg/kg)					
alpha-BHC	--	--	1.2	270	77
beta-BHC	--	--	1.2	960	270
delta-BHC	--	--	1.2	960	270
gamma-BHC	--	--	1.8	2,100	520
heptachlor epoxide	--	--	0.82	190	53
Metals (mg/kg)					
aluminum	5,487	10,369	--	99,000	7,700
arsenic	0.626	2.12	5.8	1.6	0.39
chromium	6.05	14.5	3.8	5.6	0.29
iron	3,245	5	150	72,000	5,500
manganese	13.7	9.25	65	2,300	180
vanadium	13.7	17.2	--	520	39

Legend

- Surface Soil Sampling Locations
- Subsurface Soil Sampling Locations
- Site 69

Notes:
J- Analyte present, value may or may not be accurate or precise
mg/kg - milligrams per kilogram
µg/kg -micrograms per kilogram
NC SSLs - NC Department of Environment and Natural Resources' Federal Remediation Branch Soil Screening Levels
RSLs - USEPA Regional Screening Levels
SS - Surface Soil
SB - Subsurface Soil

N

0 100 200 400 Feet

1 inch = 200 feet

Figure 5-1
Soil Exceedances - March 2010
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

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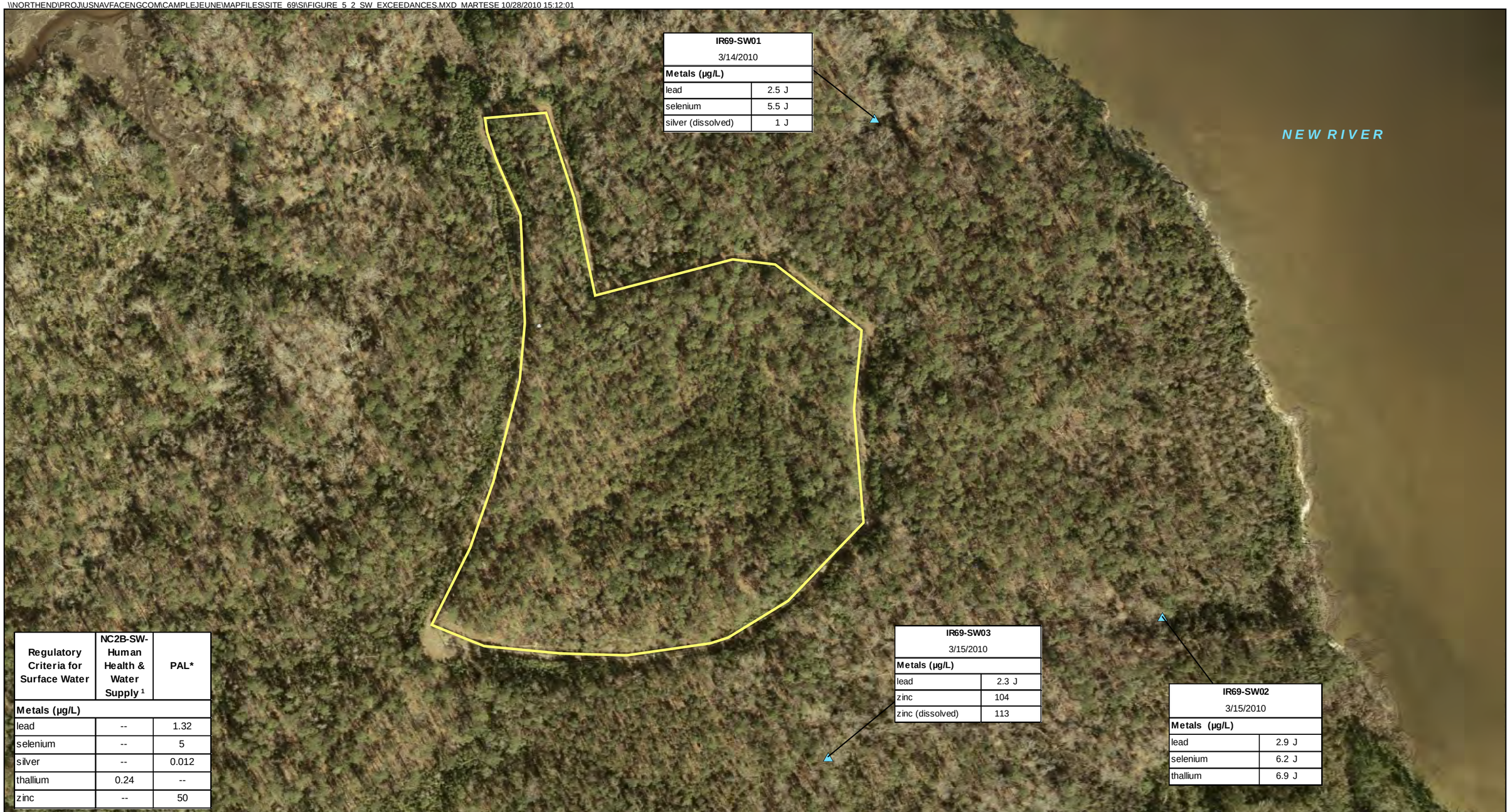

Regulatory Criteria for Surface Water	NC2B-SW-Human Health & Water Supply [1]	PAL*
Metals (µg/L)		
lead	--	1.32
selenium	--	5
silver	--	0.012
thallium	0.24	--
zinc	--	50

Legend

- Surface Water Sampling Locations
- Site 69

Notes:
[1] - NC2B-SW-Human Health and NC2B-SW-Water Supply were combined to show the most conservative criteria.
J- Analyte present, value may or may not be accurate or precise
µg/l -micrograms per liter
*See Table 5-1 for "PAL" references
NC2B-SW- North Carolina Administrative Code Title 15A, Subchapter 2B, Classifications and Water Quality Standards
PAL - Project Action Limit

N

0 100 200 400 Feet

1 inch = 200 feet

Figure 5-2
Surface Water Exceedances - March 2010
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

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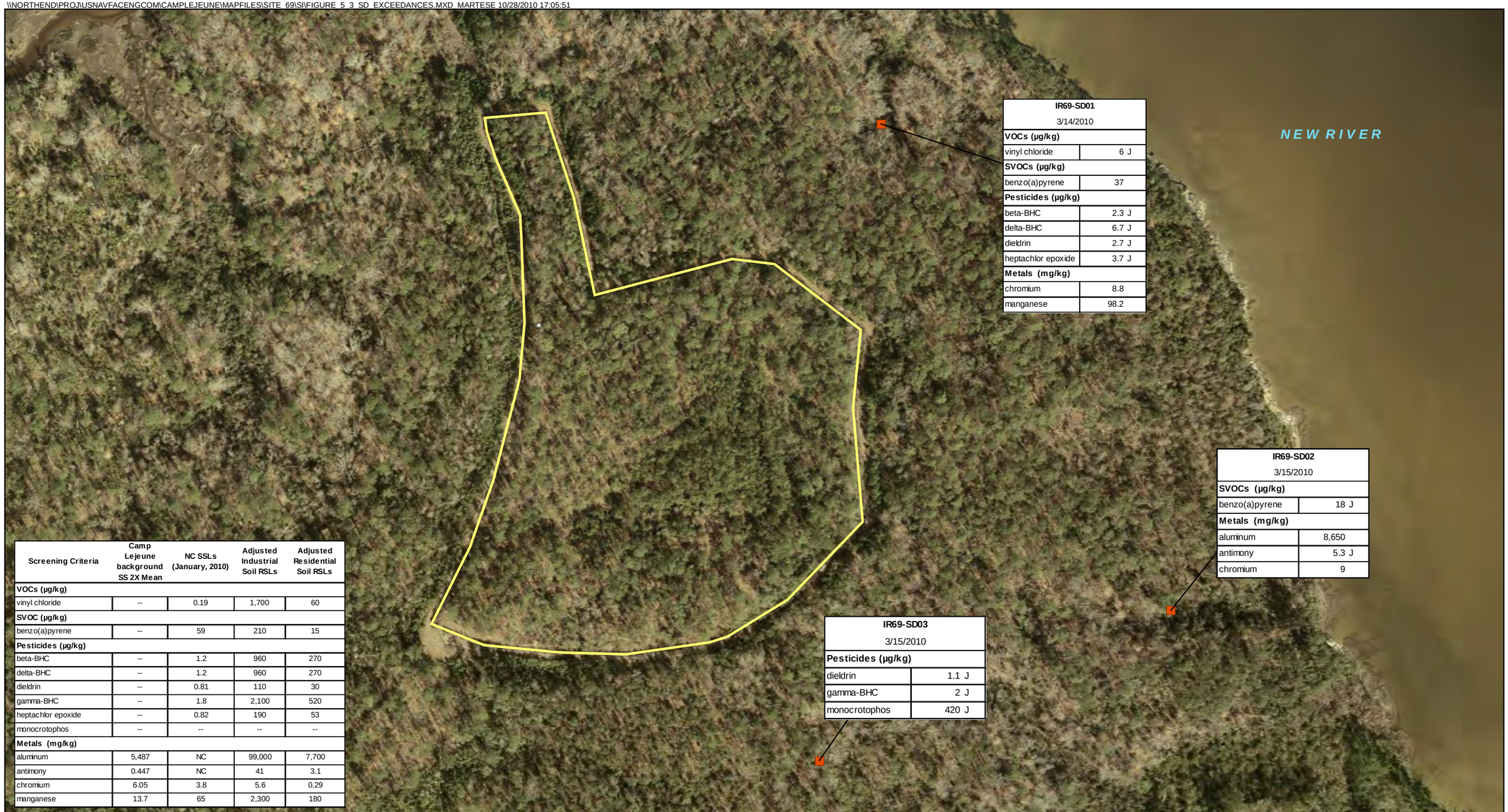

IR69-SD01	
3/14/2010	
VOCs (µg/kg)	
vinyl chloride	6 J
SVOCs (µg/kg)	
benzo(a)pyrene	37
Pesticides (µg/kg)	
beta-BHC	2.3 J
delta-BHC	6.7 J
dieldrin	2.7 J
heptachlor epoxide	3.7 J
Metals (mg/kg)	
chromium	8.8
manganese	98.2

IR69-SD02	
3/15/2010	
SVOCs (µg/kg)	
benzo(a)pyrene	18 J
Metals (mg/kg)	
aluminum	8,650
antimony	5.3 J
chromium	9

IR69-SD03	
3/15/2010	
Pesticides (µg/kg)	
dieldrin	1.1 J
gamma-BHC	2 J
monocrotophos	420 J

Screening Criteria	Camp Lejeune background SS 2X Mean	NC SSLs (January, 2010)	Adjusted Industrial Soil RSLs	Adjusted Residential Soil RSLs
VOCs (µg/kg)				
vinyl chloride	--	0.19	1,700	60
SVOC (µg/kg)				
benzo(a)pyrene	--	59	210	15
Pesticides (µg/kg)				
beta-BHC	--	1.2	960	270
delta-BHC	--	1.2	960	270
dieldrin	--	0.81	110	30
gamma-BHC	--	1.8	2,100	520
heptachlor epoxide	--	0.82	190	53
monocrotophos	--	--	--	--
Metals (mg/kg)				
aluminum	5,487	NC	99,000	7,700
antimony	0.447	NC	41	3.1
chromium	6.05	3.8	5.6	0.29
manganese	13.7	65	2,300	180

Legend

- Sediment Sampling Locations
- Site 69

Notes:
J- Analyte present, value may or may not be accurate or precise
R - unreliable result
mg/kg - milligrams per kilogram
µg/kg -micrograms per kilogram
NC SSLs - NC Department of Environment and Natural Resources' Federal Remediation Branch Soil Screening Levels
RSLs - USEPA Regional Screening Levels
SVOC - semi-volatile organic compound
VOC - volatile organic compound
BHC - Benzene Hexachloride

N

0 100 200 400 Feet

1 inch = 200 feet

Figure 5-3
Sediment Exceedances - March 2010
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

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Location	1,1,2,2-PCA	1,1,2-TCA	1,2-DCA
NCGWQS	0.2	5	0.4
IR69-GW02	9.8	7.8	1.7
IR69-GW03	0.18 J	0.5 J	0.72 J
IR69-GW04	0.17 J	0.5 U	0.48 J
IR69-GW15	2.9	1.3	13

Legend
- Surficial Aquifer Well Locations
- Site 69 Boundary

1,1,2-TCA Concentration
- > 5 µg/L

1,1,2,2-PCA Concentration
- > 0.2 µg/L

1,2-DCA Concentration
- > 0.4 µg/L

Notes:
- All concentrations are reported in micrograms per liter (µg/L)
- Contours have been interpolated between well locations. Actual conditions may differ from those shown on this figure.
- Only detected concentrations shown on table

NCGWQS - North Carolina Groundwater Quality Standard
J - analyte detected, value may or may not be accurate or precise
U - analyte not detected
1,1,2-TCA - 1,1,2-Trichlorethane
1,1,2,2-PCA - 1,1,2,2-Tetrachloroethane
1,2-DCA - 1,2-Dichloroethane

N

0 100 200 400 Feet

1 inch = 200 feet

Figure 5-4
Chlorinated Ethane Distribution, Surficial Aquifer - March 2010
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

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\\NORTHEND\PROJ\USNAVFACENGCOM\CAMPLEJEUNE\MAPFILES\SITE_69\SI\FIGURE_5-5_TCE_RESULTS_SURFICIAL_MARCH_2010.MXD MUNWIN 9/20/10

Location	TCE (µg/L)
NCGWQS	3
IR69-GW02	2.3
IR69-GW03	3.5
IR69-GW04	0.38 J
IR69-GW09	0.3 J
IR69-GW12	0.29 J
IR69-GW15	0.38 J

Legend

- Surficial Aquifer Well Locations
- Site 69 Boundary

TCE Concentration

- > 3.0 µg/L

Notes:
- All concentrations are reported in micrograms per liter (µg/L)
- Contours have been interpolated between well locations. Actual conditions may differ from those shown on this figure.
- Only detected concentrations shown on table

NCGWQS - North Carolina Groundwater Quality Standard
J - analyte detected, value may or may not be accurate or precise
TCE - Trichloroethene

N

0 100 200 400 Feet

1 inch = 200 feet

Figure 5-5
TCE Distribution, Surficial Aquifer - March 2010
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

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\\NORTHEND\PROJ\USNAVFACENGCOM\CAMPLEJEUNE\MAPFILES\SITE_69\SI\FIGURE_5_6_CIS12_DCE_RESULTS_SURFICIAL_MARCH_2010.MXD MUNWIN 9/20/10

Location	cis-1,2-DCE (µg/L)
NCGWQS	70
IR69-GW02	110 J
IR69-GW03	180
IR69-GW04	3.1
IR69-GW09	6.5
IR69-GW12	0.8
IR69-GW15	2.1

Legend
- Surficial Aquifer Well Locations
- Site 69 Boundary

cis-1,2-DCE Concentration
- > 70 µg/L

Notes:
- All concentrations are reported in micrograms per liter (µg/L)
- Contours have been interpolated between well locations. Actual conditions may differ from those shown on this figure.
- Only detected concentrations shown on table

NCGWQS - North Carolina Groundwater Quality Standard
J - analyte detected, value may or may not be accurate or precise
cis-1,2-DCE - cis-1,2-Dichloroethene

N

0 100 200 400 Feet

1 inch = 200 feet

Figure 5-6
cis-1,2-DCE Distribution, Surficial Aquifer - March 2010
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

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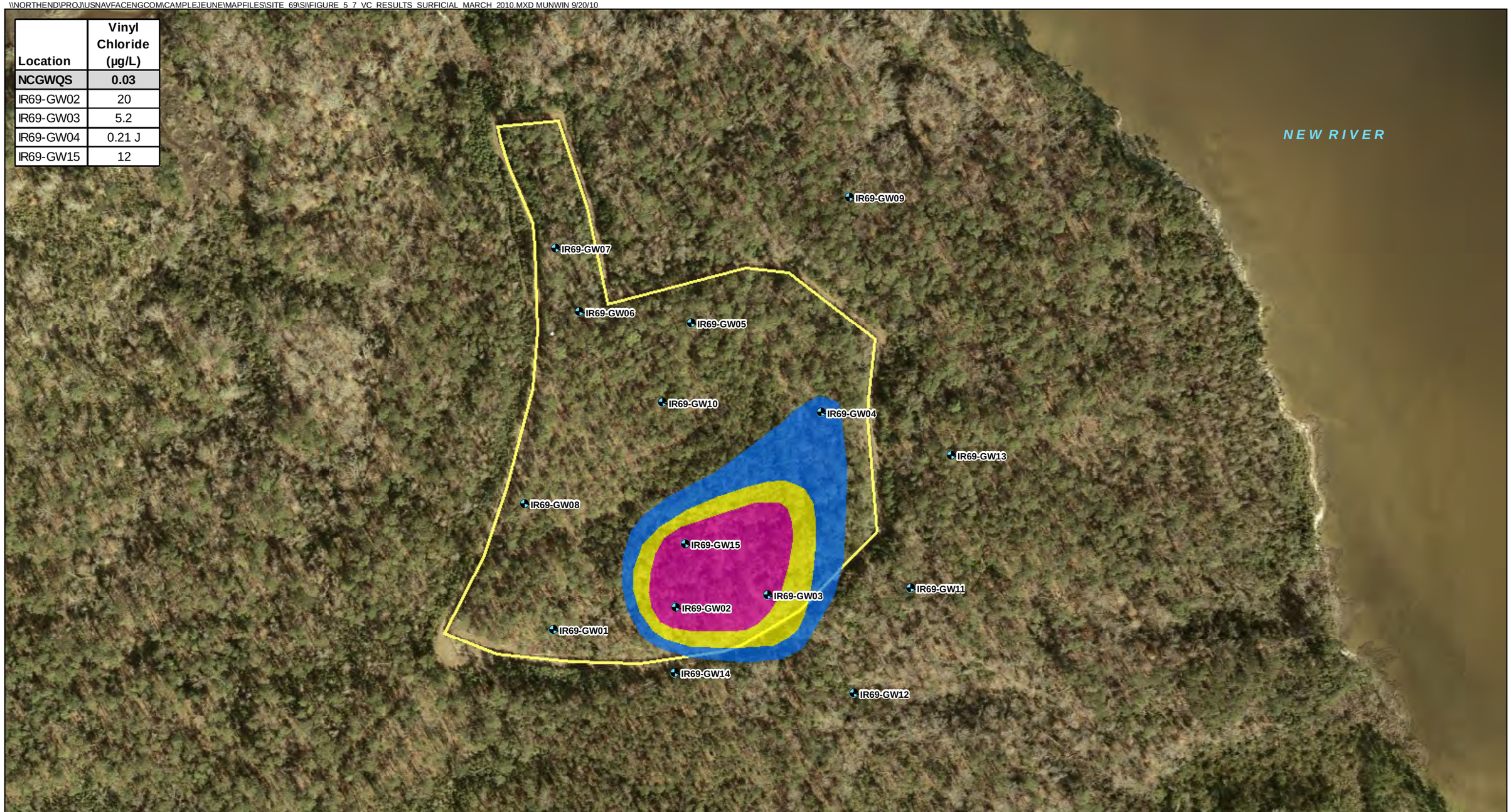
\\NORTHEND\PROJ\USNAVFACENGCOM\CAMPLEJEUNE\MAPFILES\SITE_69\SI\FIGURE_5_7_VC_RESULTS_SURFICIAL_MARCH_2010.MXD MUNWIN 9/20/10

Location	Vinyl Chloride (µg/L)
NCGWQS	**0.03**
IR69-GW02	20
IR69-GW03	5.2
IR69-GW04	0.21 J
IR69-GW15	12



Legend
- Surficial Aquifer Well Locations
- Site 69 Boundary

VC Concentration
- > 0.03 µg/L
- > 0.3 µg/L
- > 3.0 µg/L

Notes:
- All concentrations are reported in micrograms per liter (µg/L)
- Contours have been interpolated between well locations. Actual conditions may differ from those shown on this figure.
- Only detected concentrations shown on table

NCGWQS - North Carolina Groundwater Quality Standard
J - analyte detected, value may or may not be accurate or precise
VC - Vinyl Chloride

N

0 100 200 400 Feet

1 inch = 200 feet

Figure 5-7
Vinyl Chloride Distribution, Surficial Aquifer - March 2010
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

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\\NORTHEND\PROJ\USNAVFACENGCOM\CAMPLEJEUNE\MAPFILES\SITE_69\SRI\FIGURE_5_8_12_DCA_RESULTS_UCH_MARCH_2010.MXD

Location	1,2-DCA (µg/L)
NCGWQS	**0.4**
IR69-GW02DW	0.41 J
IR69-GW04IW	0.16 J
IR69-GW11IW	0.12 J
IR69-GW15IW	19
IR69-GW19UW	0.58

Legend

- Upper Castle Hayne Aquifer Well Location
- Site 69 Boundary

1,2-DCA Concentration

- > 0.4 µg/L

Notes:
- All concentrations are reported in micrograms per liter (µg/L)
- Contours have been interpolated between well locations. Actual conditions may differ from those shown on this figure.
- Only detected concentrations shown on table

NCGWQS - North Carolina Groundwater Quality Standard
J - analyte detected, value may or may not be accurate or precise
1,2-DCA - 1,2-Dichloroethene

N

0 100 200 400 Feet

1 inch = 200 feet

Figure 5-8
1,2-DCA Results, Upper Castle Hayne Aquifer - March 2010
Operable Unit No. 14 (Site 69)
Supplemental Remedial Investigation
MCB CamLej
North Carolina

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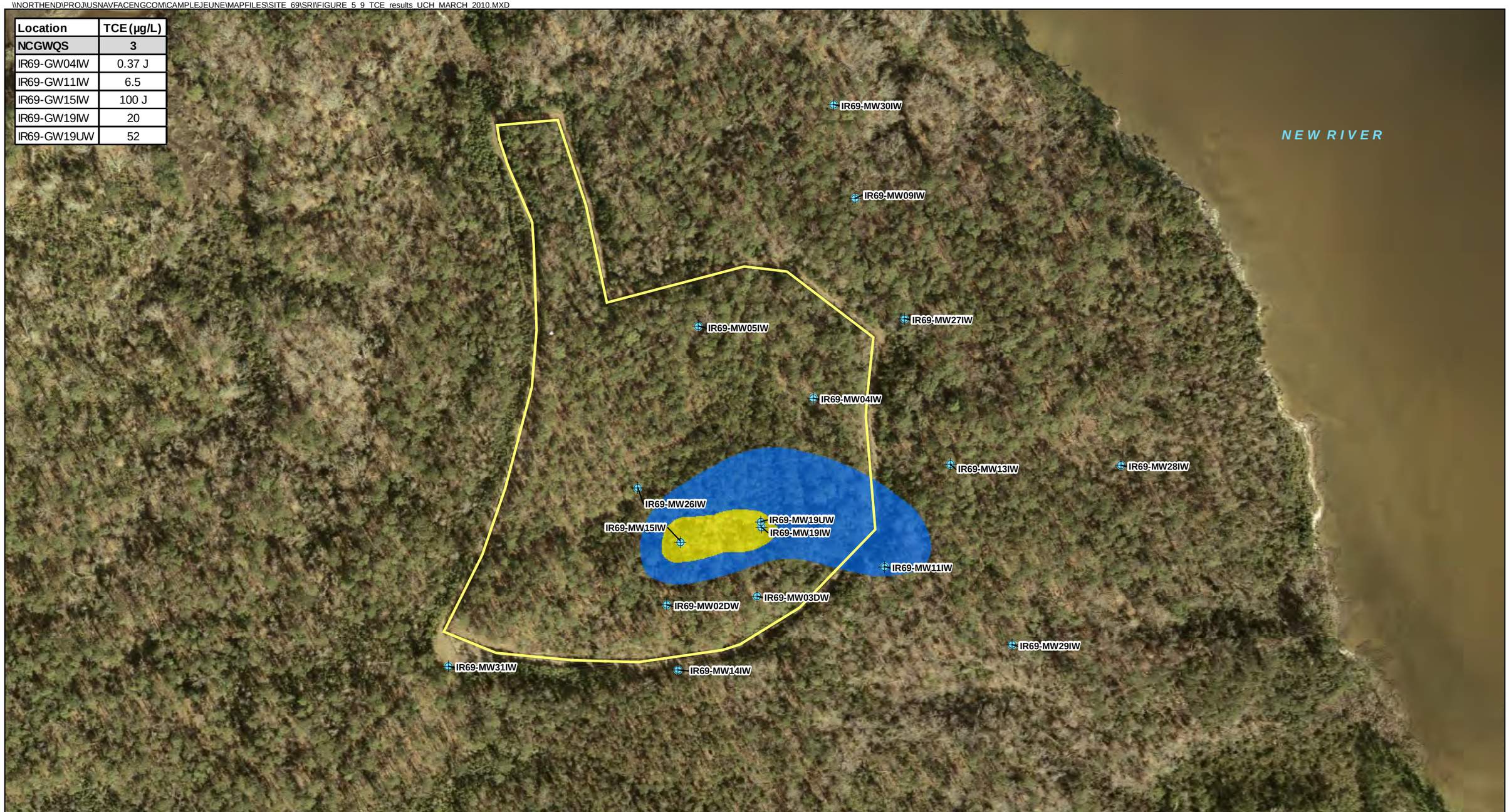
\\NORTHEND\PROJ\USNAVFACENGCOM\CAMPLEJEUNE\MAPFILES\SITE_69\SRI\FIGURE_5_9_TCE_results_UCH_MARCH_2010.MXD

Location	TCE (µg/L)
NCGWQS	3
IR69-GW04IW	0.37 J
IR69-GW11IW	6.5
IR69-GW15IW	100 J
IR69-GW19IW	20
IR69-GW19UW	52



Legend

- Upper Castle Hayne Aquifer Well Location
- Site 69 Boundary

TCE Concentration

- > 3.0 µg/L
- > 30.0 µg/L

Notes:
- All concentrations are reported in micrograms per liter (µg/L)
- Contours have been interpolated between well locations. Actual conditions may differ from those shown on this figure.
- Only detected concentrations shown on table

NCGWQS - North Carolina Groundwater Quality Standard
J - analyte detected, value may or may not be accurate or precise
TCE - Trichloroethene

N

0 100 200 400 Feet

1 inch = 200 feet

Figure 5-9
TCE Results, Upper Castle Hayne Aquifer - March 2010
Operable Unit No. 14 (Site 69)
Supplemental Remedial Investigation
MCB CamLej
North Carolina

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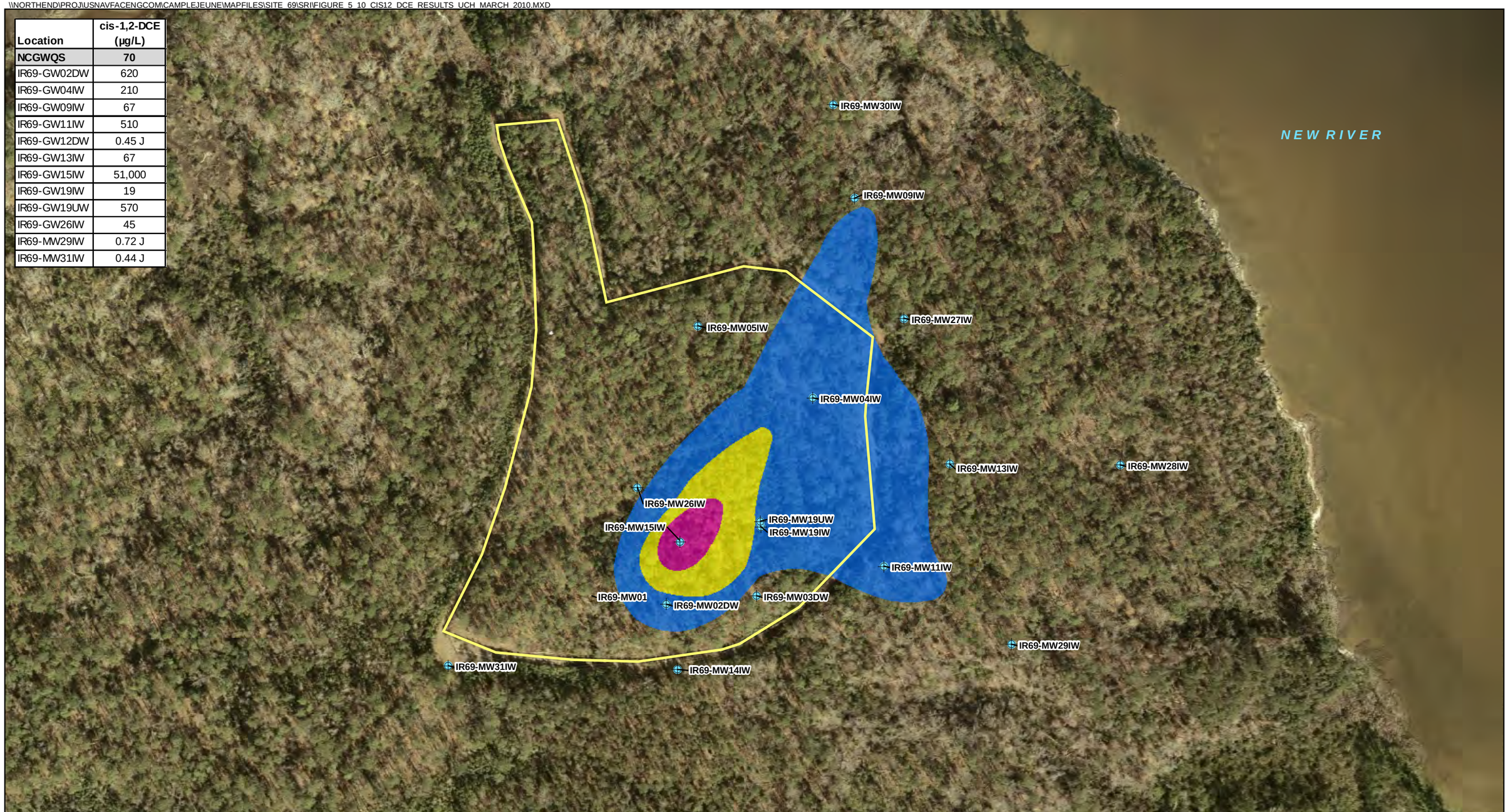
\\NORTHEND\PROJ\USNAVFACENGCOM\CAMPLEJEUNE\MAPFILES\SITE_69\SRI\FIGURE_5_10_CIS12_DCE_RESULTS_UCH_MARCH_2010.MXD

Location	cis-1,2-DCE (µg/L)
NCGWQS	70
IR69-GW02DW	620
IR69-GW04IW	210
IR69-GW09IW	67
IR69-GW11IW	510
IR69-GW12DW	0.45 J
IR69-GW13IW	67
IR69-GW15IW	51,000
IR69-GW19IW	19
IR69-GW19UW	570
IR69-GW26IW	45
IR69-MW29IW	0.72 J
IR69-MW31IW	0.44 J



Legend

- Upper Castle Hayne Aquifer Well Location
- Site 69 Boundary

cis-1,2-DCE Concentration

- > 70 µg/L
- > 700 µg/L
- > 7,000 µg/L

Notes:
- All concentrations are reported in micrograms per liter (µg/L)
- Contours have been interpolated between well locations. Actual conditions may differ from those shown on this figure.
- Only detected concentrations shown on table

NCGWQS - North Carolina Groundwater Quality Standard
J - analyte detected, value may or may not be accurate or precise
cis-1,2-DCE - cis-1,2-Dichloroethene

N

0 100 200 400 Feet

1 inch = 200 feet

Figure 5-10
cis-1,2-DCE Results, Upper Castle Hayne Aquifer - March 2010
Operable Unit No. 14 (Site 69)
Supplemental Remedial Investigation
MCB CamLej
North Carolina

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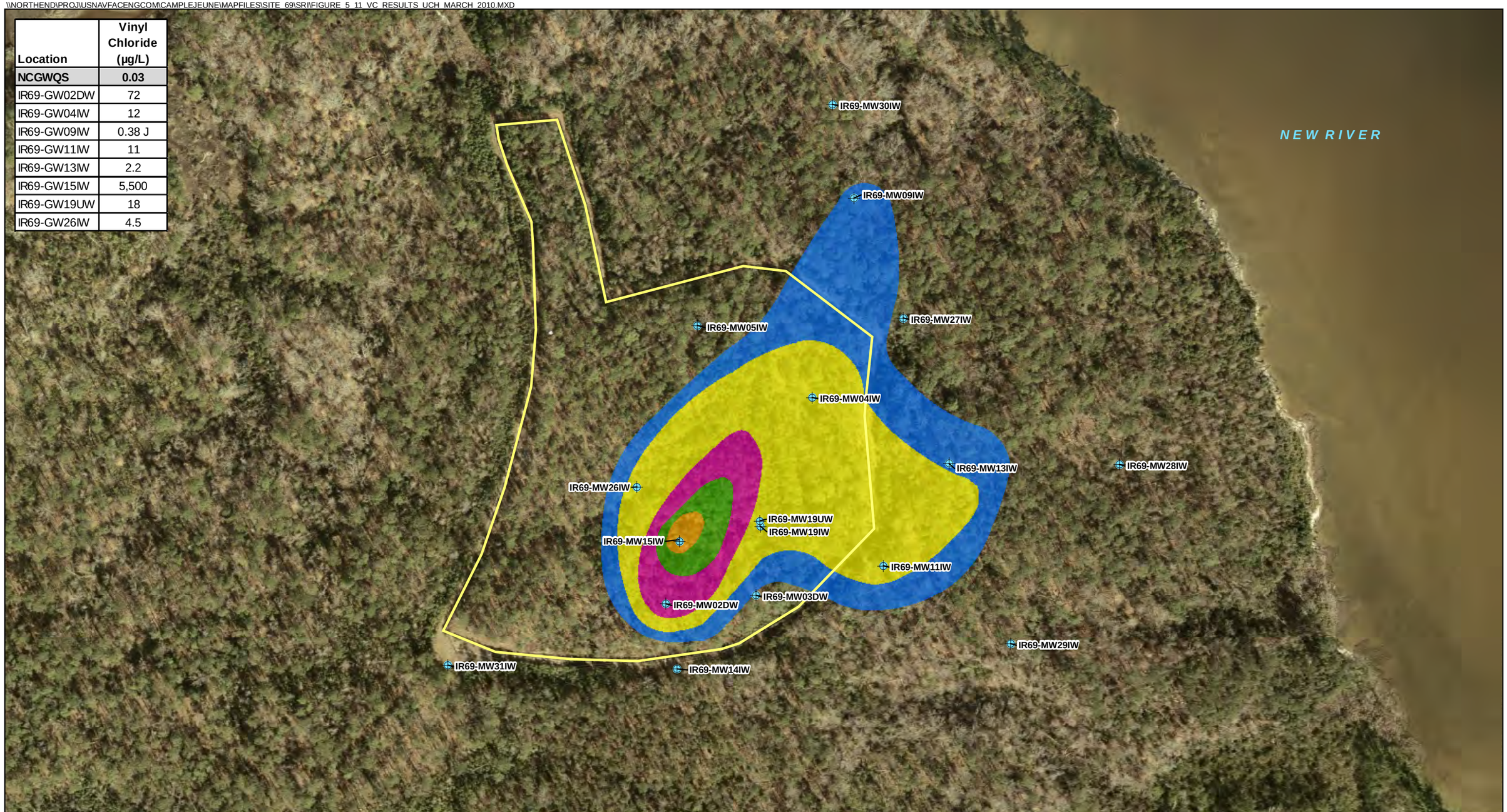
\\NORTHEND\PROJ\USNAVFACENGCOM\CAMPLEJEUNE\MAPFILES\SITE_69\SRI\FIGURE_5_11_VC_RESULTS_UCH_MARCH_2010.MXD

Location	Vinyl Chloride (µg/L)
NCGWQS	**0.03**
IR69-GW02DW	72
IR69-GW04IW	12
IR69-GW09IW	0.38 J
IR69-GW11IW	11
IR69-GW13IW	2.2
IR69-GW15IW	5,500
IR69-GW19UW	18
IR69-GW26IW	4.5



Legend

Upper Castle Hayne Aquifer Well Location

Site 69 Boundary

Site 69 Plumes

VC Concentration

- > 0.03 µg/L
- > 3.0 µg/L
- > 30.0 µg/L
- > 300.0 µg/L
- > 3,000.0 µg/L

Notes:
- All concentrations are reported in micrograms per liter (µg/L)
- Contours have been interpolated between well locations. Actual conditions may differ from those shown on this figure.
- Only detected concentrations shown on table

NCGWQS - North Carolina Groundwater Quality Standard
J - analyte detected, value may or may not be accurate or precise
VC - Vinyl Chloride

N

0 100 200 400 Feet

1 inch = 200 feet

Figure 5-11
Vinyl Chloride Results, Upper Castle Hayne Aquifer - March 2010
Operable Unit No. 14 (Site 69)
Supplemental Remedial Investigation
MCB CamLej
North Carolina

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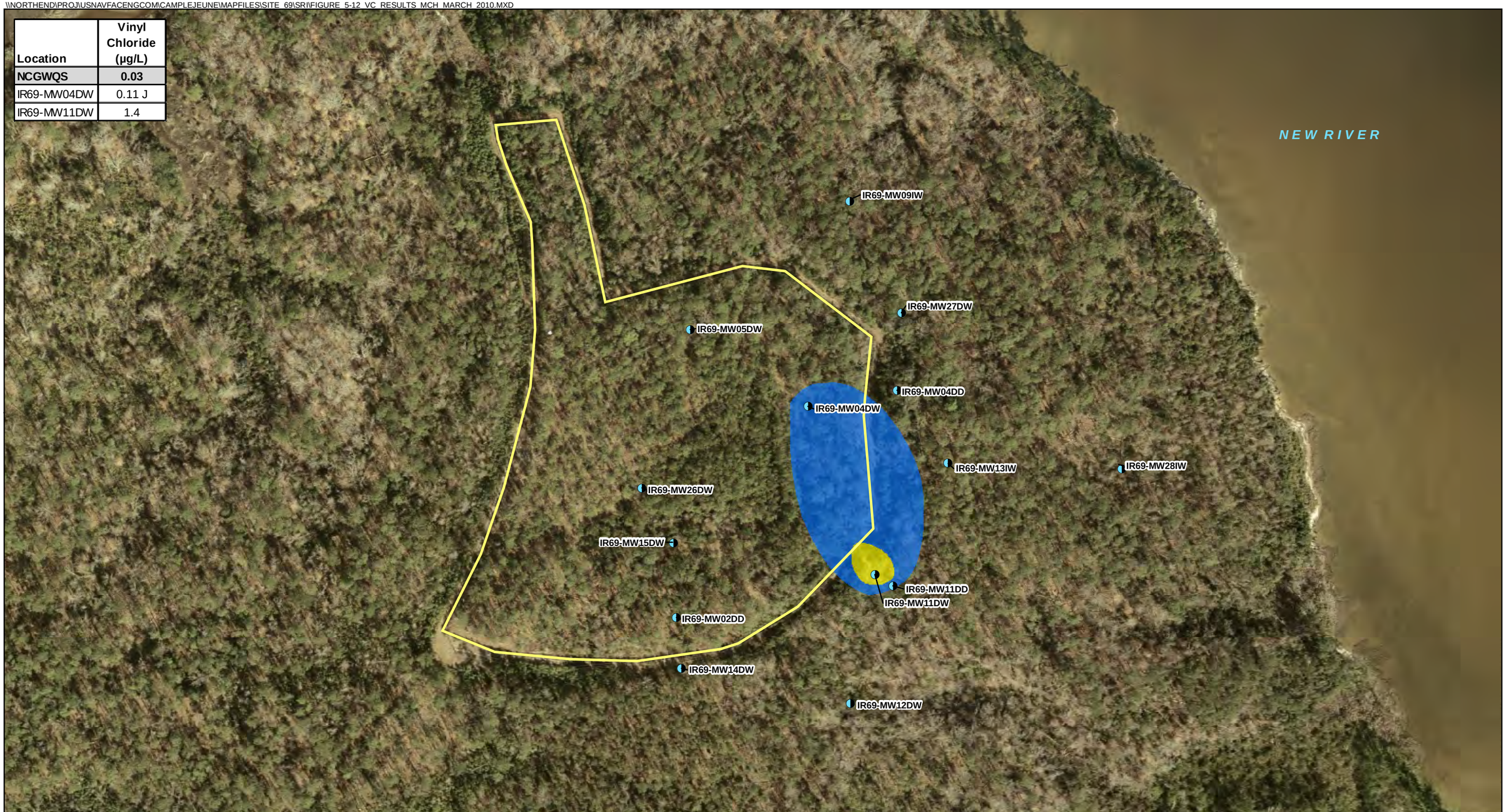
\\NORTHEND\PROJ\USNAVFACENGCOM\CAMPLEJEUNE\MAPFILES\SITE_69\SRI\FIGURE_5-12_VC_RESULTS_MCH_MARCH_2010.MXD

Location	Vinyl Chloride (µg/L)
NCGWQS	0.03
IR69-MW04DW	0.11 J
IR69-MW11DW	1.4



Legend

- Middle Castle Hayne Aquifer Well Location
- Site 69 Boundary

Site 69 Plumes

VC Concentration

- > 0.03 µg/L
- > 0.3 µg/L

Notes:
- All concentrations are reported in micrograms per liter (µg/L)
- Contours have been interpolated between well locations. Actual conditions may differ from those shown on this figure.
- Only detected concentrations shown on table

NCGWQS - North Carolina Groundwater Quality Standard
J - analyte detected, value may or may not be accurate or precise
- Wells IR69-MW04DD & IR69-MW11DD are screened at lower depths than surrounding wells. See Figures 5-19 & 5-20 for vertical VC plume details

N

0 100 200 400 Feet

1 inch = 200 feet

Figure 5-12
Vinyl Chloride Results, Middle Castle Hayne Aquifer - March 2010
Operable Unit No. 14 (Site 69)
Supplemental Remedial Investigation
MCB CamLej
North Carolina

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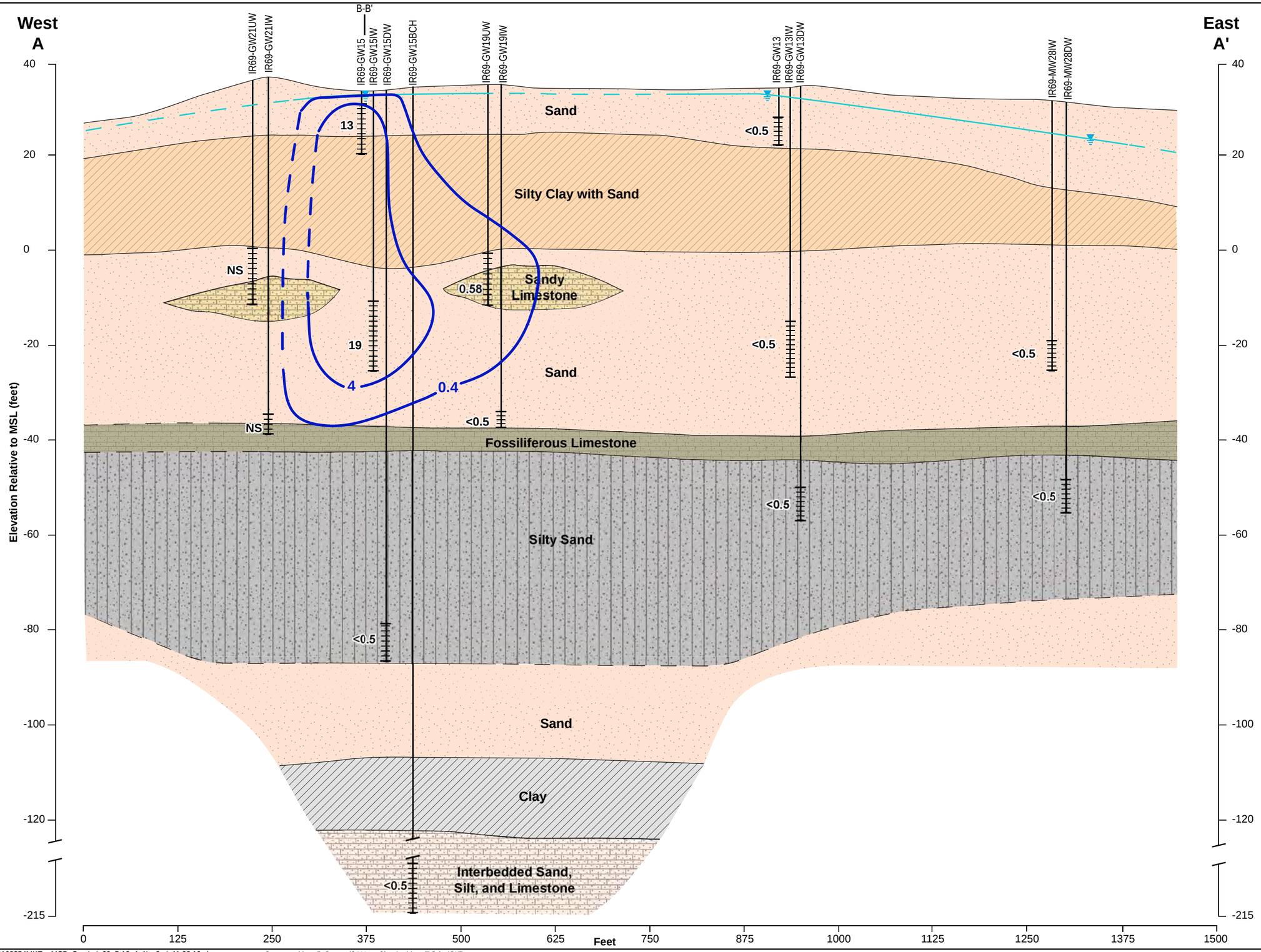


Horizontal : 1" = 125'
Vertical: 1" = 20'
V.E. = 6.25x

LEGEND

- Sand
- Silty clay with sand
- Silty Sand
- Fossiliferous Limestone and Cemented Sand
- Sandy Limestone
- Interbedded Sand, Silt, and Limestone
- Clay
- Screened Interval
- Geologic Contact (dashed where inferred)
- Water Table (dashed where inferred)

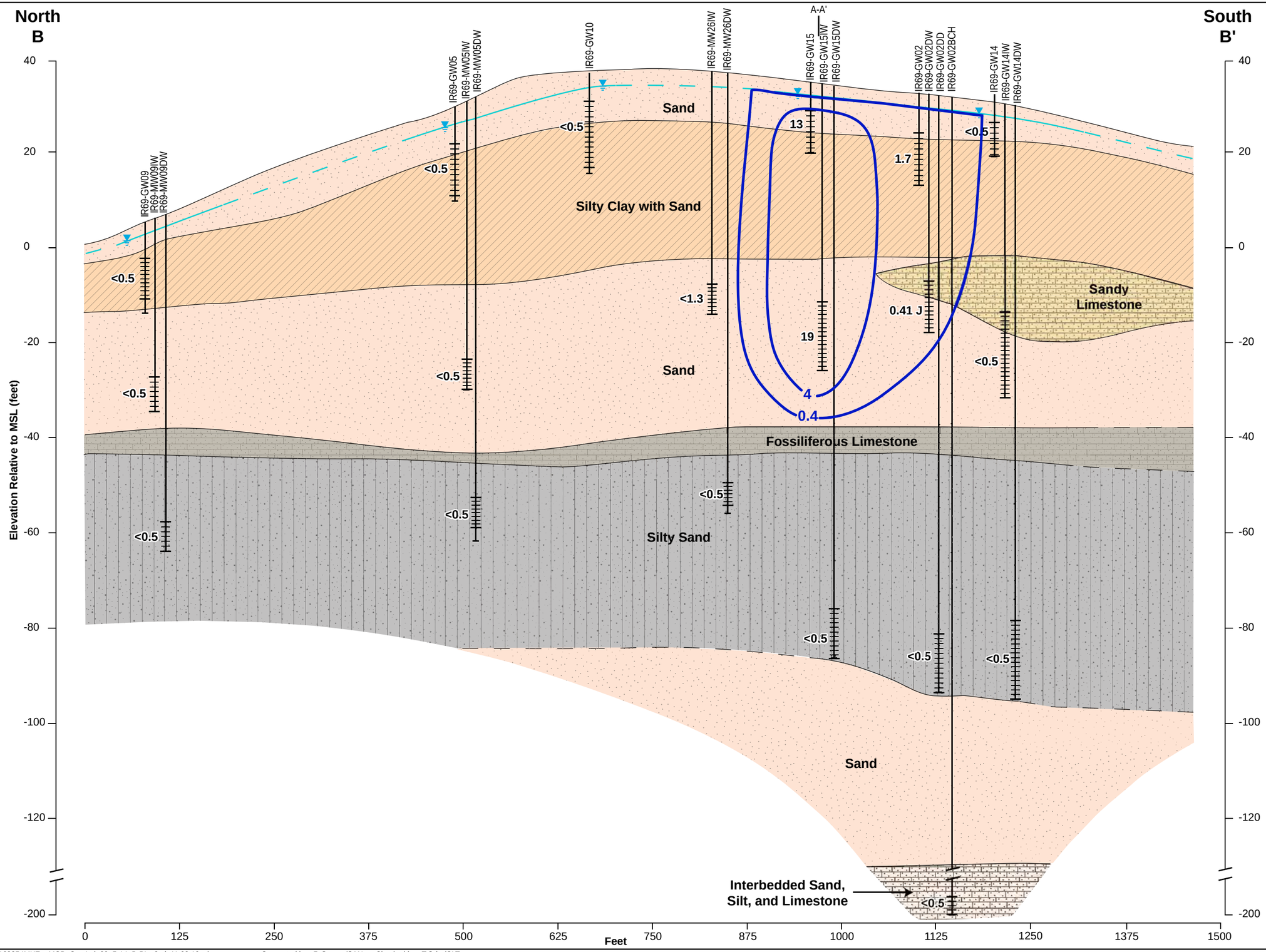
NOTE

1) The depth and thickness of the subsurface strata indicated on this section (profile) were generalized from and interpolated between test locations. Information on actual subsurface conditions apply only to the specific locations indicated. Subsurface conditions and water levels at other locations may differ from conditions occurring at the indicated locations.
2) NS – Not Sampled.

Figure 5-13
1,2-DCA Plume Cross Section A-A'
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

CH2MHILL

ES060710163354MKE MCB_CamLej_69_5-13_A-A'_v3.ai 11.02.10 sls Generated by: R.Gomez/SAN Checked by: T.Grim/CLT



Horizontal : 1" = 125'
Vertical: 1" = 20'
V.E. = 6.25x

LEGEND

- Sand
- Silty clay with sand
- Silty Sand
- Fossiliferous Limestone and Cemented Sand
- Sandy Limestone
- Interbedded Sand, Silt, and Limestone
- Clay
- Screened Interval
- Geologic Contact (dashed where inferred)
- Water Table (dashed where inferred)

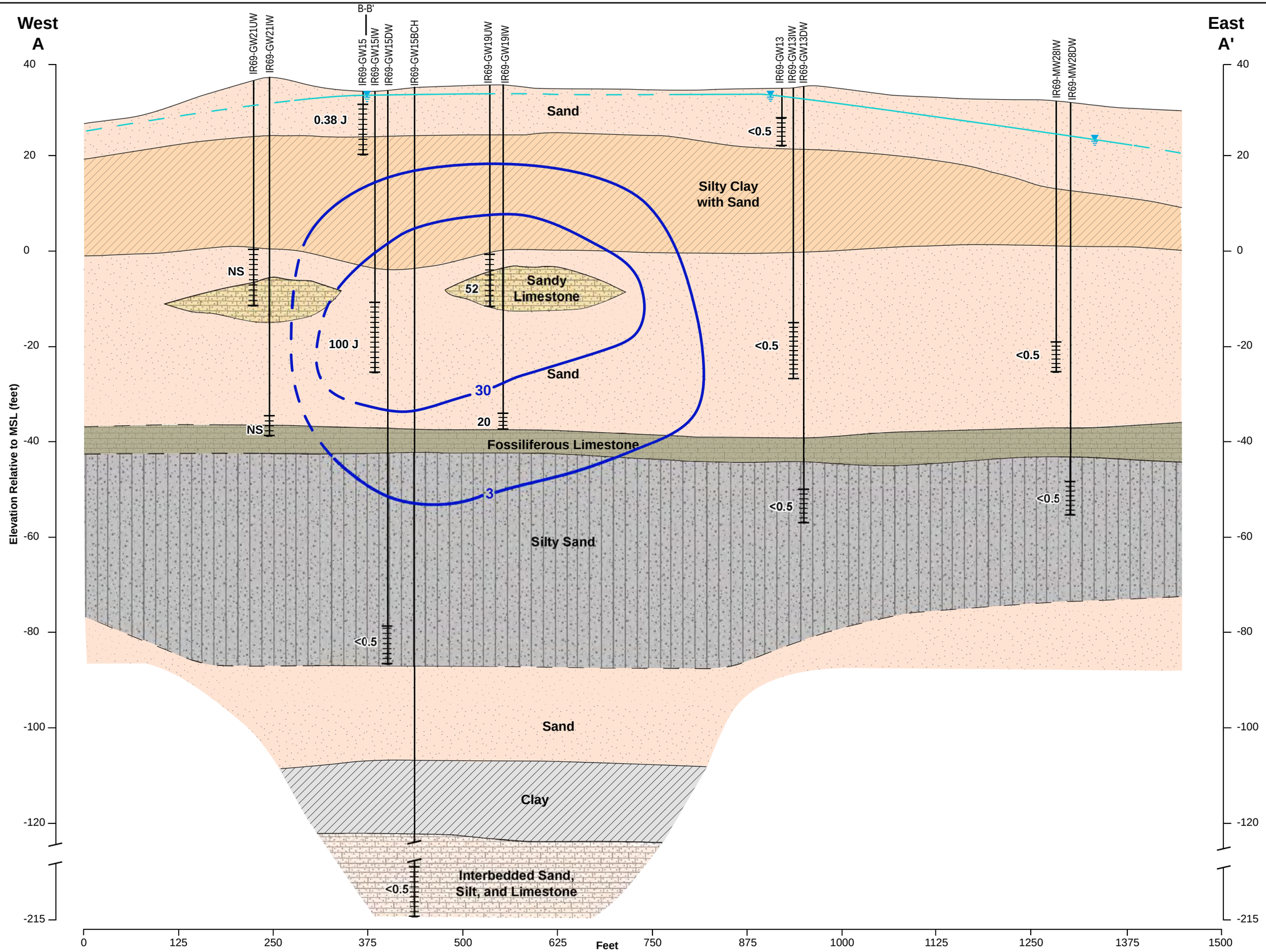
NOTE

1) The depth and thickness of the subsurface strata indicated on this section (profile) were generalized from and interpolated between test locations. Information on actual subsurface conditions apply only to the specific locations indicated. Subsurface conditions and water levels at other locations may differ from conditions occurring at the indicated locations.
2) J- Analyte present, value may or may not be accurate or precise.

Figure 5-14
1,2-DCA Plume Cross Section B-B'
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

CH2MHILL

ES060710163354MKE MCB_CamLej_69_5-14_B-B'_v3.ai 11.02.10 sls Generated by: R.Gomez/SAN Checked by: T.Grim/CLT



Horizontal : 1" = 125'
Vertical: 1" = 20'
V.E. = 6.25x

LEGEND

- Sand
- Silty clay with sand
- Silty Sand
- Fossiliferous Limestone and Cemented Sand
- Sandy Limestone
- Interbedded Sand, Silt, and Limestone
- Clay
- Screened Interval
- Geologic Contact (dashed where inferred)
- Water Table (dashed where inferred)

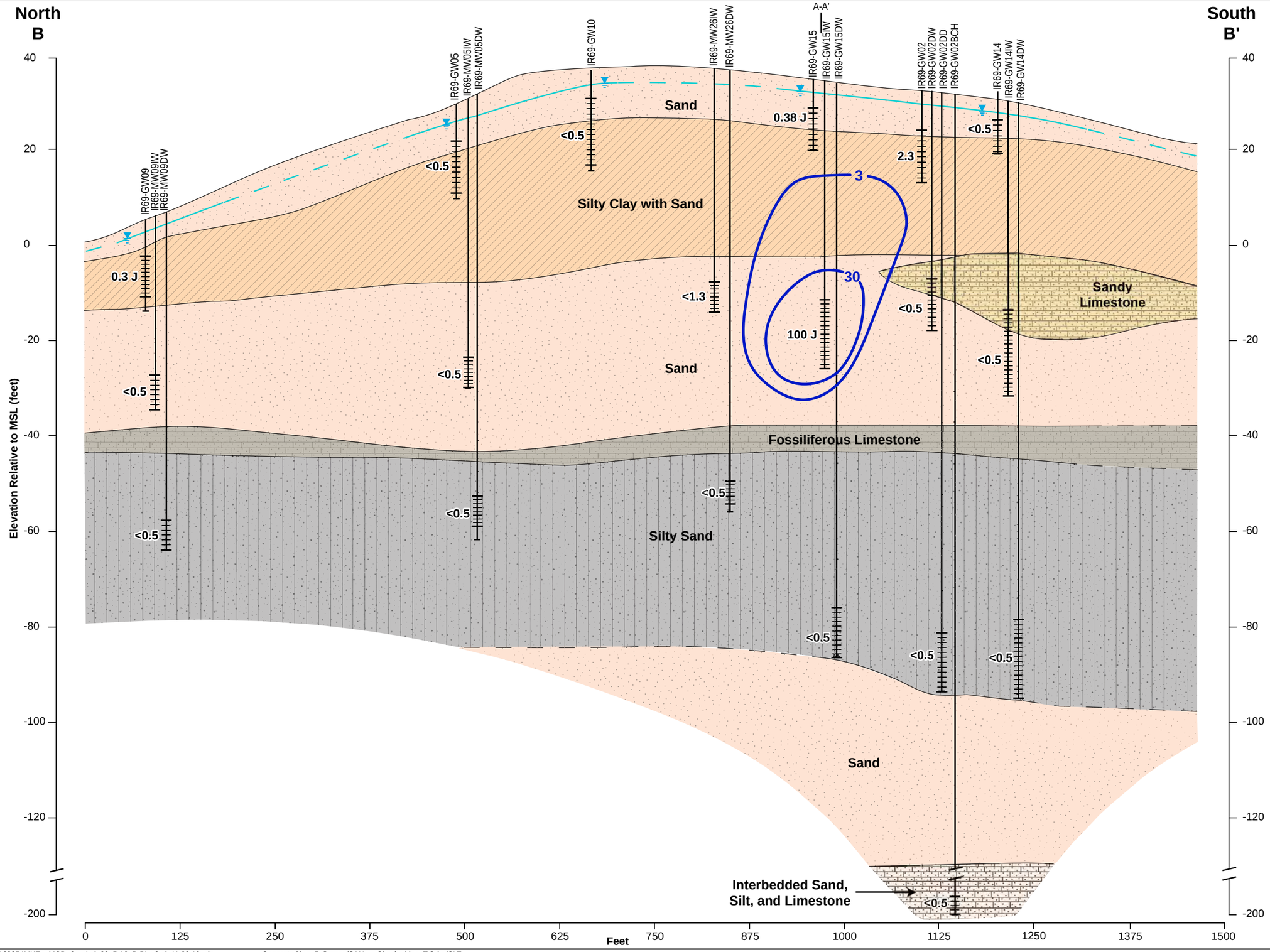
NOTE

1) The depth and thickness of the subsurface strata indicated on this section (profile) were generalized from and interpolated between test locations. Information on actual subsurface conditions apply only to the specific locations indicated. Subsurface conditions and water levels at other locations may differ from conditions occurring at the indicated locations.
2) J – Analyte present, value may or may not be accurate or precise.
3) NS – Not Sampled.

Figure 5-15
TCE Plume Cross Section A-A'
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

CH2MHILL

ES060710163354MKE MCB_CamLej_69_5-13_A-A'_v3.ai 11.02.10 sls Generated by: R.Gomez/SAN Checked by: T.Grim/CLT



Horizontal : 1" = 125'
Vertical: 1" = 20'
V.E. = 6.25x

LEGEND

- Sand
- Silty clay with sand
- Silty Sand
- Fossiliferous Limestone and Cemented Sand
- Sandy Limestone
- Interbedded Sand, Silt, and Limestone
- Clay
- Screened Interval
- Geologic Contact (dashed where inferred)
- Water Table (dashed where inferred)

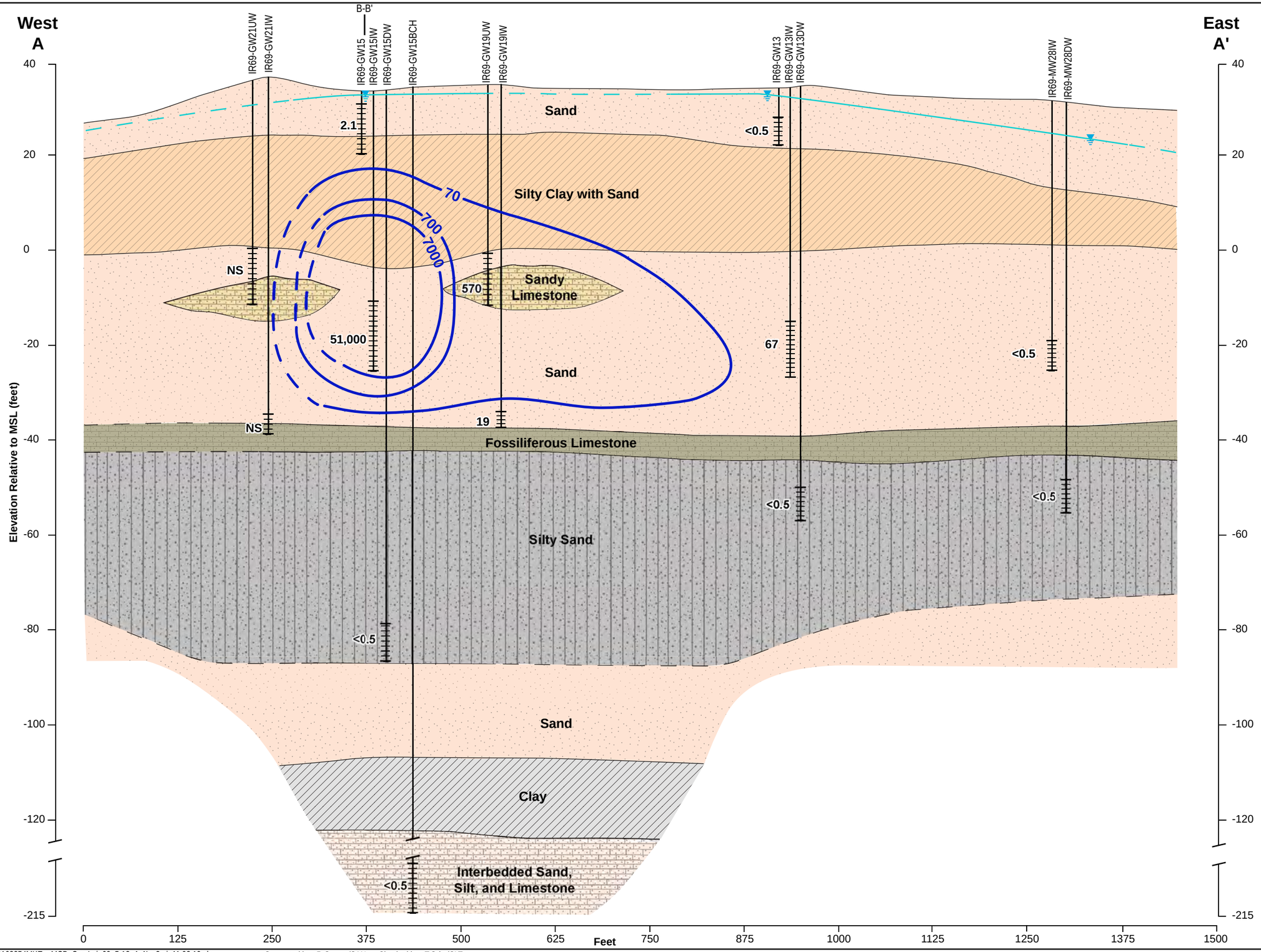
NOTE

1) The depth and thickness of the subsurface strata indicated on this section (profile) were generalized from and interpolated between test locations. Information on actual subsurface conditions apply only to the specific locations indicated. Subsurface conditions and water levels at other locations may differ from conditions occurring at the indicated locations.
2) J- Analyte present, value may or may not be accurate or precise.

Figure 5-16
TCE Plume Cross Section B-B'
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

CH2MHILL

ES060710163354MKE MCB_CamLej_69_5-16_B-B'_v3.ai 11.02.10 sls Generated by: R.Gomez/SAN Checked by: T.Grim/CLT



Horizontal : 1" = 125'
Vertical: 1" = 20'
V.E. = 6.25x

LEGEND

- Sand
- Silty clay with sand
- Silty Sand
- Fossiliferous Limestone and Cemented Sand
- Sandy Limestone
- Interbedded Sand, Silt, and Limestone
- Clay
- Screened Interval
- Geologic Contact (dashed where inferred)
- Water Table (dashed where inferred)

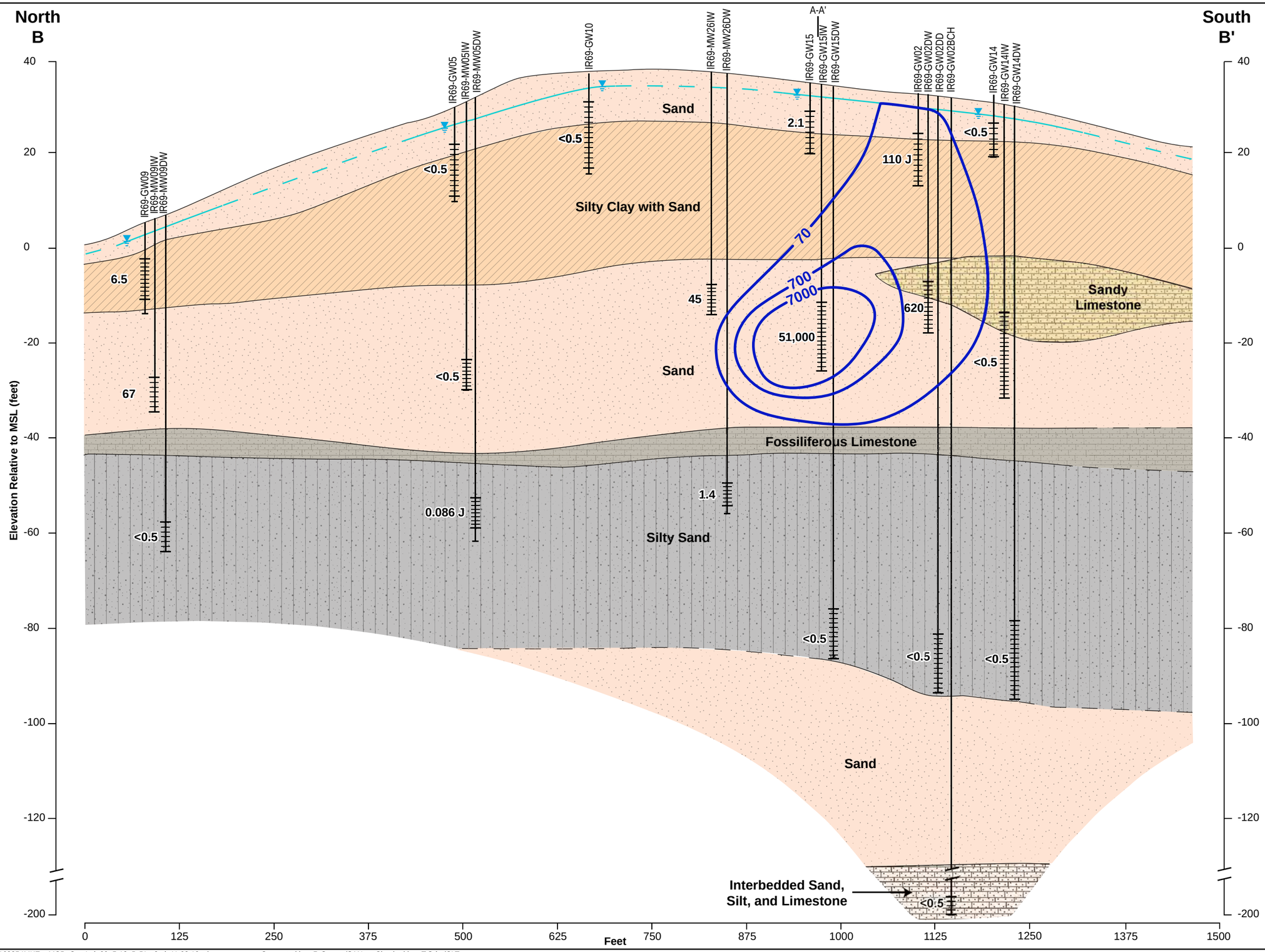
NOTE

1) The depth and thickness of the subsurface strata indicated on this section (profile) were generalized from and interpolated between test locations. Information on actual subsurface conditions apply only to the specific locations indicated. Subsurface conditions and water levels at other locations may differ from conditions occurring at the indicated locations.
2) NS – Not Sampled.

Figure 5-17
cis-1,2-DCE Cross Section A-A'
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

CH2MHILL

ES060710163354MKE MCB_CamLej_69_5-13_A-A'_v3.ai 11.02.10 sls Generated by: R.Gomez/SAN Checked by: T.Grim/CLT



Horizontal : 1" = 125'
Vertical: 1" = 20'
V.E. = 6.25x

LEGEND

- Sand
- Silty clay with sand
- Silty Sand
- Fossiliferous Limestone and Cemented Sand
- Sandy Limestone
- Interbedded Sand, Silt, and Limestone
- Clay
- Screened Interval
- Geologic Contact (dashed where inferred)
- Water Table (dashed where inferred)

NOTE

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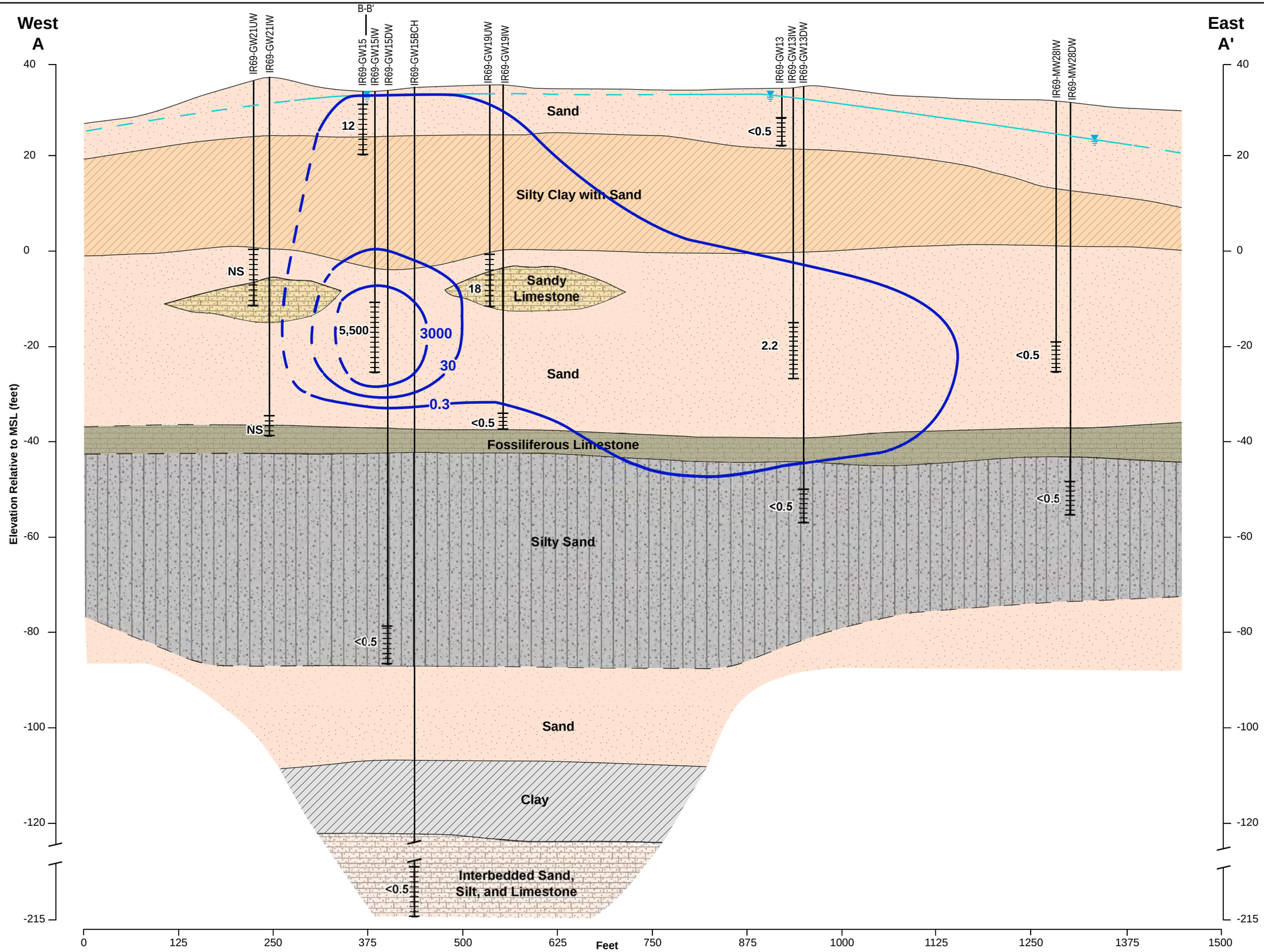
2) J- Analyte present, value may or may not be accurate or precise.

Figure 5-18
cis-1,2-DCE Cross Section B-B'
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

CH2MHILL

ES060710163354MKE MCB_CamLej_69_5-18_B-B'_v3.ai 11.02.10 sls Generated by: R.Gomez/SAN Checked by: T.Grim/CLT



Horizontal : 1" = 125'
Vertical: 1" = 20'
V.E. = 6.25x

LEGEND

- Sand
- Silty clay with sand
- Silty Sand
- Fossiliferous Limestone and Cemented Sand
- Sandy Limestone
- Interbedded Sand, Silt, and Limestone
- Clay
- Screened Interval
- Geologic Contact (dashed where inferred)
- Water Table (dashed where inferred)

NOTE

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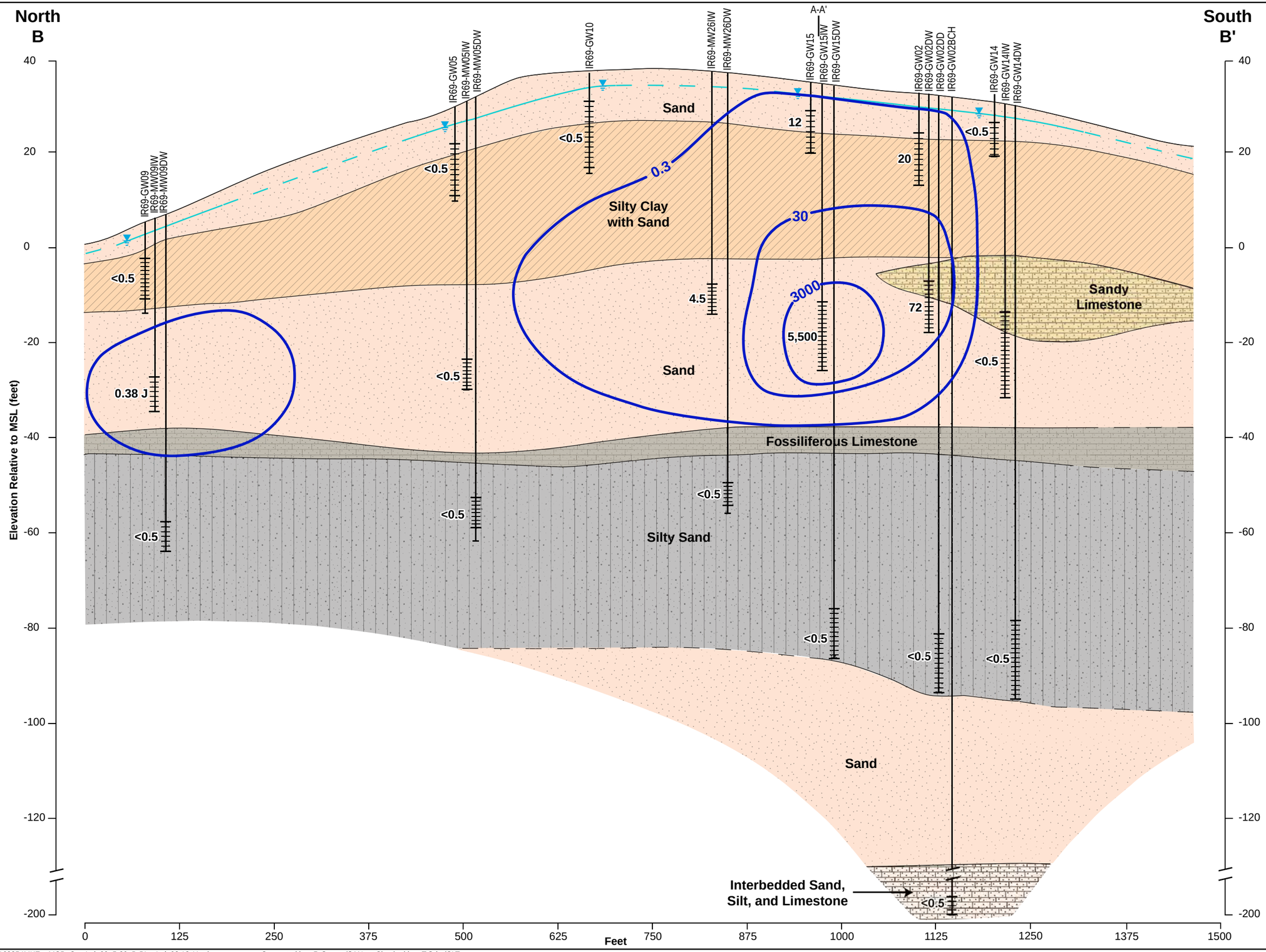
2) NS – Not Sampled.

Figure 5-19
VC Plume Cross Section A-A'
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

CH2MHILL

ES060710163354MKE MCB_CamLej_69_5-19_A-A'_v4.ai 08.18.11 sls Generated by: R.Gomez/SAN Checked by: T.Grim/CLT



Horizontal : 1" = 125'
Vertical: 1" = 20'
V.E. = 6.25x

LEGEND

- Sand
- Silty clay with sand
- Silty Sand
- Fossiliferous Limestone and Cemented Sand
- Sandy Limestone
- Interbedded Sand, Silt, and Limestone
- Clay
- Screened Interval
- Geologic Contact (dashed where inferred)
- Water Table (dashed where inferred)

NOTE

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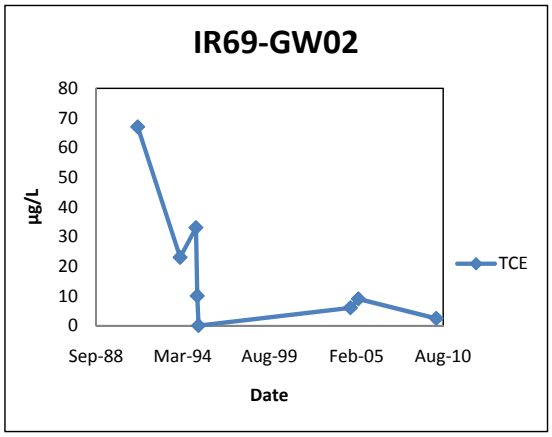
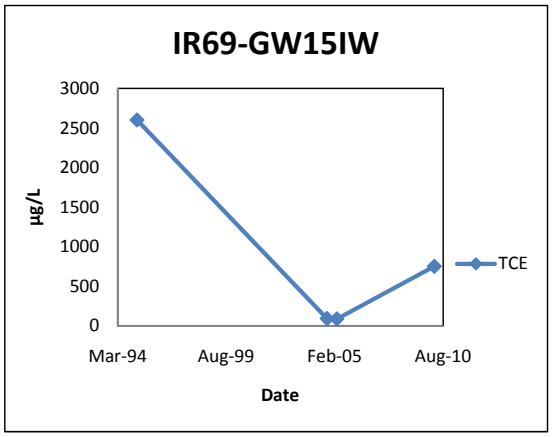
2) J- Analyte present, value may or may not be accurate or precise.

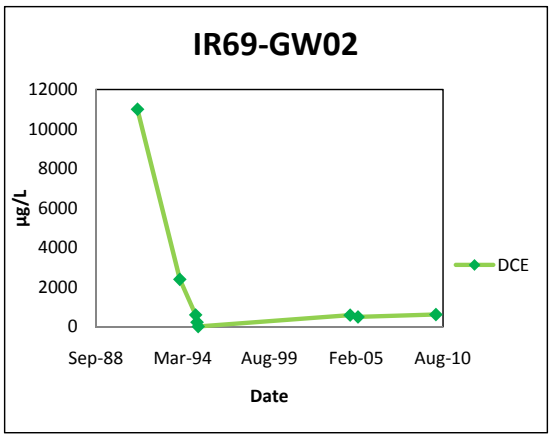
Figure 5-20
VC Plume Cross Section B-B'
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

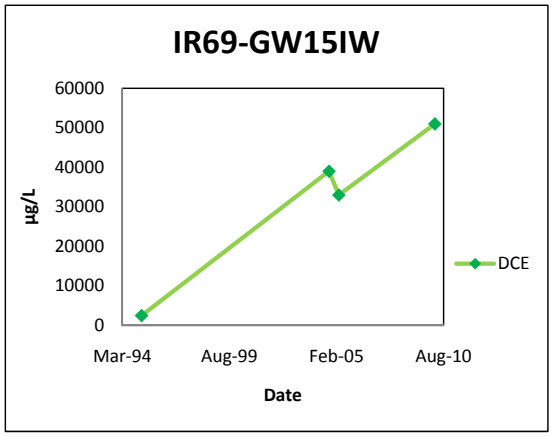
CH2MHILL

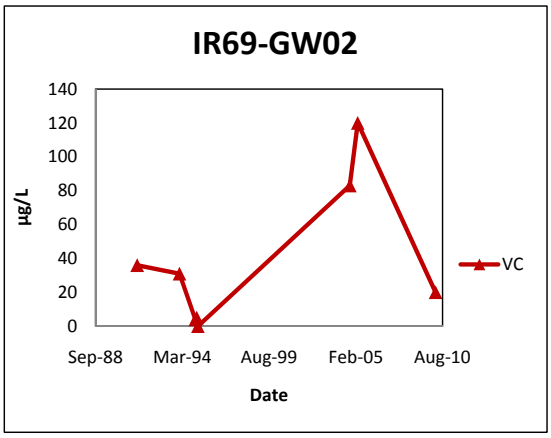
ES060710163354MKE MCB_CamLej_69_5-20_B-B'_v4.ai 08.18.11 sls Generated by: R.Gomez/SAN Checked by: T.Grim/CLT











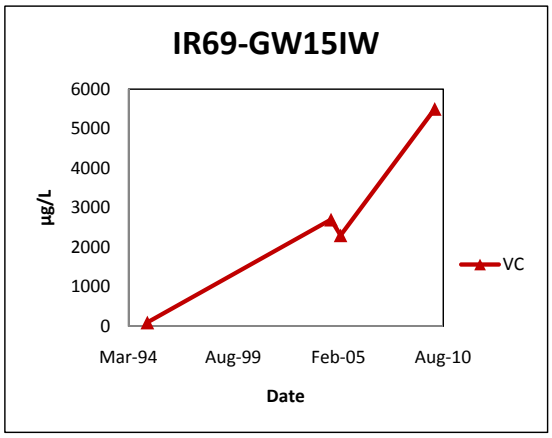


Figure 5-21
Historical Groundwater Analytical Data Trends – IR69-GW02, IR69-GW15IW
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

CH2MHILL

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SECTION 6

Contaminant Fate and Transport

The fate and transport of contaminants in soil and groundwater at Site 69 are discussed in this section, including contaminant mobility and persistence, physical and chemical properties, and physical and hydraulic properties of the aquifers. This section includes a comparison of predicted attenuation conditions to observed contaminant migration and attenuation characteristics.

6.1 Contaminant Mobility and Persistence

The behavior of contaminants is determined by their physical, chemical, and biological interaction with the environment. Mobility and persistence are two key factors in determining probable behavior. Mobility is the potential for a chemical to migrate from a source, and persistence is the measure of how long a chemical will remain in the environment. When considering mobility and persistence, it is important to understand their role in evaluating the extent of NA that may be occurring at the Site.

NA is defined as "the biodegradation, dispersion, dilution, sorption, volatilization, and/or chemical and biological stabilization of contaminants to effectively reduce contaminant toxicity, mobility, or volume to levels that are protective of human health" (USEPA, 1998).

6.1.1 Contaminant Groups

VOCs, SVOCs, pesticides, and metals have been detected in the soil, sediment, surface water, and groundwater at Site 69. The nature and extent of these constituents, as discussed in Section 5, indicate that the most prevalent site-related constituents are VOCs in groundwater. SVOCs, pesticides, and PCBs were detected infrequently at low concentrations relative to screening values, and are less mobile in the environment than VOCs. Metals were detected more frequently than the other contaminant groups, but were within the range of Base background concentrations and screening criteria, with the exception of iron in the waste disposal area. Based on the low pH of the surficial aquifer (**Table 5-9**), metals may be more mobile in shallow groundwater; however, analytical results indicate that metals exceedances are generally confined to the source area.

Based upon potential mobility, nature, and extent, the primary contaminants of concern (COCs) at Site 69 are 1,2-DCA, TCE, cis-1,2-DCE, and VC in groundwater.

6.1.2 Physical and Chemical Properties of Representative Compounds

The following physical and chemical properties (and processes) are considered to be the most important when evaluating the transport of chemicals at Site 69:

- Sorption
- Volatilization
- Degradation

- Bioaccumulation
- Non-aqueous liquids

The following profiles describe how chemical and physical properties (e.g., water solubility, specific gravity) of the COCs affect their mobility and persistence. **Table 6-1** summarizes the relevant physical and chemical properties of the COCs. **Table 5-9** summarizes the water quality parameters (pH, specific conductance, temperature, DO, ORP, and turbidity) recorded during the March 2010 groundwater monitoring event.

Sorption

Sorption is the tendency for chemicals to adsorb to and desorb from the media through which the contaminants are being transported. The subsurface materials most likely to adsorb site-related contaminants are clays and organic material. As noted in Section 4, the geological formations present at Site 69 consist predominantly of silts, sandy silts, and limestone with variable amounts of sandy clay and clay. Consequently, the likelihood of chemical adsorption to this material would vary depending on the clay content of the underlying soil.

The conventional measure of sorption is the distribution coefficient (K_d) of soil and geologic material for a given chemical. The K_d for organic chemicals is the product of a partition coefficient of the chemical and the fraction of organic carbon (F_{oc}) in the soil. Chemicals with a K_d less than 1,000 milliliters per gram (ml/g), or a log K_{oc} less than 3 ml/g have low degrees of adsorption and high mobility potential. This is characteristic of the VOCs detected in the groundwater at Site 69. For example, TCE and VC both have relatively low log K_{oc} values (2.10 ml/g and 0.60 ml/g, respectively), thus a lower tendency for adsorption to the subsurface material, which enhances mobility through the environment. All VOCs detected at the Site 69 have log K_{oc} values of less than 3 and are considered to have moderate to high mobility in soil, suggesting that they are likely to leach from soil to groundwater. Chemicals with a K_d greater than 1,000 ml/g, or a log K_{oc} greater than 3 ml/g, have higher degrees of adsorption and low mobility potential. Pesticides, PCBs, and SVOCs generally have high K_d and log K_{oc} values and tend to adsorb to soils.

The migration rates of dissolved contaminants vary depending on a chemical's tendency to adsorb to the site-specific aquifer matrix. Consequently, the rate of contaminant migration is generally less than the groundwater seepage velocity, due to a process referred to as retardation. For each contaminant detected at Site 69, it is possible to calculate theoretical retardation coefficients, which are estimates of how the migration of a contaminant is slowed by adsorption with respect to groundwater seepage velocity. Soil retardation coefficients for VOCs detected in the groundwater at Site 69 are presented in **Table 6-2**. The following is a brief explanation of the retardation coefficient equation:

$$R = 1 + p_b \, x \, K_d / n_e$$

where:

R = Retardation coefficient (dimensionless)
p_b = Bulk density (grams per cubic centimeter)
K_d = Distribution coefficient (ml/g)
n_e = Effective porosity (dimensionless)

The effect of retardation is estimated by dividing the groundwater flow velocity by R, which provides a value of migration that is either equal to the flow rate (in the case of no retardation) or less than the flow rate (when retardation is occurring).

For the reasons discussed earlier in this section, estimates of the rates of contaminant migration are approximate and the estimates of R have an even greater level of uncertainty than the estimated rates of groundwater flow. Contaminant migration velocities can be approximated by modifying the Darcy Equation to utilize the available groundwater velocity data described in Section 4 and the chemical-specific properties presented in **Table 6-1.** The Darcy Equation can be used to calculate a groundwater velocity within a porous medium as shown in the following equation:

$$V_L = (K \times i)/n_e$$

where:

V_L = Linear groundwater seepage velocity [Length/Time]
K = Hydraulic conductivity [Length/Time]
i = Hydraulic gradient [dimensionless]
n_e = Effective porosity [dimensionless]

Contaminant migration velocity is the quotient of the linear groundwater velocity and the retardation factor as shown below:

$$V_{COC} = V_L/R$$

where:

V_{coc} = Velocity of the COC [[Length/Time]
V_L = Linear groundwater velocity [[Length/Time]
R = Retardation coefficient (dimensionless)

Approximate contaminant migration velocities for the COCs are listed in **Table 6-2**. Of the contaminants listed in the table, TCE is likely to migrate at the slowest rate due to the relatively high retardation coefficient and the chemical's tendency to sorb onto, or partition into, organic matter which may be coating the aquifer matrix. Because VC has a retardation coefficient of 1.0, it is more likely to migrate through the aquifer at the same velocity as groundwater.

Volatilization

Volatilization is the tendency for some chemicals, particularly VOCs, to change from a liquid or adsorbed state to a gas. A conventional measure of volatility is Henry's Law Constant (K_h). Values of K_h for the COCs are presented in **Table 6-1**. In general, compounds with K_h values greater than 10^{-3} atmosphere-cubic meter per mole (atm-m^3/M) are expected to volatilize readily from water to air. Compounds with K_h values less than 10^{-5} atm-m^3/M are generally stable and not expected to volatilize from water to air.

The dominant process that removes VOCs from shallow soil is volatilization into the atmosphere, due to their relatively high K_h values and vapor pressures. Thus, VOCs infrequently occur for long periods in shallow soil, and likely volatilize into soil gas overlying the water table. Inversely, the vapor pressure and K_h suggest that of the VOCs

present at Site 69, VC would be expected to volatilize at the highest rate, followed by TCE, cis-1,2-DCE and 1,2-DCA.

Pesticides, PCBs, and SVOCs have low K_h values compared to VOCs and volatilization is not a significant fate and transport mechanism for these contaminant groups in soil, sediment, and groundwater.

Degradation

Degradation is the transformation of one chemical to another either biotically (biodegradation) or abiotically through hydrolysis or photolysis. Biodegradation occurs when microorganisms convert one chemical to another as part of their respiration process. Hydrolysis is the reaction of a chemical with water, and photolysis is the result of exposing the chemical to light.

The rate at which a chemical degrades is commonly expressed in terms of half-life, and refers to the time required for half of the mass of the chemical to degrade. Estimates of half-lives for the groundwater COCs are presented in **Table 6-1**.

VOCs can undergo biodegradation through three separate pathways: reductive dechlorination, oxidation, or co-metabolism. The primary biodegradation process for TCE and cis-1,2-DCE is reductive dechlorination. During this process, VOCs are used as electron acceptors based on the availability of an adequate supply of electron donors. Anthropogenic and natural organic carbon sources act as electron donors. During the biodegradation process, chlorine atoms are removed from the VOCs and replaced by hydrogen atoms, which eventually results in the transformation of the VOC to innocuous degradation byproducts such as carbon dioxide, ethane, ethane, and water.

The rate of reductive dechlorination appears to decrease as the degree of chlorination decreases. Therefore, TCE degradation rates are generally higher than those of cis-1,2-DCE and VC. The less chlorinated degradation byproducts have been documented to degrade as electron donors under aerobic conditions. Evidence of limited degradation is present in the plume area, as discussed in Section 5.

Degradation rates of pesticides, SVOCs, and PCBs are relatively low compared to those of VOCs. However, they typically have high soil-water distribution coefficients and consequently, strongly sorb to soil. Therefore, even if biological and chemical transformation rates are slow (such as with heptachlor epoxide), contaminant mobility is low, allowing these processes to reduce contaminant mass without plume migration. This is consistent with the limited extent of pesticides observed in Site 69 groundwater.

Bioaccumulation

Bioaccumulation is the process of chemicals adsorbing to and accumulating in plants and the organ tissue of animals. This process is expressed as the octanol-water partition coefficient (K_{ow}), which is the ratio of the concentration of a chemical in octanol versus the concentration in water at equilibrium and a specified temperature. Octanol is an organic solvent that is used as a surrogate for natural organic matter and is used to predict the fate of chemicals in the environment and a chemical's tendency to accumulate in biological material.

At Site 69, VOCs that are more highly chlorinated, such as TCE, have slightly higher K_{ow} values and tend to bioaccumulate more readily than less chlorinated VOCs, such as 1,2-DCA, cis,1-2-DCE, and VC.

Non-aqueous Phase Liquids

Because of their low solubility, CVOCs, with the exception of VC, can occur in aquifers as dense non-aqueous phase liquids (DNAPLs) when present in the undissolved free phase form. They are referred to as dense because they are heavier than water when present in free phase form and have a tendency to sink through the aquifer. The DNAPL slowly partitions (dissolves) into the surrounding groundwater at a rate and concentration dependent on the solubility of the compound, temperature, chemical characteristics of the groundwater, and other factors.

Dissolved concentrations of CVOCs in groundwater at approximately 1 to 5 percent of a compound's aqueous solubility would suggest the potential presence of DNAPL in the subsurface. The maximum concentrations of TCE and VC detected during the March 2010 groundwater sampling event were less than 1 percent of their respective aqueous solubilities, indicating that the presence of non-aqueous phases of these VOCs is unlikely. However, cis-1,2-DCE was detected in the sample collected from IR69-GW15IW at a concentration of 51 mg/L, which is roughly 1.5 percent of its aqueous solubility (3,500 mg/L), indicating that cis-1,2-DCE may be present in the non-aqueous phase.

6.1.3 Fate and Transport of Inorganic Constituents

The fate and transport of inorganic constituents are highly influenced by the geochemistry of the subsurface environment. As discussed in Section 5.3, iron and manganese can be used as electron acceptors and reductively dissolve from a solid into soluble forms. Therefore, elevated levels of iron and manganese in groundwater are often observed where organic contamination has caused more reducing conditions in groundwater. The highest concentrations of iron and manganese in Site 69 groundwater are observed within the VOC plume and concentrations decrease downgradient of the plume. Other inorganics, which are sorbed to these iron hydroxides and manganese oxides, may be concurrently released during these oxidation-reduction processes. However, they likely complex back to solid forms once the water quality returns to background conditions. High pH values (greater than 9) tend to drive inorganic constituents to form insoluble hydroxides, thus reducing their mobility in groundwater. Conversely, low pH values (less than 5) drive inorganic constituents to more mobile species; consequently, metals may be more mobile in the surficial aquifer than in the Castle Hayne aquifer.

6.1.4 Physical Properties of the Aquifer

The following physical mechanisms are key factors in controlling the fate and transport of contaminants dissolved in groundwater during migration:

- Advection
- Dispersion

Advection is the transport of dissolved contaminants by the bulk motion of flowing groundwater. It is the primary transport mechanism for dissolved contamination.

Advection controls the rate and direction of contaminant migration. Site-specific hydrology is discussed in Section 4. Groundwater flows radially in the surficial aquifer, and to the north and east toward the New River in the Castle Hayne aquifer. Additionally, a downward hydraulic gradient exists at Site 69 between the surficial and Castle Hayne aquifers, ranging from 0.522 to 0.817 ft/ft.

Dispersion is the distribution of dissolved contaminants along the path they would be expected to follow during advection. It is a result of the spatial variation in aquifer permeability, fluid mixing, and molecular diffusion. Dispersion primarily controls the concentrations of the contaminant at any point in the flow system.

Dispersion occurs in moving groundwater because of local variations in flow velocities caused by the variability of the hydraulic conductivity of porous media. Typically, the degree of dispersion is greater in the direction of groundwater flow than in directions perpendicular to it. The concentrations in the center of the contaminant plume decrease as dispersion dilutes the contaminant mass. Migration of contaminants from the center of the mass varies based on the retardation coefficient previously described.

6.2 Contaminant Migration

This section discusses the likely site-specific source areas at Site 69 and potential mechanisms for contaminant release and migration.

Fundamental to describing fate and transport at the Site is the CSM, graphically represented by **Figure 2-3**. The CSM qualitatively evaluates the various contaminant sources, release mechanisms, relative rates of migration, persistence of contaminants, and potential migration pathways at Site 69.

6.2.1 Source Areas

Based on data collected during the March 2010 investigation, the highest concentrations of contaminants are located in the south-central portion of the Site in the upper Castle Hayne aquifer; concentrations decrease toward the New River (**Figure 5-9** through **5-11**). The primary contaminants in the plume are cis-1,2-DCE, TCE, and VC.

The contaminant plume appears to have originated in an area coincident with a large geophysical anomaly and historical reports of waste disposal. The dissolved-phase concentrations of cis-1,2-DCE detected in groundwater samples collected from the upper Castle Hayne aquifer have been reported to exceed 1 percent of its aqueous solubility, which suggests the potential presence of DNAPL. Since all previous investigations have specifically avoided intrusive investigation of the actual disposal trenches, there is significant uncertainty regarding the nature of the buried wastes.

Section 2 provides a complete summary of the potential source areas at Site 69 that may have contributed to the contaminants described above.

6.2.2 Migration of Contaminants in Groundwater

This section addresses the migration of contaminants within the surficial and Castle Hayne aquifers, and addresses potential downward and/or lateral migration to downgradient receptors (surface water bodies).

General Conceptual Model of Groundwater Flow and Contaminant Transport

A detailed discussion of the general conceptual model of groundwater flow, including recharge to the groundwater system and hydrogeology of the aquifer systems, is presented in Section 4.

Recharge to the Groundwater System

Precipitation that falls within the boundary of Site 69 tends to infiltrate into the ground, flow toward the drainage features to the north and south of the Site, or evaporate or transpire into the air. Infiltrating water generally reaches the water table at approximately 4 to 10 feet bgs and enters the surficial aquifer. Groundwater migrates horizontally downgradient toward the New River and vertically into the upper Castle Hayne. The Castle Hayne confining unit is only semi-confining in the Site 69 area, allowing some downward migration of groundwater. Contaminants are leached from the buried waste material and transported into the underlying aquifers.

Discharge from the Groundwater System

The New River is located downgradient of the eastern boundary of Site 69, and is the ultimate receptor for surface water and groundwater discharge from the Site. During the March 2010 field activities, downgradient monitoring wells were installed in the upper and middle Castle Hayne aquifers to assess the lateral extent of contamination. COCs were not detected at concentrations exceeding NCGWQS in samples from downgradient surficial aquifer monitoring wells (IR69-GW09, IR69-GW11, IR69-GW12 and IR69-GW13) or downgradient upper Castle Hayne aquifer monitoring wells (IR69-GW30IW, IR69-GW27IW, IR69-GW28IW and IR69-GW29IW), indicating that impacted groundwater does not appear to be discharging from the surficial aquifer or upper Castle Hayne aquifer to surface water bodies.

6.3 BIOCHLOR Modeling

Predictive modeling was conducted as part of the SI to estimate the time required for groundwater to achieve the NCGWQS via NA processes and to evaluate the potential for CVOCs to migrate as far as the New River. Groundwater fate and transport modeling was performed using BIOCHLOR Version 2.2 (Aziz et al., 2002).

BIOCHLOR is a screening level model that utilizes the three-dimensional analytical model by Domenico (1987). BIOCHLOR can simulate one-dimensional advection, three-dimensional dispersion, linear adsorption, and biotransformation via reductive dechlorination. Reductive dechlorination is assumed to occur under anaerobic conditions, and dissolved solvent degradation is assumed to follow a sequential first-order decay process.

It should be noted that the model used in this evaluation is a screening level tool intended to facilitate decision-making. Further, the model is not designed to account for complexities

such as multiple source areas or previously implemented remedial actions. Therefore, the model output should be used only as an estimate of potential future conditions.

6.3.1 Model Development

For purposes of this evaluation, only the flow path in the upper Castle Hayne aquifer was modeled, as CVOC concentrations only slightly exceed the applicable NCGWQS in the surficial and middle Castle Hayne aquifers. The selected flow path parallels the estimated groundwater flow path from the source area to a potential point of discharge at the New River. Based on a comparison of current and historical data, the model was set up with a plume centerline that extends from the presumed source area adjacent to monitoring well IR69-GW15IW, through IR69-MW19UW to the east through monitoring wells IR69-MW11IW and IR69-MW28IW, and then on to the New River. Since groundwater appears to also flow to the northeast from the source area, concentrations reported in samples from monitoring wells IR69-MW04IW and IR69-MW09IW were used in the BIOCHLOR calibration. The New River is approximately 1,300 feet downgradient of the presumed source area.

6.3.2 BIOCHLOR Model Calibration

Groundwater data collected from March 2010 field activities were used to calibrate the BIOCHLOR model.

Model inputs include: the source area decay coefficient, constituent half-life (biological decay rate), release date, initial source area concentration, source zone width and thickness, soil density, fraction organic carbon, constituent partition coefficients, aquifer hydraulic conductivity, hydraulic gradient, effective porosity, and longitudinal dispersivity. The individual decay coefficients for the model were estimated by model calibration using constituent half-lives. Initial source area concentrations were also estimated by model calibration.

The BIOCHLOR model can be set up to include up to two biodegradation zones. This allows the individual decay constants to be varied within the plume. A two-zone model is appropriate for plumes that undergo rapid biodegradation near the source area, but lower rates of degradation further downgradient. However, a two-zone model can be used only when the plume is at steady state near the source area, meaning the source is constant. This assumption is appropriate for plumes where source area concentrations are relatively high and DNAPL is present. Based on the presence cis-1,2-DCE at concentrations above 1 percent of its aqueous solubility in the vicinity of the buried waste material (IR69-GW15IW), it is possible that DNAPL is present. Consequently, a two-zone model was used for this evaluation.

The initial source concentrations for TCE (100 µg/L), cis-1,2-DCE (50,000 µg/L), and VC (750 µg/L) were based on a release date of 1951, on historical concentrations of constituents, and on model calibration.

The half-lives in the source area, Zone 1, estimated through model calibration and literature values, were 4 years for TCE, 0.6 year for cis-1,2-DCE, and 0.10 year for VC. The half-lives in the downgradient area, Zone 2, were 4.5 years for TCE, 7 years for cis-1,2-DCE, and 0.20 year for VC. These half-lives are within the range of published literature values.

Model inputs and the results of the model calibration are shown in the calibration run included in **Table 6-3** and **Appendix F.** The constituent concentrations detected in samples from each well in 2010 generally match the constituent concentrations predicted by the model.

6.3.3 BIOCHLOR Model Prediction

The calibrated model was used to predict constituent concentrations and the maximum plume extent for each constituent at dates of 2020 (10 years from present), 2030 (20 years from present), 2050 (40 years from present), 2070 (60 years from present), and 2110 (100 years from present). The results are summarized in **Table 6-4,** and the model runs are provided in **Appendix G**.

According to the continuous source model that was used, the concentrations of TCE, cis-1,2-DCE, and VC will not attenuate below their NCGWQS (3 µg/L, 70 µg/L, and 0.03 µg/L, respectively) in the source area. The model predicts that each plume (defined as groundwater concentrations exceeding NCGWQS) will remain relatively stable over the 100-year predicted period. The model also predicted that concentrations of TCE, cis-1,2-DCE, and VC in shallow groundwater at the shoreline of the New River should not exceed corresponding surface water quality standards (30 µg/L for TCE, no criterion available for cis-1,2-DCE, 2.4 µg/L for VC).

Table 6-1

Physical, Chemical, and Half-Life Data of COCs

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

CHEMICAL	Molecular Weight (g/mole)	Specific Gravity (unitless)	Water Solubility (mg/L)	Vapor Pressure (mm Hg) @ 25°C	K_h (atm-m^3/mole)	Log K_{oc} (ml/g)	Log K_{ow} (ml/g)	Half-Life Range (days)					
								Soil		Groundwater		Surface Water	
								Low	High	Low	High	Low	High
Volatile Organic Compounds													
1,2-DCA	98.96 [1]	1.24 [1]	8426 [1]	69.16 [1]	0.001 [1]	1.26	1.47 [1]						
TCE	131.39 [1]	1.46 [1]	1000 [1]	60.8 [1]	0.01 [1]	2.21	2.42 [1]	180 [2]	365 [2]	320 [2]	1,640 [2]	180 [2]	365 [2]
Cis-1,2-DCE	96.94 [1]	1.28 [1]	3500 [1]	197.6 [1]	0.0034 [1]	1.65	1.86 [1]	28 [2]	180 [2]	56 [2]	2,875 [2]	28 [2]	180 [2]
VC	62.50 [1]	0.91 [1]	90 [1] to 1100 [4]	2584 [1]	2.4 [1]	0.39	0.60 [1]	Rapid [3]		18 [3]		0.0194 [3]	

Notes:

K_{oc} = Organic carbon partition coefficient

K_{ow} = Octanol-water partition coefficient

K_h= Henry's Law Constant

NA = Indicates parameter not appropriate for the chemical

Log K_{OC} = 1.00 x Log K_{OW} - 0.21 (Karickhoff method [1])

Data sources:

[1] Schnoor, J.E. 1996. Environmental Modeling. First Edition.

[2] Howard, Ph. H. et al. 1991. *Handbook of Environmental Degradation Rates.*

[3] Montgomery, John H. Groundwater Chemicals Desk Reference. Third Edition.

[4] Montgomery, John H. Groundwater Chemicals Desk Reference. Second Edition.

Table 6-2

Soil Retardation Coefficients for Representative Chemicals

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemicals	Log K_{oc} (mL/g)	K_d (mg/g)	R (dimensionless)	Average V_{coc} (ft/day)	
				Surficial aquifer	Castle Hayne aquifer
1,2-DCA	1.26	0.03	1.1	0.033	0.019
TCE	2.21	0.26	2.3	0.017	0.010
Cis-1,2-DCE	1.65	0.07	1.3	0.028	0.016
VC	0.39	0.00	1.0	0.037	0.022

Notes:

K_{oc} = Organic carbon partition coefficient

K_d = Distribution coefficient

R = Retardation coefficient = $1 + K_d \times p_b / n_e$

p_b = Soil bulk density = 1.7 grams per cubic centimeter

n_e = Effective porosity = 0.35 (Baker, 1997)

V_{coc}= Contaminant migration velocity (ft/day)

NA = Not applicable; K_d provided

V_L = Linear seepage velocity = $K \times i / n_e$

Surficial Aquifer V_L=0.038 ft/day

Castle Hayne Aquifer V_L=0.022 ft/day

K = hydraulic conductivity

i = hydraulic gradient

For organics, $K_d = K_{oc}$ x fraction of organic carbon, estimated to be 0.0016 for soil based on site-specific measurements cited in Woodward-Clyde, et. al., August 1990. *Multimedia exposure Assessment Model (Multimed) for Evaluating the Land Disposal of Wastes -- Model Theory.*

Table 6-3
Summary of BIOCHLOR Input and Calibration Parameters
Supplemental Investigation Report Operable Unit No. 14 (Site 69)
MCB CamLej, North Carolina

Input Parameters

Parameter	Value	Units	Basis
Hydraulic Conductivity	0.002	cm/sec	Calculated from site data, Estimated from April 29-30 1994 slug test
Hydraulic Gradient	0.0048	ft/ft	Calculated from site data between monitoring well IR69-GW15IW and IR69-GW28IW
Effective Porosity	0.35	-	Typical of site soils; provided in Baker RI
Longitudinal Dispersivity	15	ft	
Transverse Dispersivity Ratio	0.05	-	Model calibration
Vertical Dispersivity Ratio	1.E-99	-	Conservatively assumes little vertical dispersion
Soil Bulk Density	1.7	kg/L	Typical of site soils; model calibration
Fraction Organic Carbon	0.0016	-	Typical of site soils; analytical data
PCE Partition Coefficient	426	L/kg	BIOCHLOR Default Value
TCE Partition Coefficient	130	L/kg	BIOCHLOR Default Value
DCE Partition Coefficient	125	L/kg	BIOCHLOR Default Value
VC Partition Coefficient	30	L/kg	BIOCHLOR Default Value
Ethene Partition Coefficient	302	L/kg	BIOCHLOR Default Value
TCE Half-Life - Zone 1	4	years	Literature values; model calibration. Zone 1 - high biotransformation
DCE Half-Life - Zone 1	0.6	years	Literature values; model calibration. Zone 1 - high biotransformation
VC Half-Life - Zone 1	0.10	years	Literature values; model calibration. Zone 1 - high biotransformation
TCE Half-Life - Zone 2	4.5	years	Literature values; model calibration. Zone 2 - low biotransformation
DCE Half-Life - Zone 2	7	years	Literature values; model calibration. Zone 2 - low biotransformation
VC Half-Life - Zone 2	0.20	years	Literature values; model calibration. Zone 2 - low biotransformation
Calibration Simulation Time	59	years	Release date of 1951 based on site history
Model Area Width	140	ft	Potential plume width
Modeled Area Length	1,300	ft	Distance along the length of the plume from the source (GW15IW) to New River
Zone 1 Length	150	ft	Estimated distance along the length of the plume with high biotransformation rates
Zone 2 Length	1,150	ft	Estimate
Source Thickness in Saturated Zone	30	ft	Estimated based on site conditions; model calibration
Width	140	ft	Estimated source width; model calibration
Source Area Decay Rate	--	1/yr	Continuous source assumed based on source area concentrations and historical site use
Initial TCE Concentration	100	µg/L	Estimated based on site conditions; model calibration
Initial DCE Concentration	50,000	µg/L	Estimated based on site conditions, lack of *trans*-1,2-DCE compared to *cis*-1,2-DCE; model calibration
Initial VC Concentration	750	µg/L	Estimated based on site conditions; model calibration

Model Calibration

Well ID	Distance from Source Area (ft)	TCE		DCE		VC	
		Model Predicted (µg/L)	Actual (µg/L)	Model Predicted (µg/L)	Actual (µg/L)	Model Predicted (µg/L)	Actual (µg/L)
IR69-GW15IW	Source	100	100	50,000	51,000	750	5,500
IR69-GW19UW	175	40	52	661	570	81	19
IR69-GW04IW	408	12.27	0.50	316	210	6	12
IR69-GW11IW	430	11.38	6.50	299	510	6	11
IR69-GW09IW	808	1.59	0.00	79.41	67	1.51	0.38
IR69-GW28IW	950	0.73	0.00	42.47	0.00	0.81	0.00

Notes:
TCE = Trichloroethene; DCE = cis-1,2-Dichloroethene; VC = Vinyl Chloride
Actual Concentrations based on data collected in March 2010.

Table 6-4
Summary of BIOCHLOR Predictions
Supplemental Investigation Site 69, Operable Unit No. 14
MCB CamLej, North Carolina

TCE (Initial Source Concentration 100 µg/L)

Date	Maximum Concentration (µg/L)	Distance from Source of Maximum Concentration (ft)	Maximum Plume Extent (ft)	Concentration at New River (µg/L)
2020	100	Source	700	Below SW Standard
2030	100	Source	700	Below SW Standard
2050	100	Source	700	Below SW Standard
2070	100	Source	700	Below SW Standard
2110	100	Source	700	Below SW Standard

cis-1,2-DCE (Initial Source Concentration 50,000 µg/L)

Date	Maximum Concentration (µg/L)	Distance from Source of Maximum Concentration (ft)	Maximum Plume Extent (ft)	Concentration at New River (µg/L)
2020	50,000	Source	850	Below SW Standard
2030	50,000	Source	850	Below SW Standard
2050	50,000	Source	850	Below SW Standard
2070	50,000	Source	855	Below SW Standard
2110	50,000	Source	855	Below SW Standard

VC (Initial Source Concentration 4,000 µg/L)

Date	Maximum Concentration (µg/L)	Distance from Source of Maximum Concentration (ft)	Maximum Plume Extent (ft)	Concentration at New River (µg/L)
2020	2,450	30	>1300	Below SW Standard
2030	2,450	30	>1300	Below SW Standard
2050	2,450	30	>1300	Below SW Standard
2070	2,450	30	>1300	Below SW Standard
2110	2,450	30	>1300	Below SW Standard

Notes:
TCE = Trichloroethene, cis-1,2-DCE = cis-1,2-dichloroethene, VC = vinyl chloride
"GW Standard" refers to the North Carolina 2L Groundwater Standard (TCE = 3 µg/L, cis-1,2-DCE = 70 µg/L, VC = 0.03 µg/L)
"SW Standard" refers to the North Carolia Surface Water Standard (TCE = 30 µg/L,VC = 2.4 µg/L)

SECTION 7

Human Health Risk Assessment

This section presents the results of a baseline HHRA for soil, surface water, sediment, and groundwater at Site 69. The facility overview and history are presented in Section 2. The data used for this risk assessment are discussed in Section 5. The fate and transport evaluation of the detected chemicals is discussed in Section 6.

Supplemental information used in the risk assessment is presented in **Appendix G** and includes the *Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual, Part D* (RAGS Part D) (USEPA, 2001) tables and additional supporting tables. Guidance documents used for preparing the risk assessment include RAGS Part A (USEPA, 1989), RAGS Part D (USEPA, 2001), RAGS Part E (USEPA, 2004), and USEPA Region IV *Supplemental Guidance to RAGS: Region 4 Bulletins* (USEPA, 2000).

7.1 Conceptual Site Model

The human health CSM presents an overview of site conditions, potential contaminant migration pathways, and exposure pathways to potential receptors. **Figure 7-1** presents the CSM for Site 69 associated with soil, surface water, sediment, and groundwater.

Table G 1 in **Appendix G** and the CSM on **Figure 7-1** summarize the potential exposure pathways and scenarios considered for Site 69. Site 69 is currently fenced, which limits access to the Site. However, soil, surface water, and sediment samples were collected from inside as well as outside the fence, so the boundary of Site 69 has been expanded for the purposes of this HHRA. Human health risks are assumed to be present as a result of impacted soils and waste material in the disposal trenches/burial pits in the fenced area of Site 69. Due to health and safety concerns with collecting samples from these areas, empirical data are not available and the HHRA does not include any further evaluation of these areas. The boundary of the receptors was also expanded and is assumed to include media from inside and outside the fence, even though receptors would likely be exposed only to media outside the fence. Therefore, the potential current receptors include military personnel who use this area for training and trespassers/visitors. Exposure routes may include incidental ingestion of and dermal contact with the surface soil, surface water, and sediment, as well as inhalation of particulate emissions from the surface soil. Surface water and sediment samples were collected northeast, southeast, and east of Site 69 from drainage ditches and a marshy area, all of which eventually discharge into the New River to the east. The other surface water bodies near the Site, the unnamed tributary of the New River to the north, and Everett Creek to the south, were not sampled during this investigation. The drainage ditches and marshy area are not suitable for fish habitation. Therefore, ingestion of fish was not evaluated.

There are no plans for a future site use different from the current use. In addition, before any development of Site 69 occurs, and before future site use is changed, contaminated soil and any buried waste material would likely be removed from the Site. However, for this

HHRA, potential future receptors were included to evaluate any potential future site use. It is assumed that the future receptors could be exposed to surface and subsurface soil if future residences or additional industrial buildings are constructed at the Site, or excavation activities occur onsite and the soil is re-worked, bringing the subsurface soil to the surface. Potential future receptors include trespassers/visitors, and future residents, industrial workers, and construction workers. Exposure of future military personnel was evaluated qualitatively, since exposure is expected to be less than industrial worker exposure. Exposure routes for the combined surface and subsurface soil are the same as those for current surface soil: incidental ingestion of the soil, dermal contact with the soil, and inhalation of particulate emissions from the soil. It is unlikely that residents would be exposed to surface water or sediment in the drainage ditches or marshy area, as these features would likely be reworked and removed if the Site were to be used for residential development.

Potable water supplies for MCB CamLej and the surrounding residential area are provided by water supply wells that pump groundwater from the Castle Hayne aquifer. Although freshwater is present within the surficial, Castle Hayne, Beaufort, and Peedee aquifers, all of which are located below MCB CamLej, only the Castle Hayne aquifer is used by MCB CamLej as a water supply source (Cardinell et al., 1993). As noted in Section 4.3.3, three active water supply wells onbase are located more than 2 miles away from Site 69 across the New River. No MCB CamLej water supply wells are located within 1 mile of Site 69. The groundwater use patterns are already established for MCB CamLej and the area around Site 69, so the use of site groundwater for industrial or residential purposes is unlikely. However, state and federal policies assume that underground freshwater resources are potable, and should be maintained as such. Therefore, a potable use scenario was evaluated in this risk assessment. It was assumed that if future residential development of the Site occurs, the residents could use the groundwater as a potable water supply. The residents would be exposed through ingestion, dermal contact, and inhalation while bathing. It was also assumed that the groundwater could be used as a future potable water supply for industrial workers, and that industrial workers would be exposed through ingestion. Additionally, due to the groundwater depth (approximately 5 feet bgs), construction workers could be exposed to the groundwater through inhalation of volatiles and dermal contact in an excavation during construction activities.

Although the exposure pathways associated with potable use of groundwater are likely incomplete for future human receptor populations at Site 69, there is the potential for vapor intrusion of volatile constituents from groundwater into future buildings. Future residents and industrial workers could be exposed to the groundwater through vapor intrusion into a building and inhalation of indoor air. Vapor intrusion was semi-quantitatively evaluated in the risk assessment (groundwater concentrations were screened against vapor intrusion screening levels, but COPCs were not carried forward for further evaluation) because there are no plans for a future site use different from the current use at Site 69; that is, there are no plans for construction of any type of buildings, industrial or residential, onsite.

7.2 Scope of Risk Assessment

The primary objective of the HHRA is to assess current and future health risks associated with exposure to Site 69 soil, surface water, sediment, and groundwater under current site conditions. The risk assessment includes the following components:

- **Identification of COPCs**—identification of the contaminants found onsite and selection of the COPCs. COPCs identified in this screening are the focus of the subsequent evaluation in the risk assessment.
- **Exposure Assessment**—identification of the potential pathways of human exposure, characterization of the potentially exposed populations, and estimation of the magnitude, frequency, and duration of exposures.
- **Toxicity Assessment**— assessment of the potential adverse effects of the COPCs and compilation of the toxicity values used for developing numerical risk estimates.
- **Risk Characterization**—integration of the results of the exposure assessment and toxicity assessment to develop numerical estimates of health risks.
- **Uncertainty Assessment** —identification and discussion of sources of uncertainty associated with the data, methodology, and values used in the risk assessment.

These components are described in the following sections.

7.2.1 Identification of Chemicals of Potential Concern

The identification of COPCs includes data collection, data evaluation, and data screening. The data used for the quantitative risk analysis were validated prior to use in the HHRA and met project-specific data quality objectives (DQOs). The data collection and evaluation steps were performed independently and involved gathering and reviewing the available site data to determine if the available analytical data were usable for risk assessment purposes (met DQOs and represent current conditions). Screening against human health risk based criteria and background concentrations to identify COPCs further reduced the data set for each environmental medium quantitatively evaluated for the Site.

Data Summary and Evaluation

Detailed results of the sampling at Site 69 are presented in Section 5. Soil, surface water, sediment, and groundwater data collected in February and March 2010 were evaluated in the risk assessment. Surface soil samples were collected from both inside and outside the fence from depths of 0 to 1 foot bgs. Subsurface soil samples were collected from both inside and outside the fence at depths ranging from 1 to 10 feet bgs, although not from the areas suspected to contain buried waste. Groundwater samples collected from permanent monitoring wells were evaluated in the risk assessment. The surface water and sediment samples are collocated at locations outside the fence, as indicated on **Figure 3-1.** Surface water samples were collected using a peristaltic pump to reduce turbidity. Sediment samples were collected at a depth of approximately 0 to 0.5 foot into the stream sediment.

Table 7-1 lists the samples that were evaluated in the risk assessment. The full set of data evaluated in the risk assessment is included in **Appendix E**. Unfiltered groundwater

samples were analyzed in the risk assessment following USEPA Region IV guidance (USEPA, 2000).

All of the data selected for inclusion in the risk assessment were evaluated to determine their reliability for use in the quantitative risk assessment. A review of the validated data identified the following criteria for data usability:

- Estimated values flagged with a J and NJ qualifier were treated as unqualified detected concentrations.
- Data qualified with an R (rejected) were not used in the risk assessment.
- Data qualified with a B (blank contamination) were used in the risk assessment as if the constituents were not detected, with the blank-related concentrations of each constituent used as the sample detection limit.
- For duplicate samples, the maximum concentration between the two samples was used as the sample concentration.

Selection of Chemicals of Potential Concern

All of the detected constituents were screened following the procedures described below. The maximum detected concentration of each constituent in each medium was compared to the criteria discussed below to select the COPCs for the medium. If the maximum concentration exceeded the criteria, the constituent was selected as a COPC. Additionally, for constituents that were not detected, the maximum detection limit was compared to the screening criteria to identify those constituents with detection limits above the criteria. These constituents were not retained as COPCs for quantitative evaluation in the risk assessment, but are discussed in the uncertainty assessment (Section 7.7). The COPC screening is presented in **Appendix G**, Tables G 2.1 through G 2.12.

- **Comparison with Health-based Criteria for Soil:** Soil data were compared to the USEPA residential soil RSLs (USEPA, 2011a). RSLs based on non-carcinogenic effects were divided by 10 to account for exposure to multiple constituents. RSLs based on carcinogenic effects were used as presented in the RSL table.
- **Comparison with Health-based Criteria for Ambient Air:** Concentrations of chemicals in air emanating from contaminated soil by volatilization or fugitive dust emissions were compared to the USEPA residential air RSLs. RSLs based on non-carcinogenic effects were divided by 10 to account for exposure to multiple constituents. RSLs based on carcinogenic effects were used as presented in the RSL table. The ambient air concentrations were calculated following USEPA's soil screening guidance (USEPA, 2002a), as shown in **Appendix G**, Tables G 2.2, G 2.2A, and G 2.6**.**
- **Comparison with Health-Based Criteria for Sediment:** Sediment data were compared to the USEPA residential soil RSLs (USEPA, 2011a). RSLs based on non-carcinogenic effects were divided by 10 to account for exposure to multiple constituents. RSLs based on carcinogenic effects were used as presented in the RSL table.
- **Comparison with Health-based Criteria for Surface Water:** Surface water data were compared to the NCSWQS for human health and the USEPA National Recommended

Water Quality Criteria (NRWQC) (USEPA, 2009b) for human health for ingestion of water and aquatic organisms. Constituents without an NCSWQS or NRWQC standard were compared to the USEPA tap water RSL (USEPA, 2011a). RSLs based on non-carcinogenic effects were divided by 10 to account for exposure to multiple constituents. RSLs based on carcinogenic effects were used as presented in the RSL table. Constituents with a maximum detected concentration below the NCSWQS and NRWQC, or the RSL if no NCSWQS or NRWQC standard was available, were not retained as COPCs.

- **Comparison with Health-based Criteria for Groundwater:** Groundwater data were compared to the USEPA tap water RSLs (USEPA, 2011a). RSLs that are based on non-carcinogenic effects were divided by 10 to account for exposure to multiple constituents. RSLs based on carcinogenic effects were used as presented in the table. Groundwater data were also compared to the National Primary Drinking Water Regulations MCLs (USEPA, 2009b) and the NCGWQS (NCDENR, 2010b); however, these comparisons were not used to select the groundwater COPCs.

- **Comparison with Health-based Criteria for Vapor Intrusion from Groundwater to Indoor Air:** The surficial groundwater data were compared to generic vapor intrusion screening levels to help identify potentially complete vapor intrusion pathways at the Site for detected VOCs. Generic vapor intrusion groundwater screening levels (GWSLs) were calculated using the methodology in Appendix D of the USEPA Vapor Intrusion Guidance (USEPA, 2002b). The target groundwater concentration (the GWSL) corresponding to a chemical's target indoor air concentration was calculated by dividing the target indoor air concentration (the USEPA RSLs for residential air and industrial air) by the default attenuation factor (AF) (1E-03) and then converting the vapor concentration to an equivalent groundwater concentration, assuming equilibrium between the aqueous and vapor phases at the water table. The equation used to calculated the GWSL is (USEPA, 2002b):

$$C_{gw}\ [\mu g/L] = C_{target,ia}\ (\mu g/m^3) * 10\text{-}3\ m^3/L * 1/H'_{TS} * 1/\alpha$$

where,

C_{gw}	=	target groundwater concentration (i.e., GWSL)
$C_{target,ia}$	=	target indoor air concentration (i.e., RSLs for residential air)
MW	=	molecular weight (g/mole)
α	=	AF (default ratio of indoor air concentration to source vapor concentration; 1E-03)
H'_{TS}	=	Henry's Law Constant at system (groundwater) temperature (dimensionless)

The dimensionless form of the Henry's Law Constant at the system temperature (i.e., at the average groundwater temperature) was estimated using the following equation:

$$H'_{TS} = \frac{\exp\left[-\frac{\Delta H_{v,TS}}{RT_s}\left(\frac{1}{T_S} - \frac{1}{T_R}\right)\right] H_R}{RT_S}$$

where,

H'_{TS}	=	Henry's Law Constant at the system temperature (dimensionless)
$\Delta H_{v,TS}$	=	Enthalpy of vaporization at the system temperature (cal/mol)
TS	=	System temperature (°K)
T_R	=	Henry's Law Constant reference temperature (°K)
H_R	=	Henry's Law Constant at the reference temperature (atm-m^3/mol)
R_C	=	Gas constant (= 1.9872 cal/mol - °K)
R	=	Gas constant (= 8.205 E-05 atm-m^3/mol-°K)

The enthalpy of vaporization at the system temperature is calculated using the following equation:

$$\Delta H_{v,TS} = \Delta H_{v,b}\left[\frac{\left(1 - T_S/T_C\right)}{\left(1 - T_B/T_C\right)}\right]^n$$

where,

$\Delta H_{v,TS}$	=	Enthalpy of vaporization at the system temperature (cal/mol)
$\Delta H_{v,b}$	=	Enthalpy of vaporization at the normal boiling point (cal/mol)
T_S	=	System temperature (°K)
T_C	=	Critical temperature (°K)
TB	=	Normal boiling point (°K)
n	=	Constant (unitless) (The value of n is a function of the ratio of T_B / T_C.)

If the maximum detected groundwater concentration was greater than the vapor intrusion GWSL, the constituent was identified as a COPC for the vapor intrusion pathway. COPCs were carried forward in the HHRA evaluation. The exceedance of vapor intrusion GWSLs is an indication that further evaluation (e.g., multiple lines of evidence investigation) may be warranted. The residential and industrial vapor intrusion GWSLs are presented in Tables G 2.11, G 2.11 Supplement A, G 2.12, and G 2.12 Supplement A of **Appendix G**.

- **Lead Groundwater Screening:** Lead concentrations in groundwater were compared to the federal action level of 15 µg/L (USEPA, 2009b).
- **Comparison to Background Concentrations**: Following USEPA Region IV Risk Assessment Guidance (RAGS) (USEPA, 2000), the maximum detected concentrations of naturally occurring inorganic constituents in groundwater and soil were compared to twice the Base background concentration (Baker, 2001; 2002). Background data are not available for surface water or sediment.
- **Essential Human Nutrients:** Constituents that are considered essential nutrients, present at low concentrations (i.e., only slightly elevated above naturally occurring levels), and toxic only at very high doses were eliminated from the quantitative risk analysis. These constituents include calcium, magnesium, potassium, and sodium.

Following USEPA Region IV RAGS (USEPA, 2000), any member of a chemical class that was detected in a medium (such as sediment) and had one or more other members selected as COPCs (i.e., carcinogenic polycyclic aromatic hydrocarbons [cPAHs]) for that medium was retained as a COPC.

Summary of COPCs

Table 7-2 identifies the constituents that were identified as COPCs for each of the media.

Three metals (arsenic, chromium, and manganese) were identified as COPCs for surface soil. Those constituents, plus aluminum, iron, and vanadium, were identified as COPCs for combined surface and subsurface soil. For the soil to air pathway for combined surface and subsurface soil, chromium was retained as a COPC. There were no COPCs for the surface soil to air pathway.

Two metals (iron and thallium) were identified as COPCs for surface water in the drainage ditches and marshy area.

Three metals (aluminum, antimony, and chromium) and one SVOC (benzo[a]pyrene) were identified as COPCs for sediment in the drainage ditches and marshy area. Five additional SVOCs (benzo[a]anthracene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, and indeno[1,2,3-cd]pyrene) were identified as COPCs, based on the selection criterion of a chemical from the same class, cPAH.

Four metals (iron, manganese, vanadium, and zinc), 1 PCB (aroclor-1260), 4 pesticides (alpha-BHC, beta-BHC, delta-BHC, and heptachlor epoxide), and 12 VOCs (1,1,2,2-tetrachloroethane (1,1,2,2-PCA), 1,1,2-trichloroethane (1,1,2-TCA), 1,2-DCA, 1,3-dichlorobenzene, 1,4-dichlorobenzene, benzene, chloroform, cis-1,2-DCE, PCE, trans-1,2-DCE, TCE, and VC) were identified as COPCs in the groundwater of the surficial aquifer. All 12 of the VOCs were identified as COPCs for the groundwater to air pathway exposure while showering or in an excavation. Three metals (chromium, iron, and thallium), 1 PCB (aroclor-1260), 2 pesticides (dieldrin and heptachlor epoxide), and 10 VOCs (1,2,4-trichlorobenzene, 1,2-DCA, 1,3-dichlorobenzene, 1,4-dichlorobenzene, benzene, chloroform, cis-1,2-DCE, trans-1,2-DCE, TCE, and VC) were identified as COPCs in the Castle Hayne aquifer groundwater. All 10 of the VOCs were identified as COPCs for the groundwater to air pathway exposure while showering.

Two VOCs (1,1,2-TCA and VC) and six VOCs (1,1,2,2-PCA, 1,1,2-TCA, 1,2-DCA, chloroform, cis-1,2-DCE, and VC) were detected at concentrations above GWSLs for the vapor intrusion from surficial aquifer groundwater to indoor air exposure pathway in an industrial and residential building, respectively. However, groundwater is not expected to be a significant source of vapor intrusion based on the lines of evidence provided below, and the exposure pathway was not evaluated further:

- The vapor intrusion groundwater GWSLs were developed for residential and industrial exposures; the current land use (and likely future use) is not residential or industrial.
- Before industrial or residential future land use is considered, soil at Site 69 would likely be excavated and disposed of at an offsite facility. Removal of contaminated soil would likely decrease overall contamination at the Site.
- The vapor intrusion pathway would be re-evaluated if future land use changes, including plans for constructing a building onsite, and after soil excavation.

7.3 Exposure Assessment

Exposure assessment is the estimation of the likelihood, magnitude, frequency, duration, and routes of exposure for a receptor to a chemical. "Exposure" refers to the potential contact of an individual (or receptor) with a chemical. Exposure can occur when contaminants migrate from a source to an exposure point, or when a receptor comes into direct contact with contaminated media.

The three components of exposure assessment include:

- Characterization of exposure setting
- Identification of exposure pathways
- Quantification of exposure

7.3.1 Characterization of Exposure Setting

A description of MCB CamLej, as well as the facility-wide demography and land use, is summarized in Sections 2.1 and 2.2. Additionally, Section 4 describes the physical setting of Site 69, including the physiography, climate, surface water hydrology, topography, geology, and hydrogeology. Specific information on exposed populations for Site 69 was presented in the human health CSM discussion in Section 7.1. **Table 7-3** summarizes the potentially exposed populations at Site 69.

7.3.2 Identification of Exposure Pathways

An exposure pathway can be described as the physical course that a COPC takes from the point of release (or source) to a receptor. To be complete, an exposure pathway must have all of the following components:

- A source (e.g., constituent residues in soil)
- A mechanism for chemical release and migration (e.g., leaching)
- An environmental transport medium (e.g., groundwater flux)

- A point or site of potential human contact (exposure point, e.g., drinking water)
- A route of intake (e.g., ingestion of groundwater used as a drinking water source)

In the absence of any one of these components, an exposure pathway is considered incomplete and, by definition, there is no risk or hazard. In some cases, a receptor may contact a source directly, eliminating the release and transport pathways.

The potential exposure pathways for Site 69 were identified in the CSM (**Figure 7-1**) and are shown in **Table 7-3** and **Appendix G**, **Table G 1**.

The following subsections discuss the elements of the exposure pathways for Site 69.

Contaminant Source

As shown on **Figure 7-1**, the initial source of contamination at Site 69 was disposal of chemical wastes including PCBs, solvents, and pesticides. In addition, Site 69 may have a history of CA disposal.

Release and Transport Mechanisms

Contaminant fate and transport, including contaminant mobility and persistence and the potential contaminant migration pathways and release mechanisms at the Site, are discussed in Section 6. The fate and transport of chemicals in groundwater and soil are determined by physical characteristics of the Site, as well as by the chemical and physical properties of the constituents. The primary contaminant release and transport mechanisms at Site 69 appear to be spills and leaks from the multiple sources of contamination, leaching from soil to groundwater, runoff from surface soil to surface water, and discharge from groundwater to surface water. Fate and transport modeling for chemical volatilization from groundwater during showering or excavation activities was conducted as part of the HHRA to determine contaminant concentrations in air because volatile constituents were selected as COPCs for the groundwater evaluation. Fate and transport modeling for particulate emissions from soil to air was also conducted.

Exposure Points and Exposure Routes

Exposure points are the locations where humans could contact site-related contamination. Onsite exposure points include soil, surface water, sediment, and groundwater beneath the Site. Offsite exposure points are groundwater, surface water, and sediment downgradient of the Site.

Table 7-3 lists the exposure pathways that were evaluated in the risk assessment. Table G1, **Appendix G**, includes the exposure pathways that were considered for evaluation and presents the rationale for evaluation of the exposure pathway. Although the vapor intrusion pathway (i.e., groundwater to indoor air) is identified as being qualitatively evaluated in **Appendix G**, Table G1 and **Table 7-3**, this pathway was only evaluated for identification of COPCs and the potential for being a complete exposure pathway, not carried forward in the risk assessment.

Section 7.1 identifies the potential receptors and exposure pathways. In summary, the current land use exposure routes for quantitative evaluation include the following:

- **Military Personnel—**Incidental ingestion of and dermal contact with surface soil, inhalation of particulate emissions from surface soil, and incidental ingestion of and dermal contact with surface water and sediment in the drainage ditches and marshy area.
- **Trespasser/Visitor (adult and youth)—**Incidental ingestion of and dermal contact with surface soil, inhalation of particulate emissions from surface soil, and incidental ingestion of and dermal contact with surface water and sediment in the drainage ditches and marshy area.

The future land use exposure routes include the following:

- **Resident (adult and child)—**Incidental ingestion of and dermal contact with soil (combined surface and subsurface soil), inhalation of particulate emissions from soil (combined surface and subsurface soil), ingestion of groundwater, and inhalation and dermal contact with groundwater, from the surficial aquifer and Castle Hayne aquifer, while showering/bathing.
- **Construction Worker—**Incidental ingestion of and dermal contact with surface water in the drainage ditches and marshy area, incidental ingestion of and dermal contact with sediment in the drainage ditches and marshy area, incidental ingestion of and dermal contact with combined surface and subsurface soil, inhalation of particulate emissions from soil (combined surface and subsurface soil), and dermal contact with and inhalation of volatile emissions from surficial aquifer groundwater.
- **Industrial Worker—** Incidental ingestion of and dermal contact with soil (combined surface and subsurface soil), inhalation of particulate emissions from soil (combined surface and subsurface soil), and ingestion of groundwater from the surficial aquifer and the Castle Hayne aquifer.
- **Trespasser/Visitor (adult and youth)—**Incidental ingestion of and dermal contact with soil (combined surface and subsurface soil), inhalation of particulate emissions from soil (combined surface and subsurface soil), and ingestion of and dermal contact with surface water and sediment in the drainage ditches and marshy area.

7.3.3 Quantification of Exposure

Exposure is quantified by estimating the exposure point concentrations (EPCs) of COPCs in environmental media and COPC intake by the receptor. Both reasonable maximum exposure (RME) and central tendency exposure (CTE) intakes were included in this evaluation. CTE intakes were calculated for exposure scenarios with RME cumulative cancer risks greater than 1×10^{-4} or cumulative non-cancer hazards greater than 1.

Exposure Concentrations

EPCs are estimated constituent concentrations that a receptor may contact and are specific to each exposure medium. EPCs may be directly measured or estimated using environmental fate and transport models. Constituent concentrations in soil, surface water,

sediment, and groundwater were measured for this assessment. Fate and transport modeling conducted for the Site 69 risk assessment included:

- Estimating fugitive dust and volatile emissions from soil following the methods in USEPA's Soil Screening Guidance Document (USEPA, 2002a), as shown in Tables G 2.2, G 2.2A, and G 2.6, **Appendix G**
- Estimating volatile emissions from groundwater while showering using the Foster and Chrostowski (1987) shower model for residential receptors (Tables G 7.5.RME Supplements C and D, Tables G 7.6.RME Supplements C and D, Tables G 7.1.CTE Supplements C and D, and Tables G 7.2.CTE Supplements C and D in **Appendix G**)
- Estimating volatile emissions from groundwater in an open excavation for a construction scenario using a Two-Film Volatilization Model (Table G 7.4.RME Supplement D in **Appendix G**)

ProUCL software Version 4.00.05 (USEPA, 2010) was used to determine the distribution that the data fit and to calculate the 95 percent upper confidence levels (UCLs) used as the RME EPC. ProUCL identifies three possible data distributions: normal distribution, log-normal distribution, and gamma distribution. The UCL calculation method is then selected based on the data distribution (that is, normal, lognormal, gamma, or nonparametric if the data do not fit any of the distributions). The recommendations outlined in the ProUCL software documentation were followed to select the appropriate UCL (USEPA, 2010). The maximum detected concentration was used as the RME EPC in cases where the estimated 95 percent UCL was greater than the maximum detected concentration, less than 5 samples were available for a data grouping, or the COPC was only detected in 1 of the samples in the data set.

CTE risk evaluations were performed for exposure pathways that resulted in a risk above 1×10^{-4}, or a hazard index (HI) above 1 (see Section 7.6 on risk characterization). The mean of the data set based on the distribution used to calculate the RME EPC (i.e., normal or non-parametric) was used as the CTE EPC. The maximum detected concentration was used as the CTE EPC in cases where the COPC was only detected in one of the samples in the data set.

Appendix G, Tables G 3.1.RME through G 3.9.RME and G 3.1.CTE through G 3.5.CTE present the EPCs for the COPCs for each medium and the rationale for the selected EPC.

Estimation of Chemical Intakes

Chemical intake is the amount of the chemical constituent entering the receptor's body. The quantification of exposure is based on an estimate of the average daily intake, the average amount of the chemical entering the receptor's body per day. Chemical intakes are generally expressed as follows:

$$ADI = \frac{C \times CR \times EF \times ED}{BW \times AT}$$

Where:

ADI	=	average daily intake (mg/kg-day)
C	=	chemical concentration (mg/L, mg/kg)
CR	=	contact rate (liters per day [L/day], mg/day)
EF	=	exposure frequency (days per year [days/yr])
ED	=	exposure duration (years)
BW	=	body weight (kg)
AT	=	averaging time (days)

The intake equation requires exposure parameters that are specific to each exposure pathway. Many of the exposure parameters have default values, which were used for this assessment. These assumptions, based on estimates of body weights, media intake levels, and exposure frequencies and duration, are provided in USEPA guidance. Tables G 4.1.RME through G 4.9.RME and G 4.1.CTE through G 4.3.CTE in **Appendix G** identify the exposure parameters and intake equations for each of the scenarios evaluated in the HHRA. CTE exposure parameters are provided only for scenarios where the RME risk was greater than USEPA's non-carcinogenic hazard or carcinogenic risk target levels, as these were the only CTE scenarios quantified in the HHRA.

To estimate exposure via dermal contact with soil, two additional parameters are necessary. The first parameter, the dermal absorption fraction, estimates the amount of a constituent in soil and sediment that would be absorbed by the skin. The absorption fractions of 13 percent for polycyclic aromatic hydrocarbons (PAHs), 3 percent for arsenic (USEPA, 2004), and the default value for inorganic constituents (0.001) were used (USEPA, 2000). The second additional parameter is the adherence factor. The adherence factor estimates the amount of soil and sediment that adheres to the skin per unit of surface area. The adherence factors were obtained from USEPA RAGS Part E (USEPA, 2004) and are included in Tables G 4.1.RME, G 4.6.RME, and G 4.1.CTE for soil, and Tables G 4.3.RME and G 4.5.RME for sediment in **Appendix G**.

The methods presented in the USEPA RAGS Part E (USEPA, 2004) for estimating dermal exposure to water were used to evaluate dermal exposure to surface water and groundwater. The model is shown in Tables G 4.2.RME and G 4.4.RME (surface water) and Tables G 4.8.RME and G 4.3.CTE (groundwater) in **Appendix G**. Values for the chemical-specific parameters used in the models were obtained from USEPA's RAGS Part E (USEPA, 2004) and are presented in Tables G 7.1.RME Supplement A and G 7.4.RME Supplement A for surface water, and Tables G 7.5.RME Supplements A and B, G 7.6.RME Supplements A and B, G 7.1.CTE Supplements A and B, and G 7.2 Supplements A and B, for groundwater, all in **Appendix G**.

7.4 Toxicity Assessment

Toxicity assessment is used to define the relationship between the magnitude of exposure and possible severity of adverse effects, and to weigh the quality of available toxicological evidence. Toxicity assessment generally consists of two steps: hazard identification and dose-response assessment. Hazard identification is the process of determining the potential adverse effects from exposure to the constituent along with the type of health effect

involved. Dose-response assessment is the process of quantitatively evaluating the toxicity information and characterizing the relationship between the dose of the constituent administered or received and the incidence of adverse health effects in the exposed population. Toxicity criteria (e.g., reference doses [RfDs] and slope factors) are derived from the dose-response relationship.

USEPA recommends that a tiered approach be used to obtain the toxicity values, the RfDs, inhalation reference concentrations (RfCs), cancer slope factors (CSFs), and inhalation unit risk factors (IURs) (USEPA, 2003) used to calculate non-cancer and cancer risks. The sources of toxicity values are as follows:

- USEPA's Integrated Risk Information System (IRIS) database (USEPA, 2011b)
- Provisional Peer Reviewed Toxicity Values (PPRTV) database maintained by USEPA's National Center for Environmental Assessment (NCEA) and Superfund Health Risk Technical Support Center (STSC)
- Other USEPA and non-USEPA sources, including the NCEA, the Agency for Toxic Substances and Disease Registry (ATSDR), the Health Effects Assessment Summary Tables (HEAST) (USEPA, 1997a), the California Environmental Protection Agency (Cal EPA), USEPA's Office of Water, and the World Health Organization (WHO).

The use of provisional toxicity values, such as those from the PPRTV database and Cal EPA, increases the uncertainty of the quantitative risk estimate. Oral and inhalation chronic and subchronic RfDs and RfCs, and associated uncertainty factors (UFs) and modifying factors (MFs) for the COPCs are listed in Tables G 5.1 and G 5.2 in **Appendix G**. CSFs and IURs are listed in Tables G 6.1 and G 6.2 in **Appendix G**.

Dermal RfDs and CSFs were calculated from the oral RfDs and CSFs using an oral to dermal adjustment factor, or gastrointestinal (GI) absorption factor. This factor is designed to convert the orally administered dose toxicity factors to dermally absorbed dose toxicity factors (USEPA, 2004). The oral RfDs were converted to dermal RfDs by multiplying by the GI absorption factor, and the oral CSFs were converted to dermal CSFs by dividing by the GI absorption factor. If a chemical-specific GI absorption factor was not available or was greater than 50 percent, a GI absorption factor of 100 percent was assumed. The dermal RfDs are included in Table G 5.1, **Appendix G**. The dermal CSFs are presented in Table G 6.1, **Appendix G**.

7.4.1 Approach for Potential Mutagenic Effects

Consistent with the Cancer Guidelines and Supplemental Guidance (USEPA, 2005b; c), cancer risks for COPCs which act via a mutagenic mode of action (MMOA) were estimated using age-dependent adjustment factors (ADAFs). Chromium and VC were the only COPCs that are categorized as chemicals with an MMOA and evaluated using the MMOA method in the risk assessment. The calculation of cancer risk using ADAFs is presented in Table**s** G 7.7**.**RME Supplement A and G 7.3.CTE Supplement A of **Appendix G**.

7.4.2 Constituents without Available USEPA Toxicity Values

Most of the constituents detected at Site 69 have toxicity factors and USEPA RSLs. Detected constituents that did not have RSLs were compared to RSLs for appropriate surrogate

constituents during the COPC selection process. The surrogates are identified in the RAGS Table 2 series.

7.5 Risk Characterization

Risk characterization combines the results of the previous elements of the HHRA to evaluate the potential health risks associated with exposure to the COPCs.

7.5.1 Non-carcinogenic and Carcinogenic Risk Estimation Methods

Potential human health risks are discussed independently for carcinogenic and non-carcinogenic constituents because of the different toxicological endpoints, relevant exposure duration, and methods used to characterize risk. Some constituents may produce both non-carcinogenic and carcinogenic effects, and were evaluated in both groups. The methodology used to estimate non-carcinogenic hazards and carcinogenic risks is described below. Following the description of the methodology, the non-carcinogenic hazards and carcinogenic risks for Site 69 are discussed.

Non-carcinogenic Hazard Estimation

Non-carcinogenic health risks are estimated by comparing the calculated intake to an RfD or RfC. The calculated intake divided by the RfD or RfC is equal to the hazard quotient (HQ):

$$HQ = Intake / RfD \text{ or } RfC$$

The intake and RfD or RfC represent the same exposure period (i.e., chronic or subchronic) and the same exposure route (i.e., oral intakes are divided by oral RfDs). An HQ that exceeds 1 (i.e., the intake exceeds the RfD) indicates that there is a potential for adverse health effects associated with exposure to that constituent.

To assess the potential for non-carcinogenic health effects posed by exposure to multiple constituents, an HI approach is used (USEPA, 1986). This approach assumes that non-carcinogenic hazards associated with exposure to more than one constituent are additive. Synergistic or antagonistic interactions between constituents are not considered. The HI may exceed 1 even if all of the individual HQs are less than 1. HIs are also added across exposure routes and media to estimate the total non-carcinogenic health effects to a receptor posed by exposure through multiple routes and media. An HI greater than 1 indicates that there is some potential for adverse non-carcinogenic health effects associated with exposure. However, if the HI is greater than 1, it is possible to separate the HI by target organ/effect, to determine if the HI for a specific target organ/effect is greater than 1. If the HI for each target organ/effect is not above 1, it can be assumed that there is no unacceptable non-carcinogenic hazard to the receptor.

Carcinogenic Risk Estimation

The potential for carcinogenic effects due to exposure to site-related constituents is evaluated by estimating the excess lifetime carcinogenic risk (ELCR). ELCR is the incremental increase in the probability of developing cancer during one's lifetime in addition to the background probability of developing cancer. For an individual exposed to a

carcinogen with a calculated cancer risk of 2×10^{-6}, for example, the probability of that individual developing cancer increases by 2 in a million above background levels.

Carcinogenic risk is calculated by multiplying the intake by the CSF or IUR.

$$ELCR = Intake \times CSF\ (or\ IUR)$$

The combined risk from exposure to multiple constituents was evaluated by adding the risks from individual constituents. Risks were also added across the exposure routes and media if an individual would be exposed through multiple routes and to multiple media.

When a cumulative carcinogenic risk to an individual receptor under the assumed RME exposure conditions at the Site exceeds 100 in a million (i.e., 10^{-4} excess carcinogenic risk), CERCLA generally requires remedial action to reduce risks at the Site (USEPA, 1991). If the cumulative risk is less than 10^{-4}, action generally is not required, but may be warranted if a risk-based chemical-specific standard (for example, MCL) is exceeded.

Metal Human Nutrients and Background Levels

If a metal is an essential human nutrient (such as iron and manganese) and is the main contributor to a hazard and/or risk that exceeds USEPA's risk range, the metal is further evaluated. The maximum concentration of the metal is compared to the recommended daily allowance (RDA) to evaluate whether metal ingestion would be within nutritive requirements. In addition, the metal is compared to the range of Base background levels typically associated with MCB CamLej (Baker, 2001; 2002).

7.5.2 Risk Assessment Results

The results of the risk characterization are presented below by receptor. The risks are calculated in **Appendix G**, Tables G 7.1.RME through G 7.10.RME, and Tables G 7.1.CTE through G 7.4.CTE. The risks are summarized in **Appendix G**, Tables G 9.1.RME through G 9.10.RME and G 9.1.CTE through G 9.4.CTE. A summary of the RME results is shown in **Table 7-4** and a summary of the CTE results is shown in **Table 7-5**. CTE risks were calculated only when the RME hazard exceeded 1 or the RME carcinogenic risk exceeded 10^{-4}.

Current/Future Military Personnel (Table G 9.1.RME, Appendix G)

The HHRA assumed that current/future military personnel could be exposed to surface soil through incidental ingestion and dermal contact, and to surface water and sediment in the drainage ditches and marshy area through incidental ingestion and dermal contact. The RME non-carcinogenic hazard (0.02) is below USEPA's target HI of 1. The RME carcinogenic risk (2×10^{-7}) is below USEPA's target risk range of 1×10^{-6} to 1×10^{-4}.

Current/Future Adult Trespasser/Visitor (Table G 9.2.RME, Appendix G)

The HHRA assumed that a current/future adult trespasser/visitor could be exposed to surface soil through incidental ingestion and dermal contact and to surface water and sediment in the drainage ditches and marshy area through incidental ingestion and dermal contact. The RME non-carcinogenic hazard (0.05) is below USEPA's target HI of 1. The RME carcinogenic risk (6×10^{-7}) is below USEPA's target risk range of 1×10^{-6} to 1×10^{-4}.

Current/Future Youth Trespasser/Visitor (Table G 9.3.RME, Appendix G)

The HHRA assumed that a current/future youth trespasser/visitor could be exposed to surface soil through incidental ingestion and dermal contact, and to surface water and sediment in the drainage ditches and marshy area through incidental ingestion and dermal contact. The RME non-carcinogenic hazard (0.07) is below USEPA's target HI of 1. The RME carcinogenic risk (4×10^{-7}) is below USEPA's target risk range of 1×10^{-6} to 1×10^{-4}.

Future Construction Worker (Table G 9.4.RME, Appendix G)

The HHRA assumed that a future construction worker could be exposed to surface water and sediment from the drainage ditches and marshy area through incidental ingestion and dermal contact, to combined surface and subsurface soil through incidental ingestion, dermal contact, and inhalation of particulate emission from soil, and to shallow groundwater in an excavation through dermal contact and inhalation.

The RME non-carcinogenic hazard (0.3) is below USEPA's target HI of 1. The RME carcinogenic risk (1×10^{-6}) is within USEPA's target risk range of 1×10^{-6} to 1×10^{-4}.

Future Adult Resident (Non-carcinogenic Hazard, Tables G 9.5.RME and G 9.1.CTE, Appendix G)

The HHRA assumed that a future adult resident could be exposed to combined surface and subsurface soil through incidental ingestion and dermal contact, and inhalation of particulate emissions, and to groundwater (from either the surficial aquifer or Castle Hayne aquifer) used as a potable water supply through ingestion, and dermal contact and inhalation while showering. Carcinogenic risks were not calculated for an adult resident but were calculated for a lifetime resident, following USEPA guidance. The cumulative non-cancer hazard was calculated including only the aquifer that resulted in the highest hazard.

The RME non-carcinogenic hazard (734) is above USEPA's target HI of 1. Ingestion, dermal contact, and inhalation of groundwater from the Castle Hayne aquifer are the media and exposure routes that contribute the greatest to this hazard. For ingestion and dermal contact, cis-1,2-DCE (HI = 593 and 75, respectively) and VC (HI = 43 and 2, respectively), and for ingestion only, thallium (HI = 15), are the main hazard contributors. For inhalation, VC (HI = 3) is the main hazard contributor. Soil alone does not have a total HI or any individual HIs above 1. The total surficial aquifer HI of 6 exceeds the target HI, primarily associated with ingestion of cis-1,2-DCE (HI = 2) and manganese (HI = 1).

The CTE non-carcinogenic hazard also exceeds USEPA's target HI. Groundwater from the Castle Hayne aquifer has a CTE non-carcinogenic HI above 1 (HI = 39), primarily due to ingestion of cis-1,2-DCE (HI = 26), VC (HI = 2), and thallium (HI = 7), and dermal contact with cis-1,2-DCE (HI = 3).

Future Child Resident (Non-carcinogenic Hazard, Tables G 9.6.RME and G 9.2.CTE, Appendix G)

The HHRA assumed that a future child resident could be exposed to combined surface and subsurface soil through incidental ingestion and dermal contact, and inhalation of particulate emissions, and to groundwater (from either the surficial aquifer or Castle Hayne aquifer) used as a potable water supply through ingestion, and dermal contact and inhalation while showering. Carcinogenic risks were not calculated for an adult resident but

were calculated for a lifetime resident, following USEPA guidance. The cumulative non-cancer hazard was calculated including only the aquifer that resulted in the highest hazard.

The RME non-carcinogenic hazard (1713) is above USEPA's target HI of 1. Ingestion, dermal contact, and inhalation of groundwater from the Castle Hayne aquifer are the media and exposure routes that contribute the greatest to this hazard. For ingestion and dermal contact, cis-1,2-DCE (HI = 1384 and 173, respectively) and VC (HI = 100 and 5, respectively) are the main hazard contributors, with a lesser ingestion hazard from thallium (HI = 36) and trans-1,2-DCE (HI = 2). For inhalation, VC (HI = 8) is the main hazard contributor, with an HI above 1, with a small contribution from trans-1,2-DCE (HI = 1). Soil alone does not have a total HI or any individual HIs above 1. Even though not included in the total HI of a future child resident, the surficial aquifer has an HI of 14, with the main hazard from ingestion of cis-1,2-DCE, iron, and manganese, and inhalation of 1,1,2-TCA.

The CTE non-carcinogenic hazard also exceeds USEPA's target HI. Potable use of groundwater from the Castle Hayne aquifer would result in a CTE non-carcinogenic HI above 1 (HI = 125), primarily due to ingestion of cis-1,2-DCE (HI = 87), VC (HI = 6), and thallium (HI = 24). Potable use of groundwater from the surficial aquifer would also result in an HI above 1 (HI = 3).

Future Lifetime Resident (Carcinogenic Risk, Tables G 9.7.RME and G 9.3.CTE, Appendix G)

The HHRA assumed that a lifetime resident could be exposed to (1) surface and subsurface soil through incidental ingestion and dermal contact, and inhalation of particulate emissions and (2) groundwater (from either the surficial aquifer or Castle Hayne aquifer) used as a potable water supply through ingestion and dermal contact and inhalation while showering. The cumulative carcinogenic risk was calculated including only the aquifer that resulted in the highest risk, the Castle Hayne aquifer.

The RME carcinogenic risk (7×10^{-2}) is above USEPA's target risk range of 10^{-6} to 10^{-4}. Concentrations of VC and chromium in the Castle Hayne aquifer are the primary contributors to estimated risks, contributing individual cancer risks above 10^{-4}. Although not included in the total future lifetime resident risk, the surficial aquifer has an RME carcinogenic risk (3×10^{-4}) that also exceeds USEPA's target risk range, with VC being the primary RME risk driver, contributing a risk above 10^{-4}. The carcinogenic risk from soil alone ($7x10^{-5}$) is within USEPA's target risk range.

The CTE carcinogenic risk (5×10^{-3}) is above USEPA's target risk range of 10^{-6} to 10^{-4}. The CTE carcinogenic risk associated with the Castle Hayne aquifer ($5x10^{-3}$) exceeds USEPA's target risk range.

Future Industrial Worker (Tables G 9.8.RME and G 9.4.CTE, Appendix G)

The HHRA assumed that a future industrial worker could be exposed to (1) combined surface and subsurface soil through incidental ingestion and dermal contact, and inhalation of particulate emissions, and (2) groundwater (from either the surficial aquifer or Castle Hayne aquifer) used as a potable water supply through ingestion. The cumulative non-cancer hazard and carcinogenic risk were calculated including only the aquifer that resulted in the highest hazard and risk, the Castle Hayne aquifer.

The RME and CTE non-carcinogenic hazards (233 and 24, respectively) are above USEPA's target HI of 1. Ingestion of groundwater from the Castle Hayne aquifer is the only medium and exposure route with an HI greater than 1, with concentrations of cis-1,2-DCE, VC, and thallium being the primary contributors, the only COPCs with HIs greater than 1.

The RME carcinogenic risk (1×10^{-2}) and the CTE carcinogenic risk (3×10^{-4}) exceed USEPA's target risk range of 1×10^{-6} to 1×10^{-4}. Ingestion of VC in the Castle Hayne aquifer groundwater is the primary contributor to the estimated risks, and the only COPC with a cancer risk above 10^{-4}.

The RME and CTE carcinogenic risks and non-carcinogenic risks from soil alone do not exceed USEPA's target risk range. Although not included in the total risk and hazards for a future industrial worker, the RME and CTE carcinogenic risks and non-carcinogenic risks from the surficial aquifer also do not exceed USEPA's target risk range.

Future Adult Trespasser/Visitor (Table G 9.9.RME, Appendix G)

The HHRA assumed that a future adult trespasser/visitor could be exposed to (1) combined surface and subsurface soil via incidental ingestion and dermal contact, and inhalation of particulate emissions, and (2) surface water and sediment in the drainage ditches and marshy area through incidental ingestion and dermal contact. The RME non-carcinogenic hazard (0.05) is below USEPA's target HI of 1. The RME carcinogenic risk (1×10^{-6}) is within USEPA's target risk range of 1×10^{-6} to 1×10^{-4}.

Future Youth Trespasser/Visitor (Table G 9.10.RME, Appendix G)

The HHRA assumed that a future youth trespasser/visitor could be exposed to (1) combined surface and subsurface via incidental ingestion and dermal contact, and inhalation of particulate emissions, and (2) surface water and sediment in the drainage ditches and marshy area through incidental ingestion and dermal contact. The RME non-carcinogenic hazard (0.07) is below USEPA's target HI of 1. The RME carcinogenic risk (1×10^{-6}) is within USEPA's target risk range of 1×10^{-6} to 1×10^{-4}.

7.6 Uncertainty Associated with Human Health Assessment

The risk measures used in HHRAs are not fully probabilistic estimates of risk, but are conditional estimates based on a set of assumptions about exposure and toxicity. Thus it is important to specify the assumptions and uncertainties inherent in the HHRA to place the risk estimates in proper perspective (USEPA, 1989).

7.6.1 General Uncertainty in COPC Selection

The sampling that was conducted at Site 69 generally focused on areas of known or suspected impacts from past site use, based on previous sampling information and observations during previous investigations. Therefore, the uncertainty in sampling and the possibility of missing a location impacted by site constituents is expected to be minimal. The uncertainty associated with the data analysis is minimal, as the data were fully validated prior to use in the HHRA.

The general assumptions used in the COPC selection process were conservative to ensure that true COPCs were not eliminated from the quantitative HHRA and that the most conservative risk was estimated. RSLs based on residential assumptions were used to select the COPCs for all of the scenarios, including non-residential scenarios.

Results of the COPC selection indicated that a few VOCs may be present in groundwater at concentrations that exceed generic vapor intrusion groundwater screening levels for the vapor intrusion pathway. The vapor intrusion GWSLs were conservatively based on residential or industrial exposure scenarios (RSLs for residential or industrial air) and USEPA's default AF of 0.001 for groundwater. The Site is not currently used and there is no plan for future industrial or residential development (such as slab-on-grade home construction). The AF used is a generic AF recommended by USEPA. Because the generic AF is not based on site-specific subsurface data, the GWSLs used in the screening of groundwater may under-estimate or over-estimate the potential for vapor intrusion. Also, the development of the screening levels does not take into account a chemical's soil adsorption characteristics. Therefore, the quantity and magnitude of COPCs associated with the vapor intrusion exposure pathway from groundwater are likely overstated for these site conditions.

Constituents that were not detected in any of the samples within a medium were not carried through the risk assessment. However, the maximum method detection limits for the non-detected constituents were compared to the COPC screening criteria. For surface soil and subsurface soil, there were five VOCs, five SVOCs, and four pesticides/PCBs that were not detected but have detection limits that exceeded the screening level; however, most of the detection limits were generally within an order of magnitude of the screening value.

Surface water, sediment, and groundwater have a number of VOCs, SVOCs, pesticides/PCBs, and metals with detection limits that exceeded the screening level. Most of the detection limits were generally within an order of magnitude of the screening value or MCL; a few VOCs, SVOCs, and pesticide/PCBs in groundwater had detection limits more than an order of magnitude greater than the screening level. However, due to the limited number, it is not expected that they are present, and if they are, it is likely they would be below levels of potential concern for human health. As a result, there is some uncertainty associated with constituents that were not detected with detection limits above the screening levels; however, based on past site use, and results of those constituents detected in the site media, this is not expected to affect the results of this risk evaluation.

7.6.2 Uncertainty Associated with Exposure Assessment

Site-related contamination is expected to decrease with time due to NA processes (e.g., degradation due to weathering, volatilization, advection, dispersion, and leaching due to infiltrating precipitation). In the interest of conservatism, however, the HHRA assumed that concentrations would remain constant throughout the exposure period and that these concentrations occur throughout the Site. This assumption likely results in an over-estimation of risk.

Uncertainty in the exposure assessment was generally treated with conservative decision rules and assumptions and, therefore, the uncertainty likely over-estimates actual risk associated with exposure to COPCs. Several exposure pathways evaluated in this HHRA,

such as those associated with residences constructed at Site 69 in the future, are hypothetical and are not anticipated to exist in the future because residences are unlikely to be build there. Additionally, it is not likely that the groundwater would be used as a potable water supply.

The exposure factors used for the quantitation of exposure were conservative and reflect worst-case or upper-bound assumptions about exposure. The reliability of the values chosen for the exposure factors also contributes substantially to the uncertainty of the resulting risk estimates. Because most of the exposure factors are worst-case or upper-bound assumptions, the resulting risks are worst-case and likely over-estimate the actual risk.

The future soil exposure scenario adds additional conservatism by assuming that the subsurface soil will become surface soil during any future construction activities, and that future receptors may come in contact with materials in the current surface soil and current subsurface soil. During many construction projects, clean fill material such as topsoil is placed over the soil that is disturbed during excavation projects. The topsoil is generally needed to support growth of grass and other landscape plants. This would decrease the probability of future exposure to both the current surface and subsurface soil after construction activities.

7.6.3 Uncertainty Associated with Toxicity Assessment

Uncertainty associated with the non-carcinogenic toxicity factors is addressed in **Appendix G**, Tables G 5.1 and G 5.2. Several UFs were applied by USEPA to extrapolate dose points from animal studies to humans. These UFs range between 1 and 3,000. Additional MFs are also used based on the professional judgment of USEPA. As a result, there is a high degree of uncertainty in the non-carcinogenic toxicity criteria, based on the available scientific data for each constituent. The non-carcinogenic toxicity factors are likely an over-estimate of actual toxicity.

The uncertainty associated with CSFs and IURs is mostly due to the low dose extrapolation where carcinogenicity at low doses is assumed to be a linear response. This is a conservative assumption, which introduces a high degree of uncertainty into slope factors and unit risk factors that are extrapolated from this area of the dose-response curve. The CSFs and IURs are based on the assumption that there is no threshold level for carcinogenicity; however, most of the experimental studies indicate the existence of a threshold level. Therefore, CSFs and IURs developed by USEPA represent upper-bound estimates. Carcinogenic risks generated in this assessment should be regarded as an upper-bound estimate on potential carcinogenic risks, rather than an accurate representation of carcinogenic risk. The true carcinogenic risk is likely to be less than the predicted value (USEPA, 1989). Uncertainty is also associated with the application of the MMOA for VC and chromium; this may over-estimate or under-estimate risks. Additionally, the generic ADAFs were used in the MMOA calculations for chromium, as no chromium-specific ADAFs are available.

Additional uncertainty is associated with the prediction of relative sensitivities of different species of animals and the applicability of animal data to humans.

There is a high degree of uncertainty associated with the oral to dermal adjustment factors (based on constituent-specific gastrointestinal absorption factors) used to transform the oral RfDs and CSFs based on administered doses to dermal RfDs and CSFs based on absorbed

doses. It is not known if the adjustment factor results in an under-estimation or over-estimation of the actual toxicity associated with dermal exposure.

7.6.4 Uncertainty in Risk Characterization

The uncertainties identified in each component of this HHRA ultimately contribute to uncertainty in risk characterization. The addition of risks and HIs across pathways and chemicals contributes to uncertainty based on interactions among chemicals such as additivity, synergism, and potentiation, and as well as the susceptibility of exposed receptors. The simple assumption of additivity used for this Site may or may not be accurate and may over- or under-estimate risk; however, a better alternative is not available at this time.

In addition, there is some uncertainty about whether human nutrient metals are truly hazards and risks. Groundwater ingestion of iron and manganese from the surficial aquifer was identified as non-carcinogenic hazards for a future resident. However, iron and manganese were further evaluated. Iron was detected in 6 out of 6 samples, with values ranging from 1,700 to 29,000 µg/L. The basewide background concentration, twice the arithmetic mean background shallow groundwater concentration for iron, is 5,999 µg/L and the range of detections in the background data set is from 140 J to 32,700 J µg/L (Baker, 2002). The maximum detected iron concentration in the surficial aquifer at Site 69 (29,000 µg/L) falls within the range of background values. Therefore, detected concentrations of iron in the surficial aquifer at Site 69 could be attributed to background levels.

Iron is also considered an essential human nutrient. To estimate the chemical intake of iron for a future residential child via ingestion of groundwater from the surficial aquifer, the EPC (18,000 µg/L) is converted to mg/Land multiplied by the ingestion rate of water for a child of 1 L/day (USEPA, 1997b). The estimated intake of iron via ingestion of groundwater is 18 mg/day, which is above the RDA range for children ages 7 months to 8 years (7-11 mg/day) (National Institutes of Health [NIH], 2010). The estimated intake of iron can also be compared to the upper limit, which is the maximum level of daily nutrient intake that is likely to pose no risk of adverse effects. The estimated intake of iron via ingestion of groundwater (18 mg/day) is below the upper limit of iron for a child (40 mg/day). Intake of iron via groundwater ingestion by residential children using groundwater from the surficial aquifer at Site 69 as a potable source is greater than the range of iron typically associated with nutritive requirements but less than the upper limit that is likely to pose a risk of adverse effects.

To estimate the chemical intake of iron for a future residential adult via ingestion of groundwater from the surficial aquifer, the EPC (18,000 µg/L) is converted to mg/L and multiplied by the ingestion rate of water for an adult of 2 L/day (USEPA, 1997b). The estimated intake of iron via ingestion of groundwater is 36 mg/day, which is above the RDA range for youth/adults older than 8 years of age (8-18 mg/day) (NIH, 2010). The estimated intake of iron via ingestion of groundwater (36 mg/day) is below the upper limit of iron for an adult (40–45 mg/day). The intake of iron via groundwater ingestion by residential adults using groundwater from the surficial aquifer at Site 69 as a potable source is greater than the range of iron typically associated with nutritive requirements but less than the upper limit that is likely to pose a risk of adverse effects.

Based on all of these considerations, it is possible that iron should not be retained as a COPC for Site 69 groundwater from the surficial aquifer because it is within the basewide background concentration range and it is below the upper limit that is likely to pose a risk of adverse effects.

Manganese was detected in 6 out of 6 samples from the surficial aquifer groundwater, with values ranging from 62 J to 800 µg/L. The basewide background concentration, twice the arithmetic mean background shallow groundwater concentration, for manganese is 214 µg/L and the range of detected concentrations in the background data set is from 4.7 J to 359 µg/L (Baker, 2002). The maximum manganese concentration from the surficial aquifer groundwater at Site 69 (800 µg/L) is greater than the range of background values.

Manganese is also considered an essential human nutrient. To estimate the chemical intake of manganese for a future residential child via ingestion of groundwater, the EPC (800 µg/L) is converted to mg/L and multiplied by the ingestion rate of water for a child of 1 L/day (USEPA, 1997b). The estimated intake of manganese via ingestion of groundwater is 0.8 mg/day, which is within the RDA range for children ages 7 months to 8 years (0.6-1.5 mg/day) (NIH, 2010). The estimated intake of manganese via ingestion of groundwater (0.8 mg/day) is also below the upper limit of manganese for a child (2–3 mg/day). Intake of manganese via groundwater ingestion by residential children using groundwater from the surficial aquifer at Site 69 as a potable source likely falls within the range of manganese typically associated with nutritive requirements and is less than the upper limit that is likely to pose a risk of adverse effects.

To estimate the chemical intake of manganese for a future residential adult via ingestion of groundwater, the EPC (800 µg/L) is converted to mg/L and multiplied by the ingestion rate of water for an adult of 2 L/day (USEPA, 1997b). The estimated intake of manganese via ingestion of groundwater is 1.6 mg/day, which is the within the RDA range for individuals than 8 years of age (1.6-2.3 mg/day) (NIH, 2010). In addition, the estimated intake of manganese via ingestion of groundwater (1.6 mg/day) is below the upper limit of manganese for an adult (6-11 mg/day). Intake of manganese via groundwater ingestion by residential adults using groundwater from the surficial aquifer at Site 69 as a potable source is within than the range of manganese typically associated with nutritive requirements and less than the upper limit that is likely to pose a risk of adverse effects.

Based on all of these considerations, it is possible that manganese should not be retained as a COPC for Site 69 groundwater from the surficial aquifer because it is within the levels required and is not associated with adverse effects for human receptors.

7.7 Human Health Risk Summary

Human health risks were evaluated for exposure to Site 69 COPCs using the following scenarios:

- Surface soil for current military personnel and trespassers/visitors (adult and youth)
- Surface water and sediment in the drainage ditches and marshy area for current military personnel and trespassers/visitors (adult and youth), and future construction workers

- Combined surface and subsurface soil for future industrial workers, trespassers/visitors (adult and youth), construction workers, and adult and child residents
- Surficial aquifer groundwater for future adult and child residents, industrial workers, and construction workers
- Castle Hayne aquifer groundwater for future adult and child residents and industrial workers

Table 7-4 and Tables G 9.1.RME through G 9.10.RME in **Appendix G** summarize the RME cancer risks and HIs. Table 7-5 and Tables G 9.1.CTE through G 9.4.CTE in **Appendix G** summarize the CTE cancer risks and HIs. Tables G 10.1.RME through G 10.4.RME and Tables G 10.1.CTE through G 10.4.CTE show only constituents of concern to human health (COCs), the constituents that contributed HIs above 0.1 to total cumulative receptor HIs greater than 1 or carcinogenic risks greater than 10^{-6} to total cumulative receptor carcinogenic risks greater than 10^{-4}.

For current land use, Site 69 does not pose unacceptable health risks to any of the receptors evaluated in this HHRA. Contact with surface soil, surface water, and sediment would result in non-carcinogenic hazards and carcinogenic risks below or within USEPA target levels.

Potential future contact with the surface water and sediment in the drainage ditches and marshy area would result in non-carcinogenic hazards and carcinogenic risks below USEPA target levels. Potential future contact with surface and subsurface soil by any potential receptors would result in risks and hazards below or within USEPA's acceptable risk range and hazard level. Potential future contact with surficial aquifer groundwater by future construction workers and industrial workers would result in risks and hazards below or within USEPA's acceptable risk range and hazard level. Even though potential future contact with surficial aquifer groundwater and surface and subsurface soil by future military personnel was not evaluated quantitatively, exposure is expected to be less than industrial worker exposure and thus would also be below or within USEPA's acceptable risk range and hazard levels.

Potential future contact with surficial aquifer groundwater by future residents may result in risks or hazards above USEPA's acceptable risk range and hazard levels. The cancer risk for the future resident is primarily associated with ingestion of VC, with a lesser contribution from several additional VOCs and pesticides/PCBs. The non-carcinogenic hazard for the future resident is primarily associated with ingestion of cis-1,2-DCE, iron, and manganese. As discussed in the uncertainty section (Section 7.6), it is possible that iron and manganese should not be retained as COPCs for Site 69 groundwater from the surficial aquifer because they are below their respective upper limits that are likely to pose a risk of adverse effects and/or they are within basewide background concentration ranges.

Potential future contact with groundwater from the Castle Hayne aquifer by future residents and industrial workers would also result in risks and hazards above USEPA's acceptable risk range and hazard level. Hazards to the future adult and child resident are primarily associated with ingestion of, dermal contact with, and inhalation of cis-1,2-DCE, trans-1,2-DCE, VC, and thallium. Carcinogenic risks to the future lifetime resident are primarily associated with ingestion of, dermal contact with, and inhalation of VC and

chromium, with a lesser risk from 1,2-DCA, aroclor-1260, heptachlor epoxide, and even a lesser risk from 1,2,4-trichlorobenzene, chloroform, TCE, and dieldrin. For industrial workers, hazards are associated with ingestion of cis-1,2-DCE, VC, and thallium, while carcinogenic risks are associated with ingestion of VC.

The residential land use scenario evaluated in this assessment is very conservative, since Site 69 is not currently residential and future land use is unlikely to change. Additionally, groundwater at Site 69 is not a current potable source and is unlikely to be used for potable purposes in the future. The risk characterization presented in this assessment provides upper-bound risks for the residential scenario exposure to groundwater, though residential is not a current or probable future land use.

The vapor intrusion pathway from groundwater to indoor air was semi-quantitatively evaluated (the groundwater concentrations were screened against vapor intrusion GWSLs to determine the potential for vapor intrusion from groundwater to indoor air). Six VOCs (1,1,2,2-PCA, 1,1,2-TCA, 1,2-DCA, chloroform, cis-1,2-DCE, and VC) were detected at concentrations above GWSLs for the vapor intrusion from groundwater to indoor air exposure pathway in a residential building, and two VOCs (1,1,2-TCA and VC) were detected at concentrations above GWSLs for the vapor intrusion from groundwater to indoor air exposure pathway in an industrial building. However, these risks have not been fully quantified because the vapor intrusion pathway is not a current pathway and is not expected to be a future pathway. If future buildings are constructed at the Site, the vapor intrusion pathway would need to be re-evaluated.

Table 7-1

Samples Used in the Risk Assessment

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Medium	Date of Sampling	Sample Location	Sample	Parameters
Surface Soil	3/04/2010	IR69-IS01	IR69-SS01-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/04/2010	IR69-IS01	IR69-SS01D-10A[1]	VOCs, SVOCs, Pesticides/PCBs, Metals
	2/28/2010	IR69-IS02	IR69-SS02-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/04/2010	IR69-IS03	IR69-SS03-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/04/2010	IR69-IS04	IR69-SS04-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/04/2010	IR69-IS05	IR69-SS05-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/04/2010	IR69-IS06	IR69-SS06-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/04/2010	MR02-IR69-SS01	MR02-IR69-SS01-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/04/2010	MR02-IR69-SS01	MR02-IR69-SS01D-10A[1]	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/13/2010	MR02-IR69-SS02	MR02-IR69-SS02-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/13/2010	MR02-IR69-SS03	MR02-IR69-SS03-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/13/2010	MR02-IR69-SS04	MR02-IR69-SS04-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/13/2010	MR02-IR69-SS05	MR02-IR69-SS05-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/13/2010	MR02-IR69-SS06	MR02-IR69-SS06-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
Soil*	3/04/2010	IR69-IS01	IR69-SS01-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/04/2010	IR69-IS01	IR69-SS01D-10A[1]	VOCs, SVOCs, Pesticides/PCBs, Metals
	2/28/2010	IR69-IS02	IR69-SS02-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/04/2010	IR69-IS03	IR69-SS03-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/04/2010	IR69-IS04	IR69-SS04-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/04/2010	IR69-IS05	IR69-SS05-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/04/2010	IR69-IS06	IR69-SS06-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/04/2010	MR02-IR69-SS01	MR02-IR69-SS01-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/04/2010	MR02-IR69-SS01	MR02-IR69-SS01D-10A[1]	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/13/2010	MR02-IR69-SS02	MR02-IR69-SS02-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/13/2010	MR02-IR69-SS03	MR02-IR69-SS03-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/13/2010	MR02-IR69-SS04	MR02-IR69-SS04-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/13/2010	MR02-IR69-SS05	MR02-IR69-SS05-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/13/2010	MR02-IR69-SS06	MR02-IR69-SS06-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/07/2010	IR69-IS01	IR69-SB01-01-02-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/07/2010	IR69-IS01	IR69-SB01D-01-02-10A[1]	VOCs, SVOCs, Pesticides/PCBs, Metals
	2/28/2010	IR69-IS02	IR69-SB02-08-10-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/16/2010	IR69-IS03	IR69-SB03-04-05-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/07/2010	IR69-IS04	IR69-SB04-06-07-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/07/2010	IR69-IS05	IR69-SB05-06-07-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/07/2010	IR69-IS06	IR69-SB06-06-07-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
Surface Water in Drainage Ditches/Marshy Area	3/14/2010	IR69-SW01	IR69-SW01-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/14/2010	IR69-SW01	IR69-SW01D-10A[1]	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/15/2010	IR69-SW02	IR69-SW02-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/15/2010	IR69-SW03	IR69-SW03-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
Sediment in Drainage Ditches/Marshy Area	3/14/2010	IR69-SD01	IR69-SD01-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/14/2010	IR69-SD01	IR69-SD01D-10A[1]	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/15/2010	IR69-SD02	IR69-SD02-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
	3/15/2010	IR69-SD03	IR69-SD03-10A	VOCs, SVOCs, Pesticides/PCBs, Metals
Groundwater - Surficial Aquifer and Vapor Intrusion	3/02/2010	IR69-MW02	IR69-GW02-10A	VOCs, SVOCs, Pest/PCBs, Metals
	3/07/2010	IR69-MW03	IR69-GW03-10A	VOCs, SVOCs, Pest/PCBs, Metals
	3/07/2010	IR69-MW03	IR69-GW03D-10A[1]	VOCs, SVOCs, Pest/PCBs, Metals
	3/14/2010	IR69-MW04	IR69-GW04-10A	VOCs, SVOCs, Pest/PCBs, Metals
	3/01/2010	IR69-MW09	IR69-GW09-10A	VOCs, SVOCs, Pest/PCBs, Metals
	3/07/2010	IR69-MW15	IR69-GW15-10A	VOCs, SVOCs, Pest/PCBs, Metals
	3/08/2010	IR69-MW10	IR69-GW10-10A	VOCs, SVOCs, Pest/PCBs, Metals

Table 7-1

Samples Used in the Risk Assessment

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Medium	Date of Sampling	Sample Location	Sample	Parameters
Groundwater - Castle-Hayne Aquifer	3/02/2010	IR69-MW02DW	IR69-GW02DW-10A	VOCs, SVOCs, Pest/PCBs, Metals
	3/14/2010	IR69-MW04DW	IR69-GW04DW-10A	VOCs, SVOCs, Pest/PCBs, Metals
	3/15/2010	IR69-MW04IW	IR69-GW04IW-10A	VOCs, SVOCs, Pest/PCBs, Metals
	3/06/2010	IR69-MW09IW	IR69-GW09IW-10A	VOCs, SVOCs, Pest/PCBs, Metals
	3/13/2010	IR69-MW11DW	IR69-GW11DW-10A	VOCs, SVOCs, Pest/PCBs, Metals
	3/13/2010	IR69-MW11IW	IR69-GW11IW-10A	VOCs, SVOCs, Pest/PCBs, Metals
	3/01/2010	IR69-MW13IW	IR69-GW13IW-10A	VOCs, SVOCs, Pest/PCBs, Metals
	3/15/2010	IR69-MW15DW	IR69-GW15DW-10A	VOCs, SVOCs, Pest/PCBs, Metals
	3/06/2010	IR69-MW15IW	IR69-GW15IW-10A	VOCs, SVOCs, Pest/PCBs, Metals
	3/16/2010	IR69-MW19IW	IR69-GW19IW-10A	VOCs, SVOCs, Pest/PCBs, Metals
	3/16/2010	IR69-MW19UW	IR69-GW19UW-10A	VOCs, SVOCs, Pest/PCBs, Metals
	3/16/2010	IR69-MW26IW	IR69-GW26IW-10A	VOCs, SVOCs, Pest/PCBs, Metals
	3/18/2010	IR69-MW28IW	IR69-GW28IW-10A	VOCs, SVOCs, Pest/PCBs, Metals

Notes:

[1] Duplicate sample of sample listed above

VOCs = Volatile organic constituents

SVOCs = Semi-volatile organic constituents

Soil* = surface and subsurface soil

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Table 7-2

Summary of COPCs

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Soil		***Surface Water***	***Sediment***	***Groundwater***	
Surface Soil	***Soil****	***Drainage Ditches/ Marshy Area***	***Drainage Ditches/ Marshy Area***	***Surficial Aquifer***	***Castle-Hayne Aquifer***
Arsenic	Aluminum	Iron	Benzo(a)anthracene[1]	1,1,2,2-Tetrachloroethane	1,2,4-Trichlorobenzene
Chromium	Arsenic	Thallium	Benzo(a)pyrene	1,1,2-Trichloroethane	1,2-Dichloroethane
Manganese	Chromium		Benzo(b)fluoranthene[1]	1,2-Dichloroethane	1,3-Dichlorobenzene
	Iron		Benzo(k)fluoranthene[1]	1,3-Dichlorobenzene	1,4-Dichlorobenzene
	Manganese		Chrysene[1]	1,4-Dichlorobenzene	Benzene
	Vanadium		Indeno(1,2,3-cd)pyrene[1]	Benzene	Chloroform
			Aluminum	Chloroform	cis-1,2-Dichloroethene
			Antimony	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene
			Chromium	Tetrachloroethene	Trichloroethene
Air	***Air***			trans-1,2-Dichloroethene	Vinyl chloride
Chromium	Chromium			Trichloroethene	Aroclor-1260
				Vinyl chloride	Dieldrin
				alpha-BHC	Heptachlor epoxide
				Aroclor-1260	Chromium
				beta-BHC	Iron
				delta-BHC	
				Heptachlor epoxide	***Air***
				Iron	1,2,4-Trichlorobenzene
				Manganese	1,2-Dichloroethane
				Vanadium	1,3-Dichlorobenzene
				Zinc	1,4-Dichlorobenzene
					Benzene
				Air	Chloroform
				1,1,2,2-Tetrachloroethane	cis-1,2-Dichloroethene
				1,1,2-Trichloroethane	trans-1,2-Dichloroethene
				1,2-Dichloroethane	Trichloroethene
				1,3-Dichlorobenzene	Vinyl chloride
				1,4-Dichlorobenzene	
				Benzene	
				Chloroform	
				cis-1,2-Dichloroethene	
				Tetrachloroethene	
				trans-1,2-Dichloroethene	
				Trichloroethene	
				Vinyl chloride	
				Indoor Air Industrial Building	
				Vinyl Chloride	
				Indoor Air Residential Building	
				1,1,2,2-Tetrachloroethane	
				1,2-Dichloroethane	
				Chloroform	
				cis-1,2-Dichloroethene	
				Vinyl chloride	

Notes:

[1] Chemical not identified as COPC based on maximum concentration, but identified as a COPC since chemical from same class (carcinogenic PAH) identified as a COPC.

Soil* = surface and subsurface soil

Generated by: M. White/ATL Checked by: D.Stannard/DAY

Table 7-3

Potentially Complete Human Health Exposure Pathways

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Land Use	Exposure Media	Potentially Exposed Populations	Exposure Route (Human Health)	Pathway Selected for Evaluation	Rationale
Current					
Industrial	Surface soil; Surface Water and Sediment	Military Personnel	Ingestion, Dermal Contact and Inhalation	Yes	Military personnel could ingest, inhale and/or have dermal contact with surface soil while working/training at the site. In addition, personnel may ingest or have dermal contact with surface water or sediment in drainage ditches and marshy areas.
Industrial	Surface soil; Surface Water and Sediment	Trespasser/Visitor - Adults and Youth	Ingestion, Dermal Contact and Inhalation	Yes	People trespassing on site could ingest, inhale and/or have dermal contact with surface soil at site. In addition, trespassers could ingest or have dermal contact with surface water or sediment in the drainage dtiches and marshy areas.
Future					
Residential/Industrial	Surface Water and Sediment	Construction Worker	Ingestion and Dermal Contact	Yes	Construction workers could ingest or have dermal contact with surface water or sediment in drainage dtiches and marshy areas during construction activities.
Residential	Surface and Subsurface soil, Groundwater	Residents - Adults and Children	Ingestion, Dermal Contact and Inhalation	Yes	Although unlikely, if site used for future residential development, residents could ingest, inhale or have dermal contact with surface and subsurface soil. Future residents could ingest, inhale or have dermal contact with groundwater. Future residents could also inhale volatile chemicals from groundwater to indoor air.
Industrial	Surface and Subsurface soil, Groundwater	Construction Worker, Industrial Worker	Ingestion, Dermal Contact and Inhalation	Yes	If future site use is industrial, future workers could ingest, inhale or have dermal contact with surface and subsurface soil. Future workers could ingest groundwater or inhale volatile chemicals from groundwater to indoor air.
Residential/Industrial	Surface and Subsurface soil; Surface Water and Sediment	Trespasser/Visitor - Adults and Youth	Ingestion, Dermal Contact and Inhalation	Yes	Trespasser/visitor could ingest, inhale or have dermal contact with surface and subsurface soils onsite. In addition, trespassers could ingest or have dermal contact with surface water or sediment in the drainage dtiches and marshy areas.

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Table 7-4

Summary of RME Cancer Risks and Hazard Indices

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Receptor	Media	Exposure Route	Cancer Risk	Chemicals with Cancer Risks >10^{-4}	Chemicals with Cancer Risks >10^{-5} and <10^{-4}	Chemicals with Cancer Risks >10^{-6} and <10^{-5}	Hazard Index	Chemicals with HI>1
Current/Future Military Personnel	Surface Soil	Ingestion	2E-07				0.01	
		Dermal Contact	1E-08				0.002	
		Inhalation	3E-09				0.00001	
		Total	2E-07				0.01	
	Surface Water Drainage Ditches/ Marshy Area	Ingestion	NA				0.00001	
		Dermal Contact	NA				0.00001	
		Inhalation	NA				NA	
		Total	NA				0.00002	
	Sediment Drainage Ditches/ Marshy Area	Ingestion	1E-08				0.001	
		Dermal Contact	4E-09				0.0003	
		Inhalation	NA				NA	
		Total	2E-08				0.002	
	All Media	Total	2E-07				0.01	
Current/Future Trespasser/Visitor Adult	Surface Soil	Ingestion	2E-07				0.002	
		Dermal Contact	9E-09				0.0002	
		Inhalation	9E-10				0.0000003	
		Total	2E-07				0.002	
	Surface Water Drainage Ditches/ Marshy Area	Ingestion	NA				0.00004	
		Dermal Contact	NA				0.00002	
		Inhalation	NA				NA	
		Total	NA				0.00007	
	Sediment Drainage Ditches/ Marshy Area	Ingestion	3E-07				0.005	
		Dermal Contact	9E-08				0.002	
		Inhalation	NA				NA	
		Total	4E-07				0.007	
	All Media	Total	6E-07				0.009	
Current/Future Trespasser/Visitor Youth	Surface Soil	Ingestion	1E-07				0.003	
		Dermal Contact	2E-09				0.0001	
		Inhalation	4E-10				0.0000003	
		Total	1E-07				0.003	
	Surface Water Drainage Ditches/ Marshy Area	Ingestion	NA				0.00007	
		Dermal Contact	NA				0.00003	
		Inhalation	NA				NA	
		Total	NA				0.0001	
	Sediment Drainage Ditches/ Marshy Area	Ingestion	2E-07				0.008	
		Dermal Contact	1E-08				0.0005	
		Inhalation	NA				NA	
		Total	2E-07				0.008	
	All Media	Total	4E-07				0.01	

Table 7-4

Summary of RME Cancer Risks and Hazard Indices

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Receptor	Media	Exposure Route	Cancer Risk	Chemicals with Cancer Risks >10^{-4}	Chemicals with Cancer Risks >10^{-5} and <10^{-4}	Chemicals with Cancer Risks >10^{-6} and <10^{-5}	Hazard Index	Chemicals with HI>1
Future Construction Worker	Surface Water Drainage Ditches/ Marshy Area	Ingestion	NA				0.00003	
		Dermal Contact	NA				0.00002	
		Inhalation	NA				NA	
		Total	NA				0.0001	
	Sediment Drainage Ditches/ Marshy Area	Ingestion	5E-09				0.002	
		Dermal Contact	9E-10				0.0002	
		Inhalation	NA				NA	
		Total	6E-09				0.002	
	Soil*	Ingestion	1E-06				0.2	
		Dermal Contact	2E-08				0.004	
		Inhalation	3E-09				0.00003	
		Total	1E-06				0.2	
	Groundwater Surficial Aquifer	Ingestion	NA				NA	
		Dermal Contact	1E-07				0.07	
		Inhalation	4E-09				0.0005	
		Total	1E-07				0.07	
	All Media	Total	1E-06				0.3	
Future Adult Resident	Soil*	Ingestion	NA				0.07	
		Dermal Contact	NA				0.005	
		Inhalation	NA				0.0001	
		Total	NA				0.07	
	Groundwater Surficial Aquifer	Ingestion	NA				3	
		Dermal Contact	NA				0.5	
		Inhalation	NA				0.03	
		Total	NA				3	
	Groundwater Castle-Hayne Aquifer	Ingestion	NA				163	cis-1,2-Dichloroethene, Vinyl chloride
		Dermal Contact	NA				18	cis-1,2-Dichloroethene, Vinyl chloride
		Inhalation	NA				4	Vinyl chloride
		Total	NA				184	cis-1,2-Dichloroethene, Vinyl chloride
	All Media[1]	Total	NA				184	

Table 7-4

Summary of RME Cancer Risks and Hazard Indices

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Receptor	Media	Exposure Route	Cancer Risk	Chemicals with Cancer Risks >10^{-4}	Chemicals with Cancer Risks >10^{-5} and <10^{-4}	Chemicals with Cancer Risks >10^{-6} and <10^{-5}	Hazard Index	Chemicals with HI>1
Future Adult Child	Soil*	Ingestion	NA				0.6	
		Dermal Contact	NA				0.03	
		Inhalation	NA				0.0001	
		Total	NA				0.6	
	Groundwater Surficial Aquifer	Ingestion	NA				7	Iron, Manganese
		Dermal Contact	NA				1	
		Inhalation	NA				0.08	
		Total	NA				8	Iron, Manganese
	Groundwater Castle-Hayne Aquifer	Ingestion	NA				380	cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, Vinyl chloride
		Dermal Contact	NA				41	cis-1,2-Dichloroethene, Vinyl chloride
		Inhalation	NA				10	Vinyl chloride
		Total	NA				431	cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, Vinyl chloride
	All Media[1]	Total	NA				431	
Future Child/Adult Resident	Soil*	Ingestion	9E-05		Chromium, Vanadium	Arsenic	NA	
		Dermal Contact	9E-07				NA	
		Inhalation	2E-11				NA	
		Total	9E-05		Arsenic, Chromium, Vanadium		NA	
	Groundwater Surficial Aquifer	Ingestion	3E-04	Vinyl chloride	1,1,2,2-Tetrachloroethane, Aroclor-1260, Heptachlor epoxide	1,1,2-Trichlorothane, 1,2-Dichloroethane, Tetrachloroethene, alpha-BHC, beta-BHC	NA	
		Dermal Contact	4E-05		Vinyl chloride, Heptachlor epoxide	1,1,2,2-Tetrachloroethane, alph-BHC, beta-BHC	NA	
		Inhalation	2E-05			1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,2-Dichloroethane, Vinyl chloride	NA	
		Total	3E-04	Vinyl chloride	1,1,2,2-Tetrachloroethane, 1,2-Dichlororethane, alpha-BHC, Aroclor-1260, Heptachlor epoxide	1,1,2-Trichlorothane, 1,4-Dichlorobenzene, Chloroform, Tetrachloroethene, beta-BHC	NA	
	Groundwater Castle-Hayne Aquifer	Ingestion	7E-02	Vinyl chloride, Chromium	1,2-Dichloroethane, Aroclor-1260	1,2,4-Trichlorobenzene, Chloroform, Trichloroethene, Dieldrin, Heptachlor epoxide	NA	
		Dermal Contact	1E-04		Heptachlor epoxide, Vinyl chloride	1,2,4-Trichlorobenzene, 1,2-Dichloroethane, Dieldrin, Chromium	NA	
		Inhalation	8E-04	Vinyl chloride	1,2-Dichloroethane	Chloroform, Trichloroethene	NA	
		Total	7E-02	Vinyl chloride, Chromium	1,2-Dichloroethane, Aroclor-1260, Dieldrin, Heptachlor epoxide	1,2,4-Trichlorobenzene, Benzene, Chloroform, Trichloroethene	NA	
	All Media[1]	Total	7E-02				NA	

Table 7-4

Summary of RME Cancer Risks and Hazard Indices

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Receptor	Media	Exposure Route	Cancer Risk	Chemicals with Cancer Risks >10^{-4}	Chemicals with Cancer Risks >10^{-5} and <10^{-4}	Chemicals with Cancer Risks >10^{-6} and <10^{-5}	Hazard Index	Chemicals with HI>1
Future Industrial Worker	Soil*	Ingestion	5E-06			Arsenic, Chromium	0.05	
		Dermal Contact	4E-07				0.006	
		Inhalation	9E-08				0.00003	
		Total	6E-06				0.05	
	Groundwater Surficial Aquifer	Ingestion	6E-05		Vinyl chloride	1,1,2,2-Tetrachloroethane, 1,2-Dichloroethane, alpha-BHC, Aroclor-1260, beta-BHC, Heptachlor epoxide	1	
		Dermal Contact	NA				NA	
		Inhalation	NA				NA	
		Total	6E-05		Vinyl chloride	1,1,2,2-Tetrachloroethane, 1,2-Dichloroethane, alpha-BHC, Aroclor-1260, beta-BHC, Heptachlor epoxide	1	
	Groundwater Castle-Hayne Aquifer	Ingestion	1E-02	Vinyl chloride	Chromium	1,2-Dichloroethane, Aroclor-1260, Dieldrin, Heptachlor epoxide	58	cis-1,2-Dichloroethene,Vinyl chloride
		Dermal Contact	NA				NA	
		Inhalation	NA				NA	
		Total	1E-02	Vinyl chloride	Chromium	1,2-Dichloroethane, Aroclor-1260, Dieldrin, Heptachlor epoxide	58	cis-1,2-Dichloroethene,Vinyl chloride
	All Media[1]	Total	1E-02				58	

Table 7-4

Summary of RME Cancer Risks and Hazard Indices

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Receptor	Media	Exposure Route	Cancer Risk	Chemicals with Cancer Risks >10^{-4}	Chemicals with Cancer Risks >10^{-5} and <10^{-4}	Chemicals with Cancer Risks >10^{-6} and <10^{-5}	Hazard Index	Chemicals with HI>1
Future Trespasser/Visitor Adult	Soil*	Ingestion	1E-06				0.01	
		Dermal Contact	5E-08				0.0007	
		Inhalation	4E-09				0.000002	
		Total	1E-06				0.01	
	Surface Water Drainage Ditches/ Marshy Area	Ingestion	NA				0.00004	
		Dermal Contact	NA				0.000006	
		Inhalation	NA				NA	
		Total	NA				0.00005	
	Sediment Drainage Ditches/ Marshy Area	Ingestion	3E-07				0.005	
		Dermal Contact	9E-08				0.002	
		Inhalation	NA				NA	
		Total	4E-07				0.01	
	All Media	Total	1E-06				0.02	
	Soil*	Ingestion	7E-07				0.02	
		Dermal Contact	1E-08				0.0005	
		Inhalation	2E-09				0.000002	
		Total	7E-07				0.02	
	Surface Water Drainage Ditches/ Marshy Area	Ingestion	NA				0.00007	
		Dermal Contact	NA				0.00001	
		Inhalation	NA				NA	
		Total	NA				0.00007	
	Sediment Drainage Ditches/ Marshy Area	Ingestion	2E-07				0.008	
		Dermal Contact	9E-08				0.001	
		Inhalation	NA				NA	
		Total	3E-07				0.008	
	All Media	Total	1E-06				0.02	

Soil* - surface soil and subsurface soil combined.

[1] Total from All Media includes groundwater only from most contaminated well.

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Table 7-5

Summary of CTE Cancer Risks and Hazard Indices

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Receptor	Media	Exposure Route	Cancer Risk	Chemicals with Cancer Risks >10^{-4}	Chemicals with Cancer Risks >10^{-5} and <10^{-4}	Chemicals with Cancer Risks >10^{-6} and <10^{-5}	Hazard Index	Chemicals with HI>1
Future Adult Resident	Soil*	Ingestion	NA				0.01	
		Dermal Contact	NA				0.0002	
		Inhalation	NA				NA	
		Total	NA				0.01	
	Groundwater Surficial Aquifer	Ingestion	NA				0.6	
		Dermal Contact	NA				0.1	
		Inhalation	NA				0.002	
		Total	NA				0.7	
	Groundwater Castle-Hayne Aquifer	Ingestion	NA				7	cis-1,2-Dichloroethene, Vinyl chloride
		Dermal Contact	NA				0.8	
		Inhalation	NA				0.1	
		Total	NA				8	cis-1,2-Dichloroethene, Vinyl chloride
	All Media[1]	Total	NA				8	
Future Child Resident	Soil*	Ingestion	NA				0.1	
		Dermal Contact	NA				0.002	
		Inhalation	NA				NA	
		Total	NA				0.1	
	Groundwater Surficial Aquifer	Ingestion	NA				2	
		Dermal Contact	NA				0.3	
		Inhalation	NA				0.002	
		Total	NA				2	
	Groundwater Castle-Hayne Aquifer	Ingestion	NA				24	cis-1,2-Dichloroethene, Vinyl chloride
		Dermal Contact	NA				1.6	
		Inhalation	NA				0.1	
		Total	NA				26	cis-1,2-Dichloroethene, Vinyl chloride
	All Media[1]	Total	NA				26	

Table 7-5

Summary of CTE Cancer Risks and Hazard Indices

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Receptor	Media	Exposure Route	Cancer Risk	Chemicals with Cancer Risks >10^{-4}	Chemicals with Cancer Risks >10^{-5} and <10^{-4}	Chemicals with Cancer Risks >10^{-6} and <10^{-5}	Hazard Index	Chemicals with HI>1
Future Child/Adult Resident	Soil*	Ingestion	1E-05			Chromium, Vanadium	NA	
		Dermal Contact	4E-08				NA	
		Inhalation	NA				NA	
		Total	1E-05			Chromium, Vanadium	NA	
	Groundwater Surficial Aquifer	Ingestion	9E-05		Vinyl chloride, Aroclor-1260	1,1,2,2-Tetrachloroethane, 1,2-Dichloroethane, alpha-BHC, Heptachlor epoxide	NA	
		Dermal Contact	8E-06			Vinyl chloride, alpha-BHC, Heptachlor epoxide	NA	
		Inhalation	5E-07				NA	
		Total	1E-04		Vinyl chloride, Aroclor-1260	1,1,2,2-Tetrachloroethane, 1,2-Dichloroethane, alpha-BHC, Heptachlor epoxide	NA	
	Groundwater Castle-Hayne Aquifer	Ingestion	4E-03	Vinyl chloride, Chromium		1,2,4-Trichlorobenzene, Aroclor-1260, Dieldrin, Heptachlor epoxide	NA	
		Dermal Contact	6E-05		Vinyl chloride	1,2,4-Trichlorobenzene, Dieldrin, Heptachlor epoxide, Chromium	NA	
		Inhalation	5E-06			Vinyl chloride	NA	
		Total	5E-03	Vinyl chloride, Chromium		1,2,4-Trichlorobenzene, Aroclor-1260, Dieldrin, Heptachlor epoxide	NA	
	All Media[1]	Total	5E-03				NA	
Future Industrial Worker	Soil*	Ingestion	3E-07				0.01	
		Dermal Contact	5E-09				0.0002	
		Inhalation	NA				NA	
		Total	3E-07				0.01	
	Groundwater Surficial Aquifer	Ingestion	1E-05			Vinyl chloride, Aroclor-1260	0.4	
		Dermal Contact	NA				NA	
		Inhalation	NA				NA	
		Total	1E-05			Vinyl chloride, Aroclor-1260	0.4	
	Groundwater Castle-Hayne Aquifer	Ingestion	3E-04	Vinyl chloride		Chromium	5	cis-1,2-Dichloroethene, Vinyl chloride
		Dermal Contact	NA				NA	
		Inhalation	NA				NA	
		Total	3E-04	Vinyl chloride		Chromium	5	cis-1,2-Dichloroethene, Vinyl chloride
	All Media[1]	Total	3E-04				5	

Soil* - surface soil and subsurface soil combined.

[1] Total from All Media includes groundwater only from most contaminated well.

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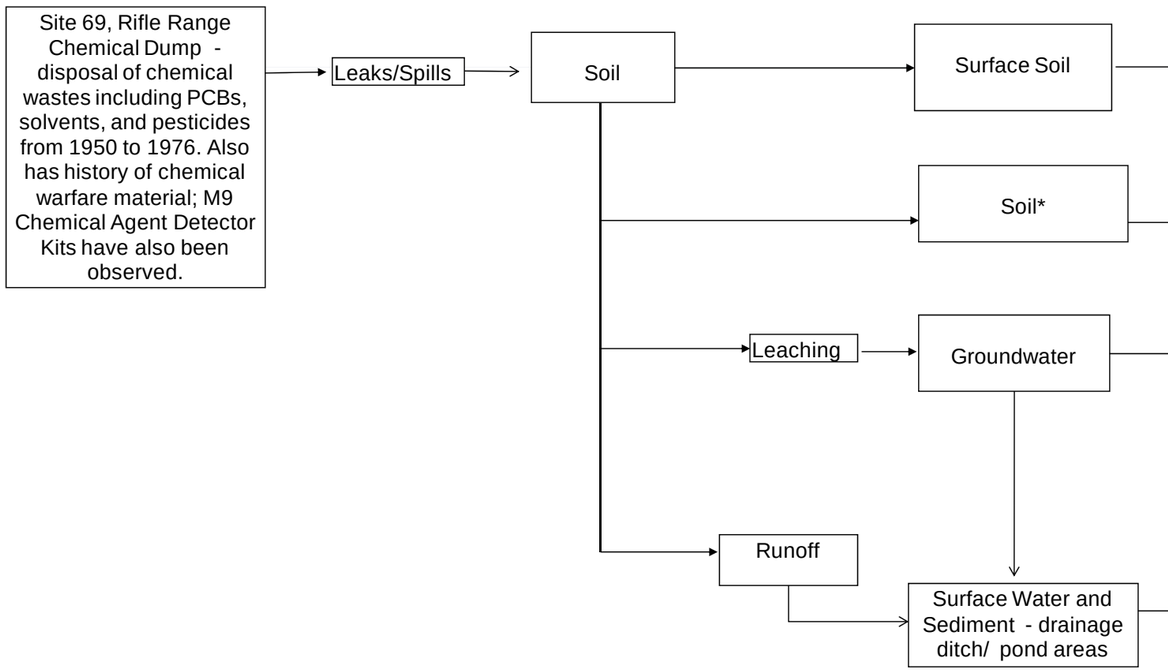

Exposure Route	Current/Future			Future			
	Military Personnel	Trespasser/Visitor Adult	Trespasser/ Visitor Youth	Resident Adult	Resident Child	Industrial Worker	Construction Worker
Ingestion	X	X	X	X	X	X	X
Dermal Contact	X	X	X	X	X	X	X
Inhalation	X	X	X	X	X	X	X
Ingestion	NA[1]	X[2]	X[2]	X	X	X	X
Dermal Contact	NA[1]	X[2]	X[2]	X	X	X	X
Inhalation	NA[1]	X[2]	X[2]	X	X	X	X
Ingestion	NA	NA	NA	X	X	X	NA
Dermal Contact	NA	NA	NA	X	X	NA	X
Inhalation - ambient air	NA	NA	NA	X	X	NA	X
Inhalation - vapor intrusion from groundwater to indoor air	NA	NA	NA	X	X	X	NA
Ingestion	X	X	X	NA	NA	NA	X
Dermal Contact	X	X	X	NA	NA	NA	X
Inhalation	NA	NA	NA	NA	NA	NA	NA

Notes:

* - Surface soil and subsurface soil combined

NA - Not Applicable or pathway is incomplete

X - Potentially complete exposure pathways

[1] - Qualitative analysis based on industrial worker exposure

[2] - Future exposure only

Figure 7-1
HHRA Conceptual Site Model
Supplemental Investigation
Site 69, Operable Unit No.14
MCB CamLej
North Carolina

CH2MHILL

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SECTION 8

Ecological Risk Assessment

8.1 Introduction

The following Screening-level Ecological Risk Assessment (SLERA) completes Steps 1 through 3a of the ERA process for the Site. This SLERA evaluates surface soil, subsurface soil, sediment, surface water, and groundwater data that were collected at Site 69 in 2010. The SLERA was performed in accordance with the following guidance:

- *Ecological Risk Assessment Guidance for Superfund (RAGS): Process for Designing and Conducting Ecological Risk Assessments* (USEPA, 1997c)
- *Region 4 Ecological Risk Assessment Bulletins – Supplement to RAGS* (USEPA, 2001a)
- *Navy Guidance for Conducting Ecological Risk Assessments* (Navy, 2003)
- *NCDENR Guidelines for Performing Screening Level Ecological Risk Assessments within the North Carolina Division of Waste Management* (NCDENR, 2003).

8.2 Step 1—Preliminary Problem Formulation and Ecological Effects Evaluation

8.2.1 Problem Formulation

The problem formulation covers the physical layout of the Site, its history and ecology, available analytical data, fate and transport mechanisms, complete exposure pathways, and receptors of concern.

Site Description

From 1950 to 1976, Site 69 was reportedly used for the disposal of chemical wastes, including PCBs, solvents, and pesticides. The Site may also have a history of CA disposal in the form of 50 to 60 drums containing mustard or nerve agent. A detailed description of the history of site use is included in Section 2.

Ecological Setting

The New River is a coastal blackwater river. The New River watershed is within Onslow County and includes the Base and the City of Jacksonville to the north.

The watershed upgradient of Jacksonville is characterized by gum-cypress swamps, with upland areas used primarily for forestry and agriculture. At Jacksonville, the river widens into a broad, slow-moving tidal embayment. It eventually discharges into the Atlantic Ocean through a narrow opening called New River Inlet. Jacksonville and the Base comprise the majority of land in the lower watershed (the area downstream of the U.S. Highway 17

bridge). There are 223 stream miles, 22,810 estuarine acres, and 15 miles of Atlantic coastline in this subbasin.

This portion of the North Carolina coast consists of sandy beaches. The adjacent upland area transitions to a region of pines (*Pinus* sp.), scrub oaks (*Quercus* sp.), sweet gum (*Liquidambar styraciflua*), and dogwood (*Cornus* sp.). Wire grass (*Cynodon dactylon*) is the primary undergrowth species. The area is interspersed with bottomland hardwood forests which are dominated by bald cypress (*Taxodium distichum*), swamp tupelo (*Nyssa sylvatica* var. *biflora*), and white cedar (*Chamaecyparis thyoides*). Croplands are common in this area, primarily for corn, cotton, peanuts, and tobacco.

The climate in Jacksonville is characterized by short, mild winters and long, hot summers. Average annual net precipitation is approximately 50 inches. Ambient air temperatures generally range from 33°F to 53 °F in the winter months, and from 71°F to 88°F in the summer months.

Site 69 covers approximately 14 acres and is situated in a topographically high area. The area is overgrown to the point that the boundary of the former dump is not easily discernable. In the 1990s, a 6-foot high chain link fence was erected around the Site to prevent access. While access is now limited, training exercises are conducted throughout the surrounding area.

The Site is wooded, with predominantly conifers, and has a relatively open canopy. There is limited leaf litter and the understory in portions of the Site is dominated by grasses. During a site visit by a CH2M HILL ecologist in May 2009, dead vegetation was observed in the southeast portion of the Site.

Outside of the Site, a road parallels the fence perimeter. Beyond the road, woods encompass the entire area. Stands are mixed and vary in age. The topography slopes to the east and there are ravines and wetlands into which runoff collects and eventually discharges into the New River. The lower ends of these topographic features are tidally influenced. In addition to the New River, two lotic surface water bodies are located within a quarter-mile of the Site, an unnamed tributary of the New River to the north and Everett Creek to the south.

The ecological checklist in **Appendix H,** Attachment 1 identifies the terrestrial and aquatic habitats onsite or nearby. Threatened or endangered species located in Onslow County are not expected to occur at the Site or in adjacent areas (**Appendix H,** Table H-1).

Summary of Available Analytical Data

Soil, surface water, and sediment data used for this assessment were collected during March 2010. Groundwater data were collected in February and March 2010. The following data were used for the assessment:

- Twelve surface soil samples (plus two field duplicates) from 0 to 1 foot bgs and two subsurface soil samples (plus one field duplicate) from 1 to 5 feet bgs.
- Three surface water samples (plus one field duplicate).
- Fifteen groundwater monitoring well samples (plus five field duplicates).
- Three sediment samples from 0 to 6 inches (plus one field duplicate).

Samples are listed in **Appendix H,** Table H-2. They were analyzed for inorganics, VOCs, SVOCs, PCBs, and pesticides. Data for dissolved inorganics were also collected for surface water and a subset of groundwater samples.

Groundwater samples were collected within the Site (i.e., within the fence) and in downgradient areas outside of the Site. All of the soil, surface water, and sediment samples were collected beyond the site boundary in areas adjacent to or downgradient of the Site.

Ecological risks are assumed to be present as a result of impacted soils and waste material in the disposal trenches/burial pits in the fenced area of Site 69. Due to health and safety concerns in collecting samples from these areas, empirical data are not available and these areas are not included in the ERA.

Fate and Transport Mechanisms

Release and transport mechanisms for the Site, as they relate to ecological exposures, are discussed below.

Leaching to Groundwater Nine VOCs, five SVOCs, and nine pesticides/PCBs, and inorganics were detected in groundwater samples. Concentrations and detection frequencies were generally low. Site-related constituents in groundwater may migrate offsite and impact aquatic habitat. Upwelling (venting) or seeping groundwater and the associated contaminants may enter surface water. Consequently, groundwater data were screened using marine values, assuming groundwater is likely to discharge to the New River or the tidally influenced portions of associated tributaries.

Surface Water Runoff and Erosion Runoff from the Site flows toward the aquatic and wetland features to the east. Given the undeveloped nature of the area and sandy soils, high rates of infiltration are expected across the area sampled, and erosion is expected to be minimal, with the potential exception of the tidal areas. Because surface water runoff may flow into freshwater or marine environments, surface water data were screened using the lowest of the freshwater and marine screening levels.

Volatilization This exposure pathway is expected to be insignificant. While burrowing may occur on the Site, burrow depths are likely to be shallow given the type of receptors present. The pathway is not expected to be significant because VOC contamination was not elevated or widespread in surface soils or subsurface soils and detected concentrations were generally low. Many of the detected VOCs are likely to be laboratory contaminants (i.e., acetone, 2-butanone).

Dust Soil dust at the Site is not expected to be significant. The majority of the Site is covered by vegetation.

Conceptual Site Model

Information regarding the general habitat features of Site 69 and the fate and transport of the chemicals associated with site media was used to build an ecological CSM. Key components of the CSM include sources, release and transport mechanisms, exposure media, receptors, and exposure routes (**Figure 8-1**).

Potentially complete and significant exposure pathways to aquatic and terrestrial ecological receptors include the following:

- Direct exposure to terrestrial plants (root uptake) and soil invertebrates (dermal and direct ingestion)
- Direct exposure to aquatic biota (root uptake for plants and dermal and direct ingestion for aquatic biota)
- Incidental ingestion and dermal exposure for wildlife
- Food chain (prey consumption) exposures for wildlife

The most significant exposure source is likely to be soil within the Site. As a result of disposal activities, groundwater is also contaminated. Contaminated groundwater may migrate offsite and discharge to the aquatic/wetland features to the north, south, and east. Likewise, contamination may enter these aquatic/wetland features via overland flow from the Site.

Terrestrial bird and mammal species that are representative of Site 69 include American robin, Eastern screech owl, short-tailed shrew, white-footed mouse, red fox, and white-tailed deer. Semi-aquatic mammal and bird species include the raccoon and American woodcock.

8.2.2 Ecological Effects Evaluation

The potential for effects from exposure to each medium was initially evaluated by comparing ecological screening values (ESVs) to maximum concentrations (Step 2) of constituents detected at the Site. For soil, the USEPA Ecological Soil Screening Levels (EcoSSL) (USEPA, 2009a) were preferentially selected over Region 4 values (USEPA, 2001a). When no EcoSSL was available for a constituent, the Region 4 value was selected.

A selection hierarchy was also applied to surface water. NRWQC was preferentially selected over the Region 4 values (USEPA, 2009b). However, when no NRWQC was available for a constituent, the Region 4 value was selected as the ESV for that constituent. Marine screening values were selected for the groundwater comparison because of the likelihood to discharge to the New River or portions of tributaries that are tidally influenced. The lowest of freshwater and marine screening values were selected for surface water, since both freshwater and marine waters may have been impacted via overland runoff. The assessment of sediment involved comparison of analyte concentrations to the Region 4 ESVs (USEPA, 2001).

Maximum soil and groundwater concentrations were also compared to MCB CamLej background concentrations (twice the mean Base background value). The Base background study was conducted at MCB Camp Lejeune in June and July 2000 (Baker, 2001).

8.3 Step 2—Preliminary Exposure Estimate and Risk Calculation

In Step 2, risk to ecological receptors was evaluated by calculating HQs. HQs are calculated by dividing the EPC by the corresponding medium-specific ESV. Maximum concentrations for detected analytes and maximum detection limits for undetected analytes were used to conservatively estimate potential chemical exposures to ecological receptors. Risk estimates were calculated for surface soil, subsurface soil, surface water, groundwater, and sediment (**Appendix H,** Tables H-3 through H-7).

North Carolina SLERA guidance (NCDENR, 2003) requires that constituents falling into one of the following categories be identified as a Step 2 COPC:

- **Category 1—** Contaminants with a maximum detection exceeding the ESV
- **Category 2—**Undetected contaminants with a laboratory sample quantitation limit (SQL) exceeding the ESV
- **Category 3—**Detected contaminants with no ESV
- **Category 4—**Undetected contaminants with no ESV

A summary of the Step 2 screening results is presented in **Appendix H,** Table H-8.

8.4 Step 3a —Refinement of Conservative Exposure Assumptions

Using the same CSM, Step 3a involves re-evaluation of the conservative assumptions used in Steps 1 and 2, resulting in refinement of the COPC list. Step 3a includes a re-assessment of the risks to lower trophic level receptors (direct exposure screening) and an evaluation, for the subset of contaminants that are bioaccumulative, of the potential for risks to upper trophic level receptors (food chain transfer screening).

It should be noted that non-detected analytes that failed Step 2 were not considered COPCs in Step 3a and are not discussed further. If the non-detected COPCs were present, the actual concentrations would be less than the MDL. Consequently, estimated risks are biased high and non-detected constituents are considered unlikely to pose a significant risk to populations of site receptors. A discussion of the uncertainty associated with non-detect analytes is presented in the Uncertainty section (Section 8.4.3).

8.4.1 Direct Exposure Screening

The risk to lower trophic level receptors was recalculated using a conservative estimate of the mean as the EPC. Conservative estimates of the mean were calculated using the algorithms and suggested UCLs from ProUCL Version 4.0.0.5 (USEPA, 2010a). If a conservative estimate of the mean could not be calculated, the arithmetic mean concentration was retained as the EPC. When a conservative estimate of the mean could not be calculated and the arithmetic mean was higher than the maximum detected concentration, the EPC defaulted to the maximum. Risks are further evaluated using a

weight-of-evidence (WOE) approach not utilized in Step 2. The WOE approach considers the magnitude of the recalculated risks, toxicity information not used in the Step 2 screening, frequency of detection, magnitude of exceedance, and the distribution of detected concentrations.

When ESVs were not available, a supplemental ESV from available literature was identified in Step 3. Constituents with no available supplemental ESVs are discussed in the Uncertainty section (Section 8.4.3).

Appendix H, Tables H-9 through H-13 present the results of the Step 3 screening for lower trophic level receptors. A summary of the screening results is presented below.

Surface Soil

Seventeen detected COPCs in surface soil were carried forward to Step 3. Based on the refined screening, bis(2-ethylhexyl)phthalate, 4,4,-DDE, 4,4′-DDT, alpha-BHC, beta-BHC, endrin, gamma-BHC (lindane), antimony, and mercury were found to have HQs greater than 1 (**Appendix H,** Table H-9).

Bis(2-ethylhexyl)phthalate had an HQ above 1, but the magnitude of exceedance was low and phthalates are common laboratory artifacts (DTSC, 2006), suggesting that this analyte is not likely the result of site-related activities. The maximum concentration of antimony (1.1 mg/kg) only slightly exceeded the maximum Base background concentration (0.9 mg/kg), suggesting that antimony is consistent with background. The constituents 4,4,-DDE, 4,4′-DDT, alpha-BHC, beta-BHC, and mercury all had HQs less than 2, and are not expected to pose significant risks to lower trophic level receptors at the Site. Endrin and gamma BHC (lindane) were retained for further consideration.

Subsurface Soil

Six detected COPCs in subsurface soil were carried forward to Step 3. Based on refined screening, endrin and antimony were found to have HQs greater than 1. Endrin had a low magnitude of exceedance (HQ = 1.1). The arithmetic mean-based concentration of antimony (0.88 mg/kg) resulted in an HQ of only 3.3. Antimony is not expected to pose a significant risk. Only one of the two samples (1.4 and 0.4 mg/kg) had a concentration in excess of the maximum detected in background samples (0.5 mg/kg).

Surface Water

Fifteen detected COPCs in the surface water were carried forward to Step 3. Due to the limited number of samples, a conservative estimate of the mean could not be calculated for the surface water constituents. Therefore, the EPC is represented by the lowest of the arithmetic mean or maximum detection.

Barium, lead, and thallium had HQs above 1 based on total inorganic concentrations but were not detected in the dissolved samples. Aluminum was detected in both the total and dissolved surface water samples and HQs were above 1. However, the magnitudes of exceedance were low (HQs less than 3) and aluminum concentrations in the surface soils onsite were within the Base background range. Therefore, aluminum is not expected to pose significant risk to lower trophic receptors.

The results for silver are suspect. Silver was not detected in total samples, but was detected at 1 µg/L (HQ of 83) in one of the filtered samples. Given that inorganics should not be detected in filtered samples if they were not detected in total samples, and because silver was not identified as a COPC in surface or subsurface soil, it was not carried forward as a COPC for lower trophic level receptors.

Groundwater

Twenty-one detected COPCs were carried forward to Step 3. Based on the refined screening, five pesticides and one PCB had HQs greater than 1. The constituents 4,4′-DDT, endrin, heptachlor epoxide, methoxychlor, and aroclor-1260 were detected in only 1 of 15 samples. Gamma-chlordane was detected and exceeded the ESV in 2 of 15 samples. These detections occurred within the southern and eastern portions of the Site in samples collected from wells GW-03, GW-04, or GW-15. Arcolor-1260 had an HQ of 24.5, but the constituent was not detected in any other medium, suggesting no exposure to ecological receptors. While the five pesticides generally had low frequencies of exceedance in groundwater, pesticides were known to be disposed of at this Site and were detected at elevated concentrations in sediments and soils. Therefore, these pesticides in groundwater were considered to pose potential risk to aquatic receptors.

Sediment

Forty-two detected COPCs in sediment were carried forward to Step 3. Due to the limited number of samples, a conservative estimate of the mean could not be calculated for the sediment constituents and the EPC is represented by the lowest of the arithmetic mean or maximum detection.

The constituents bis(2-ethylhexyl)phthalate, aldrin, heptachlor epoxide, and antimony had HQs above 1 with low magnitudes of exceedance. The HQ was elevated for acetone, but it is a common laboratory artifact (DTSC, 2006) and not likely the result of site-related activities.

The pesticides 4,4′-DDD, 4,4′-DDE, 4,4′-DDT, alpha-chlordane, dieldrin, endosulfan I, endosulfan sulfate, endrin, gamma-BHC (lindane), heptachlor, and methoxychlor all had HQs above 1. These pesticides may pose a risk to lower trophic level receptors. Elevated concentrations were detected in all three sediment sample locations across the Site. Pesticides were identified as posing a potential risk to lower trophic level receptors in surface soil, groundwater, and sediment.

8.4.2 Food Chain Transfer Screening

Food chain modeling was conducted for all detected constituents that were carried to Step 3 and identified as bioaccumulative in USEPA (2000). Food chain modeling was initially conducted for the terrestrial and semi-aquatic receptors using maximum concentrations. If analytes posed a risk based on maximum concentrations, modeling was refined using a conservative estimate of the mean, or an arithmetic mean when a conservative estimate of the mean could not be calculated.

Receptors selected for the terrestrial evaluation include the white-footed mouse, short-tailed shrew, red fox, white-tailed deer, American robin, and Eastern screech owl. Semi-aquatic receptors that may forage at or near the Site include the raccoon and American woodcock.

The basis for modeling for terrestrial receptors was soil. The basis for modeling for semi-aquatic receptors was sediment. Drinking water was also included in the model for each receptor.

Risks to upper trophic level receptors were evaluated by modeling exposure to chemicals via the ingestion of constituents which have accumulated in prey. Incidental ingestion of soil and/or sediment was also included when calculating exposure. Dietary items for which tissue concentrations were modeled included terrestrial and aquatic plants, terrestrial and aquatic invertebrates, fish, frogs, and mammals. The uptake of chemicals from the abiotic media into these food items was modeled based upon conservative assumptions.

For the maximum exposure case, two HQ were developed. The exposure estimate was calculated and compared to two types of toxicity reference values (TRVs): no observed adverse effects levels (NOAELs), and lowest observed adverse effects levels (LOAELs). If the LOAEL-based HQ was greater than 1, the exposure estimate based on a conservative estimate of the mean (i.e., also referred to as the EPC) was calculated. When HQs based on the NOAEL are below 1, there is a high degree of confidence that no significant risk is present. When HQs based on the LOAEL are above 1, risk may be present.

Exposure Assessment

Exposure Point Concentrations EPCs are the environmental media concentrations of COPCs that receptors are assumed to encounter in an exposure area. Risk calculations were initially developed using the maximum concentration. If the LOAEL-based HQ was greater than 1, risk was re-evaluated using a conservative estimate of the mean and/or an arithmetic mean. Conservative estimates of the mean were calculated using ProUCL Version 4.0.0.5 (USEPA, 2010a). To be conservative, the maximum detected value or the maximum detection limit between the field duplicate and native sample was used when calculating UCLs. When a conservative estimate of the mean could not be calculated, an arithmetic mean was used.

Exposure Parameters Receptor-specific inputs are presented in **Appendix H-2**. Minimum adult body weights and maximum food ingestion rates from the scientific literature were used for each receptor. It was assumed that chemicals were 100 percent bioavailable to the receptor and that each receptor spent 100 percent of its time on the Site (i.e., an area use factor [AUF] of 1 was assumed).

Concentrations in Food Items The concentrations of COPCs in food items were estimated rather than measured. For the purposes of exposure estimation, partitioning of constituents from environmental media to prey was estimated from literature values. The conservative model assumptions included bioaccumulation factors (BAFs) from the literature. The BAFs and other uptake or biotransfer factors used to estimate constituent concentrations in food items are provided in **Appendix H-2**. In all cases, it was assumed that tissue uptake occurs under steady-state conditions.

Calculation of Chemical Intakes Dietary exposure includes multiple pathways and requires modeling. The end product or exposure estimate resulting from exposure modeling for wildlife is a dosage (amount of chemical per kilogram receptor body weight per day [mg/kg-day]). Dietary exposure from food and incidental ingestion of soil or sediment was estimated using a generalized exposure model modified from Suter et al. (2000):

$$E_j = \left[\left(Med_{jk} * Pk * FIR \right) + \left(\sum_{i-1}^{N} B_{ij} * P_i * FIR \right) \right] * AUF$$

where:

E_j = total dietary exposure (mg/kg-day)
Med_{jk} = concentration of chemical (j) in medium (k) (mg/kg dry weight)
P_k = ingestion rate of medium (k) as proportion of diet
FIR = species-specific food ingestion rate (kg food/kg body weight/d)
B_{ij} = concentration of chemical (j) in biota type (i) (mg/kg dry weight)
P_i = proportion of biota type (i) in diet
AUF = area use factor (unitless)

Effects Assessment

Compilation of Toxicity Data Current available toxicological data were evaluated and a range of potential effects was determined by using procedures recommended by USEPA (1997b). Data were extracted from original literature sources (when available) to verify levels of effects, quality of study design, magnitude of dose, and other study parameters. Sources for toxicity data included the following:

- *Toxicological Benchmarks for Wildlife,* produced for the Department of Energy at Oak Ridge National Laboratories (Sample et al., 1996)
- Peer-reviewed scientific literature
- The NIH ATSDR Toxicity Profiles and reports (ATSDR 1990; 1993a; 1993b; 1993c; 1994)

Ingestion TRVs were selected for both chronic NOAEL and chronic LOAEL endpoints. Because the risk assessment is based upon population- or community-level effects, no intraspecies uncertainty factors were applied. Taxonomic class-type uncertainty factors were also not applied because the TRVs selected were typically derived based upon data from a broad range of taxonomic groups.

Food chain COPCs were identified based upon a comparison of exposure doses from site-specific food chain modeling with the NOAEL- and LOAEL-based ingestion TRVs.

Risk Results and Characterization

The results of the food chain modeling for terrestrial wildlife exposed to maximum concentrations in surface soil and surface water are presented in **Appendix H,** Table H-14. The white-tailed deer, red fox, and American robin had NOAEL- and LOAEL-based HQs less than 1. While NOAEL-based HQs for the Eastern screech owl exceeded 1, the LOAEL-based HQs were less than 1. The short-tailed shrew and white-footed mouse had mercury LOAEL-based HQs of 4.76 and 1.23, respectively. However, when using the EPC, the white-

footed mouse LOAEL-based HQ for mercury decreased to less than 1 and the short-tailed shrew HQ was 2.92, which is considered a low magnitude of exceedance (HQs less than 3) (**Appendix H,** Table H-15). The other constituents had LOAEL-based HQs less than 1. Overall, the results suggest that exposure to COPCs in soil and surface water does not pose a significant risk to upper trophic level receptors.

The results of the food chain modeling for semi-aquatic wildlife exposed to maximum concentrations in surface water and sediment at Site 69 are presented in **Appendix H,** Table H-16. Both the raccoon and American woodcock had LOAEL-based HQs less than 1 for all analytes. Consequently, the exposure of birds and mammals to COPCs in sediment and surface water does not pose significant risk.

8.4.3 Uncertainty

Uncertainties are inherent in all risk assessments. In general, risks are over-estimated in this evaluation through the use of conservative exposure, effects, and risk characterization assumptions described in the previous sections. A qualitative evaluation of the major general uncertainties associated with this assessment is presented below.

Effects Assessment Uncertainties

Literature-derived toxicity data based on laboratory studies were the only available toxicity data used to evaluate risk to all receptor groups. It was assumed that effects observed in laboratory species were indicative of effects that would occur in wild species. The suitability of this assumption is unknown.

The use of UFs in the development of TRVs is designed to ensure that the TRV is a conservative estimate of a toxicological effect level or endpoint. However, there is some additional uncertainty associated with extrapolating TRVs between toxicological endpoints, species, duration, and study conditions to site conditions.

Undetected chemicals for which no toxicological data were available were identified as posing no risk. Although some uncertainty is associated with this approach, it was assumed that if chemicals were present at ecologically relevant levels, they would be detected in some samples. Additionally, those analytes that were detected but lacked toxicological data were also identified as posing no risk, though they were considered an uncertainty. A lack of toxicological data demonstrates that these chemicals historically have not been identified as significant ecological risk drivers. The lack of toxicological data indicates that it is unlikely that these chemicals pose an ecological risk.

The TRVs developed from literature studies are usually based on a highly soluble and bioavailable form of the chemical. It is generally accepted that COPCs present in environmental media are not likely to be in a highly soluble form and, due to physical and chemical processes in the environment, are likely to be far less than 100 percent bioavailable. This difference between literature studies and site conditions may contribute to an over-estimation of potential exposure and risks from the COPCs.

Standard industry laboratory methods of analysis were used for the development of detection limits. In some instances, the methods produced detection limits that were higher than the ESVs. This is considered an acceptable uncertainty. Because these chemicals were

not detected, they are not known to be present onsite, but the potential for risks cannot be totally discounted because the reporting limits for at least some samples are higher than the screening values.

Exposure Assessment Uncertainties

Exposure Media and Pathways Wildlife doses were estimated based on the ingestion pathway only. This is due to limitations in the field of ERA with regard to adequately evaluating the volatilization (inhalation) and dermal absorption pathways. Although these pathways would not be expected to contribute significantly to the overall dose that receptors might receive from COPCs at this Site, this is nonetheless an uncertainty inherent in the assessment.

Bioavailability The exposure dose estimates in this assessment assume that 100 percent of the chemical concentrations to which receptors are exposed are in the bioavailable form. However, most chemicals will not be 100 percent bioavailable. In cases where bioavailability is less than 100 percent, risk is over-estimated.

The exposure concentrations used in the evaluation of trophic transfer were assumed to remain constant for the duration of exposure. Physical, chemical, and biological processes that could reduce chemical concentrations and their bioavailability over time were not factored into the calculation of the exposure concentrations. Use of this additional conservative assumption is also likely to over-estimate exposure to the COPCs.

Analytical chemistry data collected within the exposure areas at Site 69 were assumed to adequately represent the exposure to wildlife and exposure concentrations were assumed to represent the distribution of constituents present. These assumptions could either under- or over-estimate risk.

Receptor Life History Data No avian or mammalian life history data specific to the Site were available; therefore, exposure parameters were either modeled based on allometric relationships (e.g., food ingestion rates) or were based on data from these same species in other portions of their range. Because diet composition as well as food, water, and soil ingestion rates can differ among individuals and locations, published parameter values may not accurately reflect conditions at the Site. Consequently, risk may be either over- or under-estimated.

Dietary Composition Dietary compositions were simplified for the site receptors to estimate concentrations in food items using bioaccumulation models. It was assumed that concentrations were similar in comparable food types. The suitability of this assumption is unknown. Consequently, risk may be either over- or under-estimated.

Estimating Prey Tissue Concentration There is uncertainty associated with the estimated chemical concentrations in tissue of prey. Prey tissue concentrations were estimated using literature-based values for all dietary items. Potential risks based on these tissue concentration estimates, therefore, could either be over- or under-estimated.

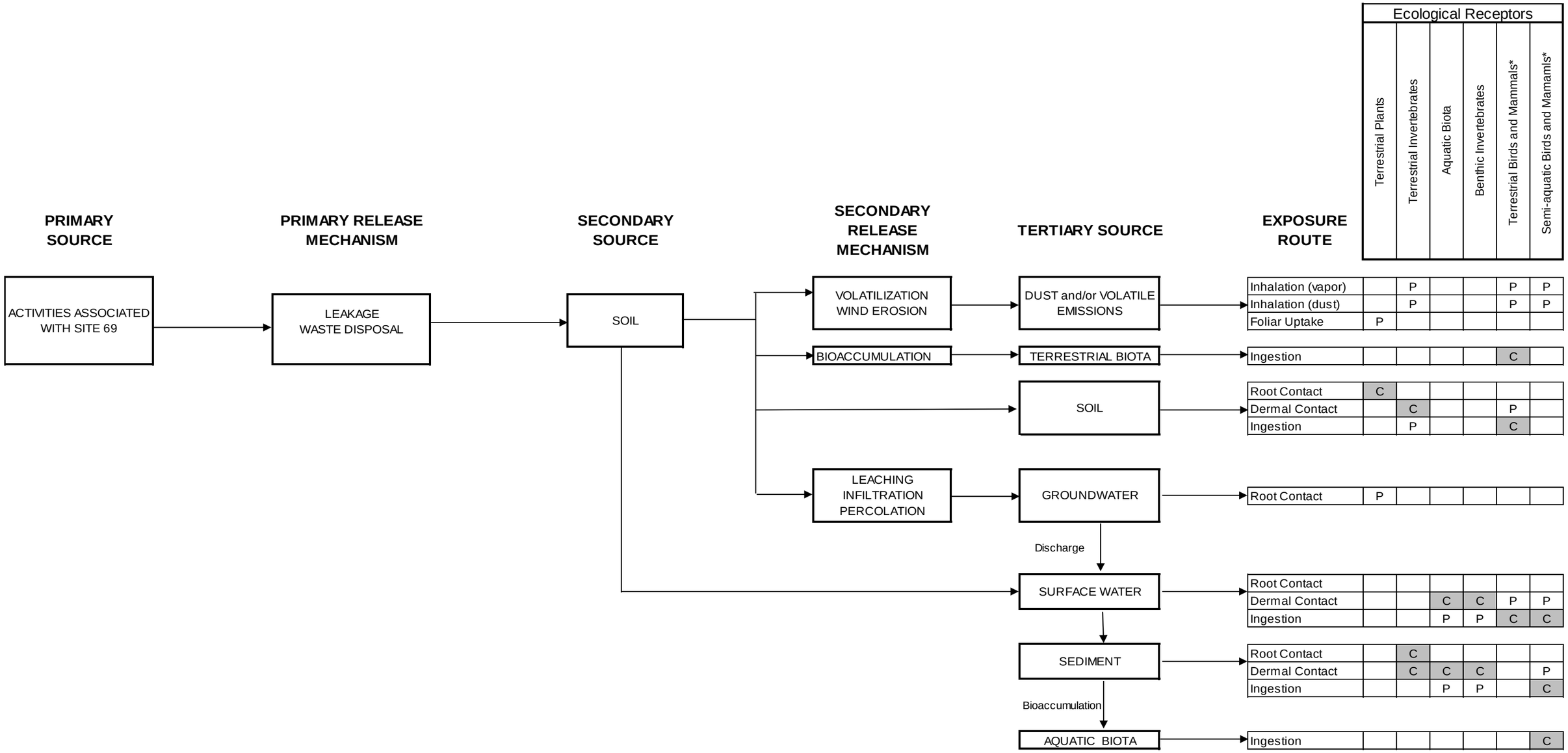
8.4.4 Conclusions

HQs were generally low for most receptors under most exposure scenarios as part of the Step 3 refinement. Based on the refined evaluation, no subsurface soil or surface water

analytes are considered to pose a significant risk to lower or upper trophic level receptors. It should be noted, however, that only two subsurface samples were available between 1 and 5 feet bgs. If additional sampling is conducted at this Site, the collection of additional subsurface samples may be warranted.

Pesticides in soil and sediment were identified as posing a risk to lower trophic level receptors, but not to upper trophic level receptors. Pesticides in groundwater, assuming exposure at the groundwater–surface water interface, were identified as posing a risk to lower trophic level receptors. Although upper trophic level receptors were not identified at risk from pesticides, the data set for sediments was limited.

Additional risk assessment activity for pesticides is recommended. While this may include additional sampling, the first step would be completion of Step 3b (problem formulation development). In this step, additional work would be done to evaluate the distribution of pesticides, the potential for the Site to be the source of pesticides found in the downgradient areas, and their potential toxicity to site receptors.



C - Pathway considered complete for purposes of ecological risk assessment

P - Pathway considered potentially complete, but insignificant

Pathways evaluated quantitatively in ecological risk assessment

* Terrestrial birds and mammals include: robin, Canada goose, mourning dove, red-tailed hawk, short-tailed shrew, meadow vole, white-footed mouse, and red fox. Semi-aquatic birds and mammals include: great blue heron, barn swallow, and raccoon.

Figure 8-1
Conceptual Site Model of Ecological Exposures at Site 69
Supplemental Investigation
Site 69, Operable Unit No. 14
MCB CamLej
North Carolina

CH2MHILL

Generated by: *S. Kent/ATL* Checked by: *K. Taylor/DFW*

SECTION 9

Conclusions and Recommendations

Conclusions of the SI and recommendations for future site investigations and management are presented below.

9.1 Conclusions

9.1.1 Nature and Extent of Contamination

Surface and Subsurface Soil

Pesticides and metals were the only target analytes detected in soil samples at concentrations that exceeded their applicable regulatory standards. The magnitude of the pesticide concentrations is generally low, compared to their regulatory standards, and the occurrence and distribution of these compounds is limited to the surface soils. The concentrations of metals that exceeded regulatory standards were generally consistent with naturally occurring levels in both the surface and subsurface soils.

Surface Water and Sediment

Surface water and sediment samples were collected from three small drainage features located northeast and southeast of Site 69 which carry surface runoff from Site 69 to the New River. Metals were detected in surface water samples at concentrations above the PAL or NCSWQS. However, the concentrations of metals that exceeded regulatory standards were generally consistent with naturally occurring levels.

VOCs, SVOCs, pesticides, and metals were detected in sediment samples at concentrations exceeding applicable screening values. The concentrations detected were generally within one order of magnitude of the most conservative screening value, and did not exceed the Industrial and, in most cases, Residential RSLs. The observed concentrations of SVOCs and pesticides do not appear to be indicative of a single historical or ongoing release. Rather, they appear to be associated with naturally occurring levels (metals), atmospheric deposition from anthropogenic sources (SVOCs), or application for intended use (pesticides).

Groundwater

The primary constituents present in groundwater above the NCGWQS are the CVOCs 1,2-DCA, TCE, cis-1,2-DCE, and VC. Pesticides, PCBs, and metals were also detected at concentrations exceeding NCGWQS and (for metals) twice the mean Base background concentrations.

The horizontal and vertical extents of impacts in the surficial and Castle Hayne aquifer have been delineated to their respective NCGWQS. The greatest concentration of a single VOC (cis-1,2-DCE at 51,000 µg/L) was reported in the sample collected from IR69-GW15IW, suggesting the potential existence of DNAPL. VOC concentrations in the sample collected

from monitoring well IR69-GW15IW are at least one to two orders of magnitude greater than VOC concentrations collected from samples in nearby monitoring wells, suggesting that the extent of the highest concentrations is limited to the area immediately around monitoring well IR69-GW15IW.

Pesticide concentrations exceeding the NCGWQS were limited to samples collected from monitoring wells located in the central portion of Site 69, in the vicinity of the suspected trench disposal (IR69-GW03, IR69-GW15IW, and IR69-GW15DW). With the exception of iron and zinc, metals concentrations were within the same order of magnitude as the NCGWQS.

9.1.2 Fate and Transport

Source Areas

Based on the historical, geophysical, chemical, and physical data collected during the SI activities, groundwater impacts are likely a result of releases from the buried wastes present in the central and eastern portion of Site 69. However, the recent and historical investigative activities have consistently avoided characterization of the actual source areas due to the potential presence of CA. The geophysical investigation also identified smaller areas of potential waste disposal in the northern portion of the Site.

Contaminant Fate and Transport

Chemicals detected in surface water, sediment, and soil at Site 69 are generally immobile (unless physically transported by storms or anthropogenic processes) and are not necessarily related to contaminated groundwater.

Vertical migration of VOCs in groundwater appears to be occurring at Site 69, as evidenced by the distribution of VOCs throughout the surficial, upper Castle Hayne, and middle Castle Hayne aquifers, and is supported by the presence of downward vertical gradients between the two aquifers.

The New River is located downgradient of the eastern boundary of Site 69, and is the ultimate receptor for surface water and groundwater discharge from the Site. During the SI field activities, downgradient monitoring wells were installed in the upper and middle Castle Hayne aquifers to assess the lateral extent of contamination. CVOCs were not detected above the NCGWQS in the downgradient monitoring wells.

Analysis of CVOCs and NAIPs indicates that NA is occurring throughout the surficial and Castle Hayne aquifers.

Groundwater Predictive Modeling

A groundwater model was generated using BIOCHLOR to predict future CVOC concentrations in groundwater and to evaluate whether CVOCs have the potential to migrate to the New River and, if so, at what concentrations. A continuous source model was used to represent the presence of leaking drums or DNAPL within the source area, as suggested by the high concentration of cis-1,2-DCE identified in source area monitoring wells. The results of the model predict that concentrations of TCE, cis-1,2-DCE and VC will not attenuate below NCGWQS in the source area within a period of 100 years. The model also predicts that downgradient CVOC concentrations will remain relatively stable.

Concentrations of TCE, cis-1,2-DCE, and VC are not predicted to exceed groundwater and surface water standards at the discharge point to the New River.

9.1.3 Human Health Risk Assessment

Human health risks are assumed to be present as a result of impacted soils and waste material in the disposal trenches/burial pits at Site 69; however, LUCs prevent current or future exposure to these materials. Samples were not collected from these areas as a result of potential health and safety concerns. As a result of the LUCs and lack of empirical data, the waste material and associated impacted soil were not included in the quantitative HHRA evaluation.

Based on current site use and LUCs in place, risks associated with receptor contact with the remaining media at Site 69 are below or within USEPA target levels. Additionally, risks associated with future receptor contact with surface water, sediment, and surface and subsurface soils were below USEPA target levels.

Potential risks associated with future residential and industrial worker ingestion of groundwater from the surficial and upper Castle Hayne aquifers were above the USEPA's acceptable risk range and hazard level. The primary COCs contributing to the elevated risk in surficial aquifer are VC, iron, and manganese. The primary COCs contributing to elevated risk in the upper Castle Hayne aquifer are VC, chromium, 1,2-DCA, aroclor-1260, and heptachlor epoxide.

The residential and industrial land use scenarios evaluated are very conservative, since waste is in-place and potential CA is present and LUCs are in-place to prevent soil intrusive activities. Exposure to waste and soil that could result in unacceptable risks is being controlled. Additionally, groundwater at Site 69 is not a current potable source and will not be used for potable purposes in the future as LUCs are in-place to prevent groundwater intrusive activities and prohibit non-industrial and potable use of groundwater.

9.1.4 Ecological Risk Assessment

Ecological risks are assumed to be present as a result of impacted soils and waste material in the disposal trenches/burial pits at Site 69. Samples were not collected from these areas due to potential health and safety concerns, as a result; the waste material and associated impacted soil were not included in the quantitative ERA evaluation.

Potential risks to lower trophic level receptors from pesticide exposure to groundwater discharging to the surface were identified during the ERA. The pesticides contributing to the elevated risk include 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, alpha-chlordane, dieldrin, endosulfan I, endosulfan sulfate, endrin, gamma-BHC (lindane), heptachlor, and methoxychlor.

9.2 Recommendations

Based on the results and conclusions of the SI performed at Site 69, the major recommendation is to complete a FS. The FS should incorporate the results of the Site 69 SI and the Site UXO-02 PA/SI to identify remedial action objectives; identify potential treatment alternatives, resource recovery technologies, and containment technologies that

would satisfy these objectives; screen the technologies based on their effectiveness, implementability, and cost; assemble the technologies into treatment alternatives; and analyze the alternatives against evaluation criteria. After the completion of the FS, a Proposed Remedial Action Plan and ROD should be completed for the selected final remedy to address both Site 69 and Site UXO-02**.**

The additional activities to complete the FS should include:

- Complete Step 3b of the ERA (problem formulation development) to evaluate the distribution of pesticides, the potential for the Site to be the source of pesticides found in the downgradient areas, and their potential toxicity to site receptors.
- Complete the PA/SI at UXO-02 and conduct an intrusive investigation to assess the nature of the identified geophysical anomalies outside of the Site 69 boundary.
- Evaluate the necessity for investigating geophysical anomalies and characterization of buried wastes within the disposal/trench areas inside the Site 69 boundary.
- Re-evaluate the need for LTM at Site 69. LTM sampling was suspended at Site 69 pending completion of the SI. Recent groundwater sampling results indicate that impacted groundwater has not reached the New River. Limited downgradient groundwater sampling could be conducted to confirm that LUCs will remain protective until the final remedy is in place.

SECTION 10

References

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Appendix A
Historical Investigations

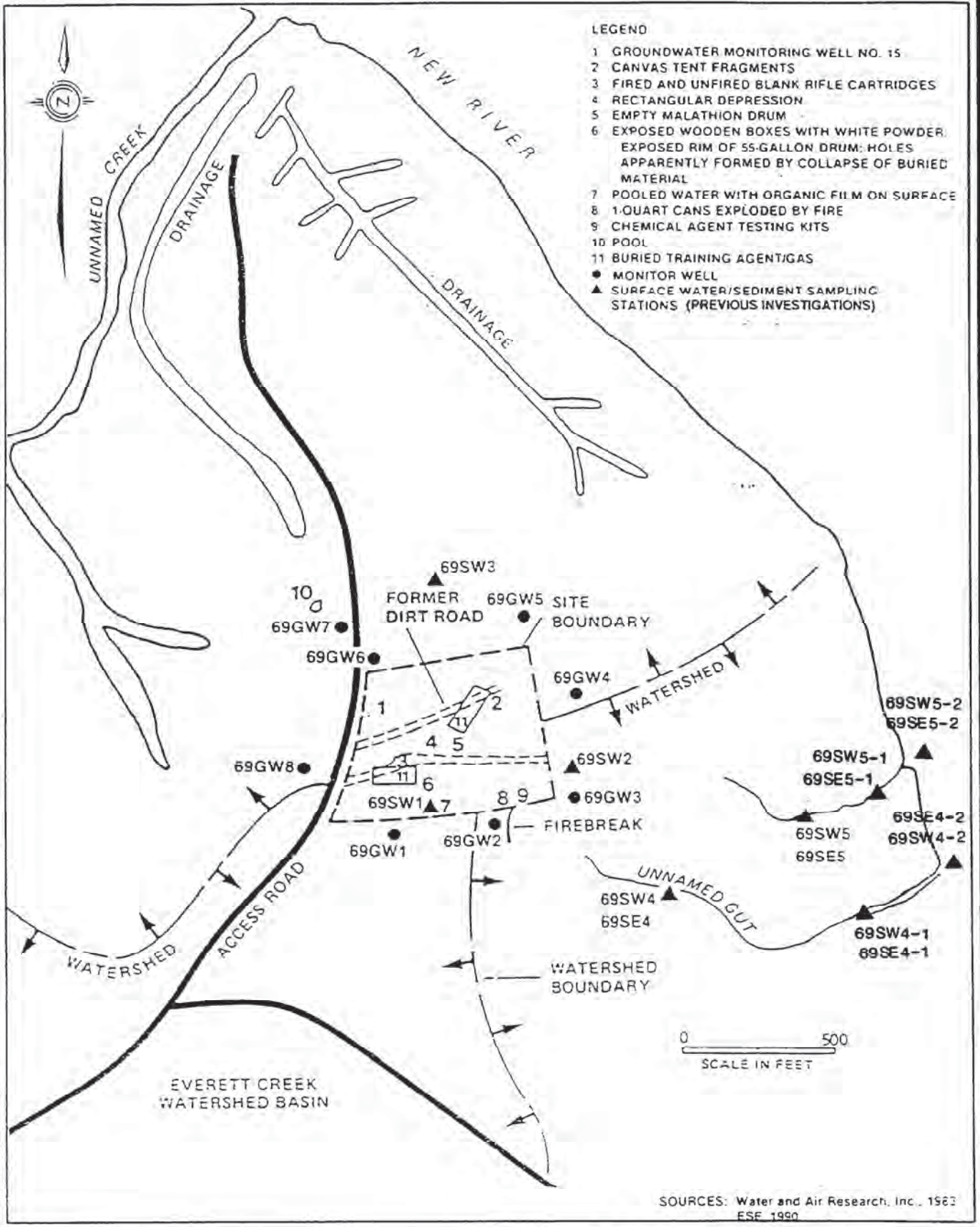
Appendix A-1
EPIC Photographs – 1956, 1964, and 1970

N
MM
DG
TR1
(w/LQ)
LT MM
POSS-ST
MM
TR2
(w/ Prob MT
LQ or M)

REV DG
(1958)
TR 1
CA
(1958)
MM
TR 3
TR 2
CA
CA

CAC(1974)
GR
GR
PROB 4-Q
GR

Appendix A-2
Site Assessment Report (ESE, 1992)



SOURCES: Water and Air Research, Inc., 1983
ESE, 1990

FIGURE 5-3
SITE 69
RIFLE RANGE CHEMICAL DUMP
SURFACE WATER AND SEDIMENT SAMPLE LOCATIONS

MARINE CORPS BASE
CAMP LEJEUNE

Environmental Science & Engineering, Inc.

Table 5-5. SITE 69 - RIFLE RANGE CHEMICAL DUMP DETECTED TARGET ANALYTES GROUNDWATER SAMPLES (PAGE 1 OF 2)

PARAMETER	NC GW STANDARDS	69GW1 7/18/84	69GW1 12/12/86	69GW2 7/18/84	69GW2 12/17/86	69GW3 7/18/84	69GW3 12/17/86	69GW4 7/18/84	69GW4 12/18/86
MERCURY	1.1	0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2
BHC,B	NONE	<0.0001	<0.013	<0.0001	<0.013	<0.0001	0.087	<0.0001	<0.013
BHC,D	NONE	<0.0003	NR	<0.0003	0.034	<0.0003	2.44	<0.0003	<0.013
1,2-DIBROMOETHANE	NONE	NA	<0.02	NA	4.74	NA	0.363	NA	<0.02
BENZENE	1	<0.3	<1	0.7	<25	4	4	<0.6	<1
CHLOROBENZENE	300	<0.5	<6	<0.5	<150	49	55	<0.9	<6
CHLOROFORM	0.19	<0.7	<1.6	<0.6	<40	<0.6	<1.6	1.3	14
1,2-DICHLOROETHANE	0.38	<1	<2.8	5.9	<70	1.9	<2.8	<1.8	<2.8
1,1-DICHLOROETHYLENE	7	<1.2	<2.8	1.6	<70	2.7	<2.8	<2.4	<2.8
T-1,2-DICHLORO-									
ETHENE	70	<1.2	<1.6	9700	37000	4000	830	410	91
METHYLENE CHLORIDE	5	10	<2.8	<1	<70	<1	<2.8	<2	<2.8
1,1,2,2-TETRACHLORO-									
ETHANE	NONE	<0.9	<4.1	44	<100	<0.8	<4.1	2	5.4
TETRACHLOROETHENE	NONE	<1.7	<3	20	<75	<1.6	<3	<3.3	<3
1,1,2-TRICHLORO-									
ETHANE	NONE	<1.2	<5	7.9	<130	<1.2	<5	3.1	<5
TRICHLOROETHENE	NONE	<1.3	<3	340	710	4.9	<3	<2.5	<3
TOLUENE	1000	0.7	<6	5	<150	14	10	<1	<6
VINYL CHLORIDE	0.015	<0.9	<1	80	440	2	1.6	<2	<1

NA: not analyzed.

NR: not reported.

Values reported are concentrations in micrograms per liter (ug/L); this approximates parts per billion (ppb).

Source: ESE, 1990.

T e 5-5. SITE 69 - RIFLE RANGE CHEMICAL DUM
DETECTED TARGET ANALYTES
GROUNDWATER SAMPLES
(PAGE 2 OF 2)

DATE	NC GW STANDARDS	69GW5 7/18/84	69GW5 12/18/86	69GW6 7/18/84	69GW6 12/18/86	69GW7 7/18/84	69GW7 12/18/86	69GW8 7/18/84	69GW8 12/18/86
PARAMETER									
MERCURY	1.1	<0.2	<0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2
BHC,B	NONE	<0.0001	<0.017	<0.0001	<0.013	<0.0001	<0.013	<0.0001	<0.013
BHC,D	NONE	<0.0003	<0.017	<0.0003	<0.013	<0.0003	<0.013	<0.0003	<0.013
1,2-DIBROMOETHANE	NONE	NA	<0.02	NA	<0.02	NA	<0.02	NA	<0.02
BENZENE	1	<0.3	<1	<0.3	<1	<0.3	<1	<0.3	<1
CHLOROBENZENE	300	<0.5	<6	<0.5	<6	<0.5	<6	<0.5	<6
CHLOROFORM	0.19	<0.7	<1.6	<0.6	<1.6	<0.7	<1.6	<0.7	<1.6
1,2-DICHLOROETHANE	0.38	<1	<2.8	<0.9	<2.8	<1	<2.8	<1	<2.8
1,1-DICHLOROETHYLENE	7	<1.2	<2.8	<1.2	<2.8	<1.2	<2.8	<1.3	<2.8
T-1,2-DICHLORO-									
ETHENE	70	<1.2	4.2	<1.2	<1.6	<1.2	<1.6	<1.2	<1.6
METHYLENE CHLORIDE	5	<1	<2.8	<1	<2.8	<1	<2.8	<1	<2.8
1,1,2,2-TETRACHLORO-									
ETHANE	NONE	<0.9	<4.1	<0.8	<4.1	<0.9	<4.1	<0.9	<4.1
TETRACHLOROETHENE	NONE	<1.7	<3	<1.6	<3	<1.7	<3	<1.7	<3
1,1,2-TRICHLORO-									
ETHANE	NONE	<1.2	<5	<1.2	<5	<1.2	<5	<1.2	<5
TRICHLOROETHENE	NONE	<1.3	<3	<1.3	<3	<1.3	<3	<1.3	<3
TOLUENE	1000	<0.6	<6	<0.6	<6	<0.6	<6	<0.6	<6
VINYL CHLORIDE	0.015	<1	<1	<0.9	<1	<1	<1	<0.9	<1

NA: not analyzed.

Values reported are concentrations in micrograms per liter (ug/L); this approximates parts per billion (ppb).

Source: ESE, 1990.

Table 5-6. SITE 69 - RIFLE RANGE CHEMICAL DUMP
DETECTED TARGET ANALYTES
SURFACE WATER SAMPLES

Date	NC SW Standards		69SW1 8/4/84	69SW1 8/4/84	69SW2 12/12/86	69SW2 8/4/84	69SW2 12/12/86	69SW3 12/12/86
Parameter	Aquatic	Human						
BHC, A	NS	NS	<0.001	<0.001	0.043	<0.001	0.056	<0.035
BHC, B	NS	NS	0.03	<0.0001	0.043	0.005	0.18	<0.013
BHC, D	NS	NS	0.2	<0.0003	NR	0.02	NR	NR
Pentachlorophenol	NS	NS	10	4	<0.89	<0.9	1.24	<0.89
Benzene	NS	71.4	0.4	NA	<1	<0.2	<1	<1
Chlorobenzene	NS	NS	2.1	NA	<6	<0.3	<6	<6
Chloroform	NS	NS	6	NA	<1.6	<0.5	<1.6	<1.6
1,2-Dichloroethane	NS	NS	0.9	NA	<2.8	<0.8	<2.8	<2.8
T-1,2-Dichloroethene	NS	NS	410	NA	310	10	170	<1.6
Ethylbenzene	NS	NS	3	NA	<7.2	<0.6	<7.2	<7.2
Methylene Chloride	NS	NS	<0.6	NA	<2.8	8	<2.8	<2.8
1,1,2,2-Tetrachloroethane	NS	10.8	59	NA	<4.1	<0.5	<4.1	<4.1
1,1,2-Trichloroethane	NS	NS	6	NA	<5	<0.8	<5	<5
Trichloroethene	NS	NS	55	NA	63	1.3	12	<3
Toluene	11	NS	11	NA	<6	<0.4	<6	<6
Vinyl Chloride	NS	525	15	NA	41	<0.6	<1	<1
Mercury	.012	NS	<0.2	<0.2	<0.2	<0.2	<0.2	0.2

NA = Not Analyzed
NS = No Standard
Values reported are concentrations in micrograms per liter (μg/L); this approximates parts per billion (ppb).

Source: ESE, 1990

Table 5-7. **SITE 69 - RIFLE RANGE CHEMICAL DUMP DETECTED TARGET ANALYTES SEDIMENT SAMPLES**

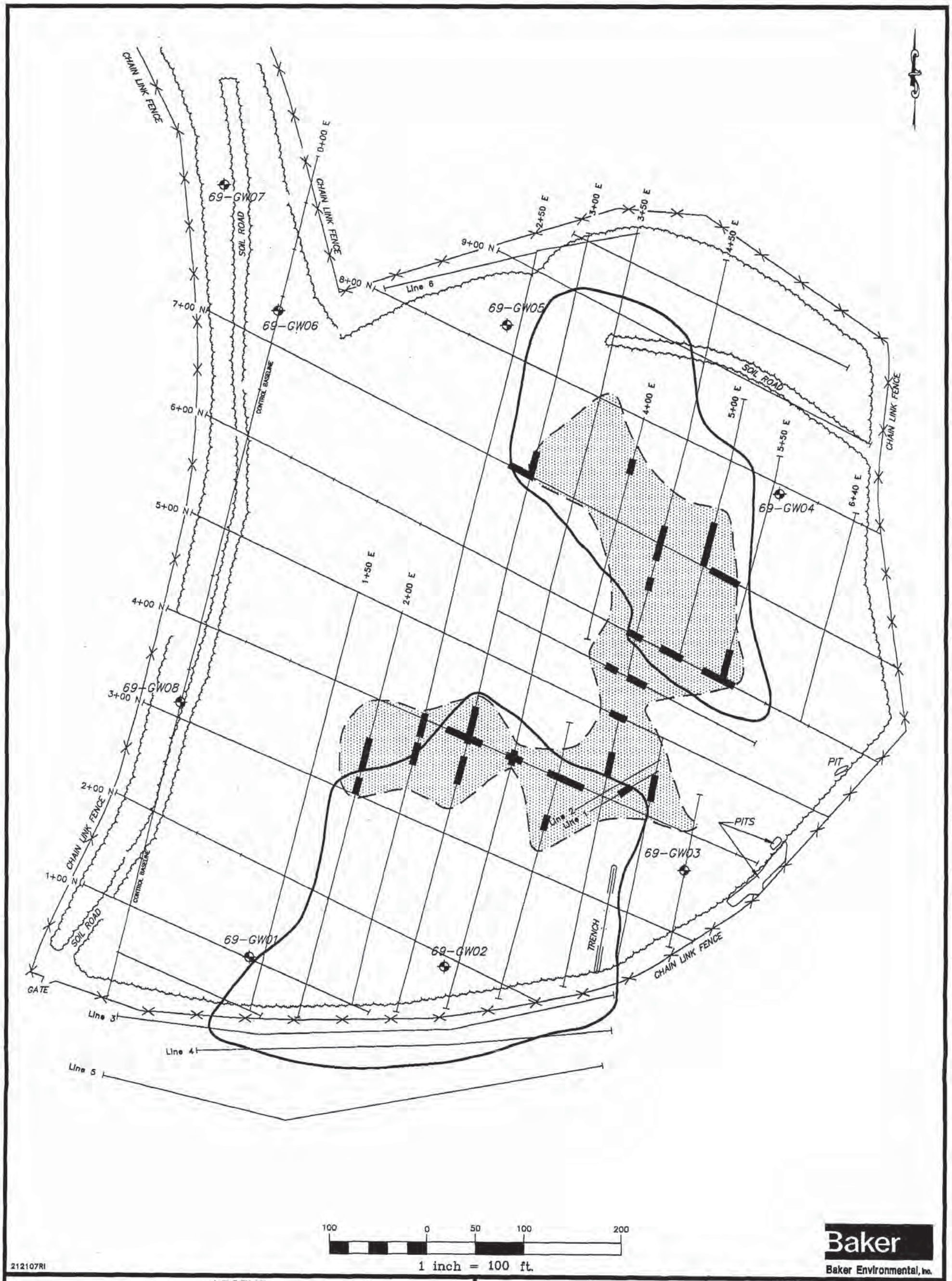
	69SE4	69SE5
DATE	12/12/86	12/12/86
PARAMETER		
DDD,PP'	<0.0129	0.113
DDE,PP'	0.0188	<0.0224
PENTACHLOROPHENOL	1.190	<0.0513

Values reported are concentrations in micrograms per gram (ug/g); this approximates parts per million (ppm).

Note: There are no NC sediment standards.

Source: ESE, 1990.

Appendix A-3
Remedial Investigation Report (Baker, 1997)

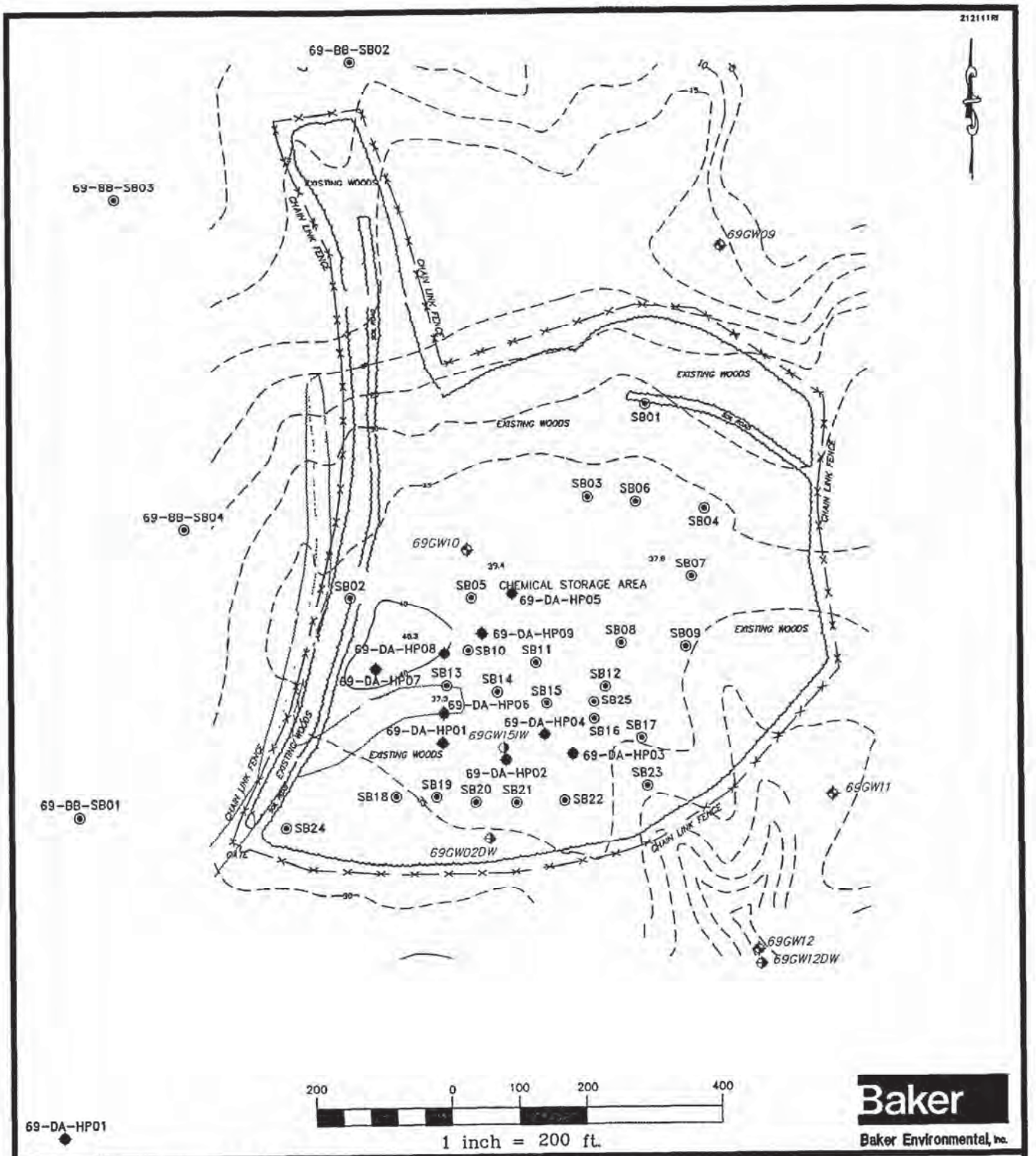


LEGEND

- MONITORING WELL
- EM AND MAG SURVEY LINE
- INTERPRETED LIMIT OF INCREASED CONDUCTIVITY(>10 mmhos/m) INDICATIVE OF BACKFILL MATERIALS AND/OR CONTAMINANT PLUME
- INTERPRETED LIMIT OF INCREASED MAGNETIC INTENSITY INDICATIVE OF BURIED FERROUS METAL
- BURIED METALLIC OBJECT

FIGURE 2-4
GEOPHYSICAL GRID RESULTS
SITE 69 - RIFLE RANGE
CHEMICAL DUMP
REMEDIAL INVESTIGATION CTO-0212
MARINE CORPS BASE, CAMP LEJEUNE
NORTH CAROLINA

01761N042



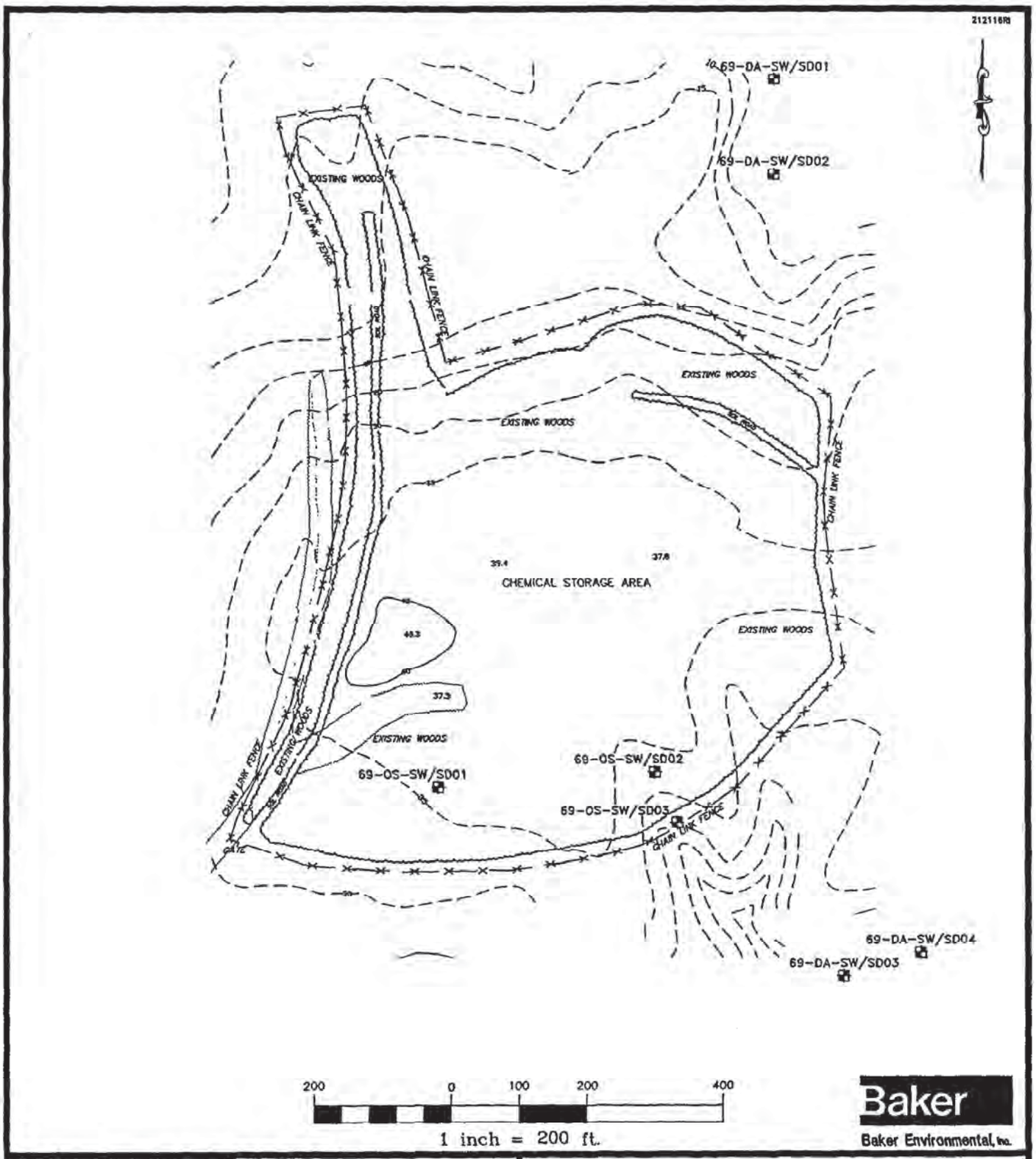
69-DA-HP01

LEGEND

- 69GW9 — SHALLOW MONITORING WELL LOCATION
- 69GW02DW — DEEP MONITORING WELL LOCATION
- SB01 — SURFACE SOIL SAMPLING LOCATION
- 69-DA-HP01 — HYDROPUNCH LOCATION
- FENCE
- VEGETATION
- TOPOGRAPHIC ELEVATION LINES (FEET, MSL)

SOURCE: REVISED FROM LANTDIV, OCT. 1991

FIGURE 2-8
SURFACE AND SUBSURFACE SOIL SAMPLING LOCATIONS
SITE 69 – RIFLE RANGE CHEMICAL DUMP
REMEDIAL INVESTIGATION CTO-0212
MARINE CORPS BASE, CAMP LEJEUNE
NORTH CAROLINA



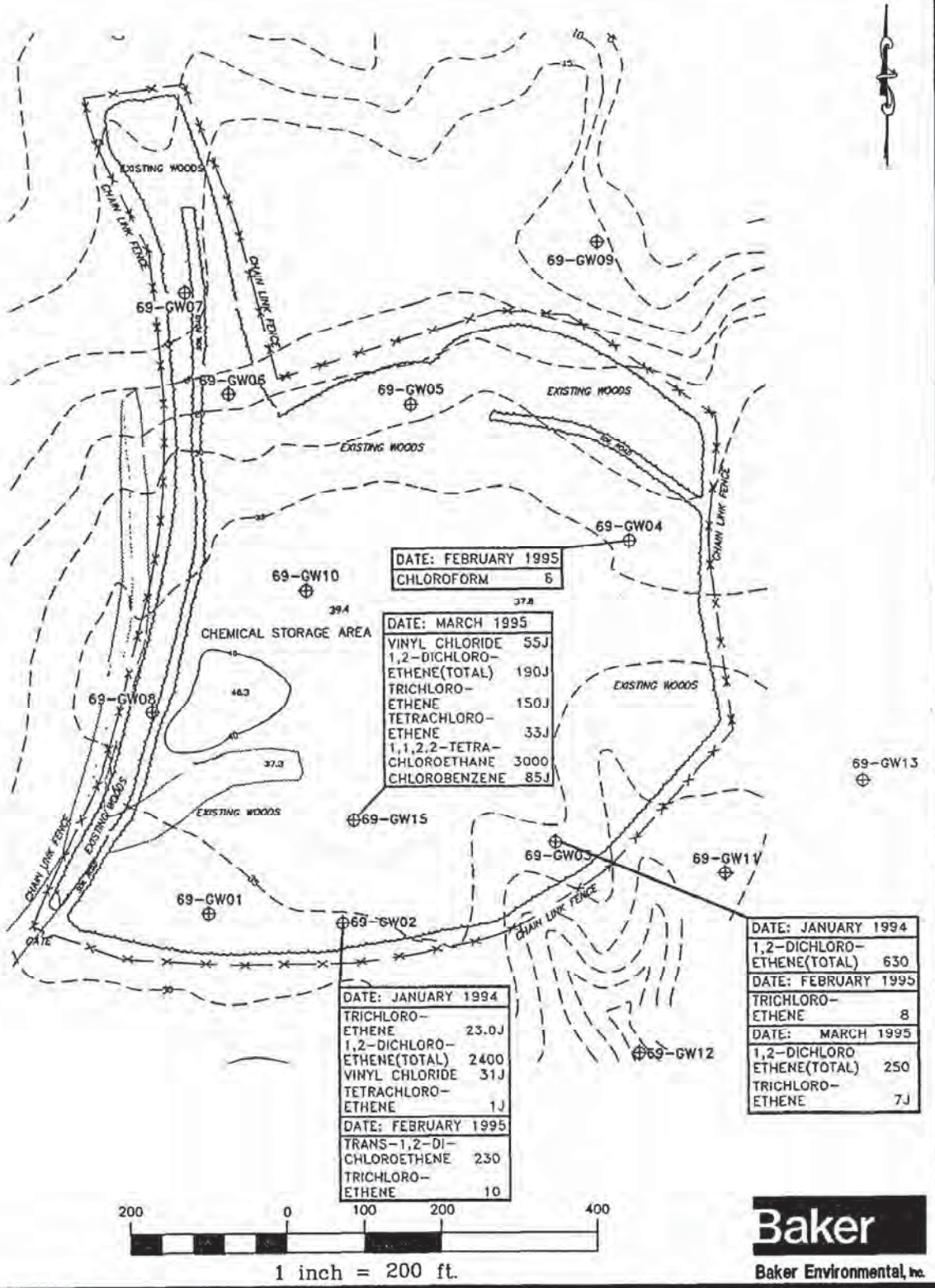
LEGEND

69-OS-SW01	SURFACE WATER/SEDIMENT SAMPLE LOCATION
	FENCE
	VEGETATION
	TOPOGRAPHIC ELEVATION LINES (FEET, MSL)

SOURCE: REVISED FROM LANTDIV, OCT. 1991

FIGURE 2-12
SURFACE WATER/SEDIMENT
SAMPLING LOCATIONS
SITE 69 - RIFLE RANGE CHEMICAL DUMP
REMEDIAL INVESTIGATION CTO-0212
MARINE CORPS BASE, CAMP LEJEUNE
NORTH CAROLINA

212135RI



Baker

Baker Environmental, Inc.

LEGEND

69-GW09 ⊕ EXISTING SHALLOW WELLS

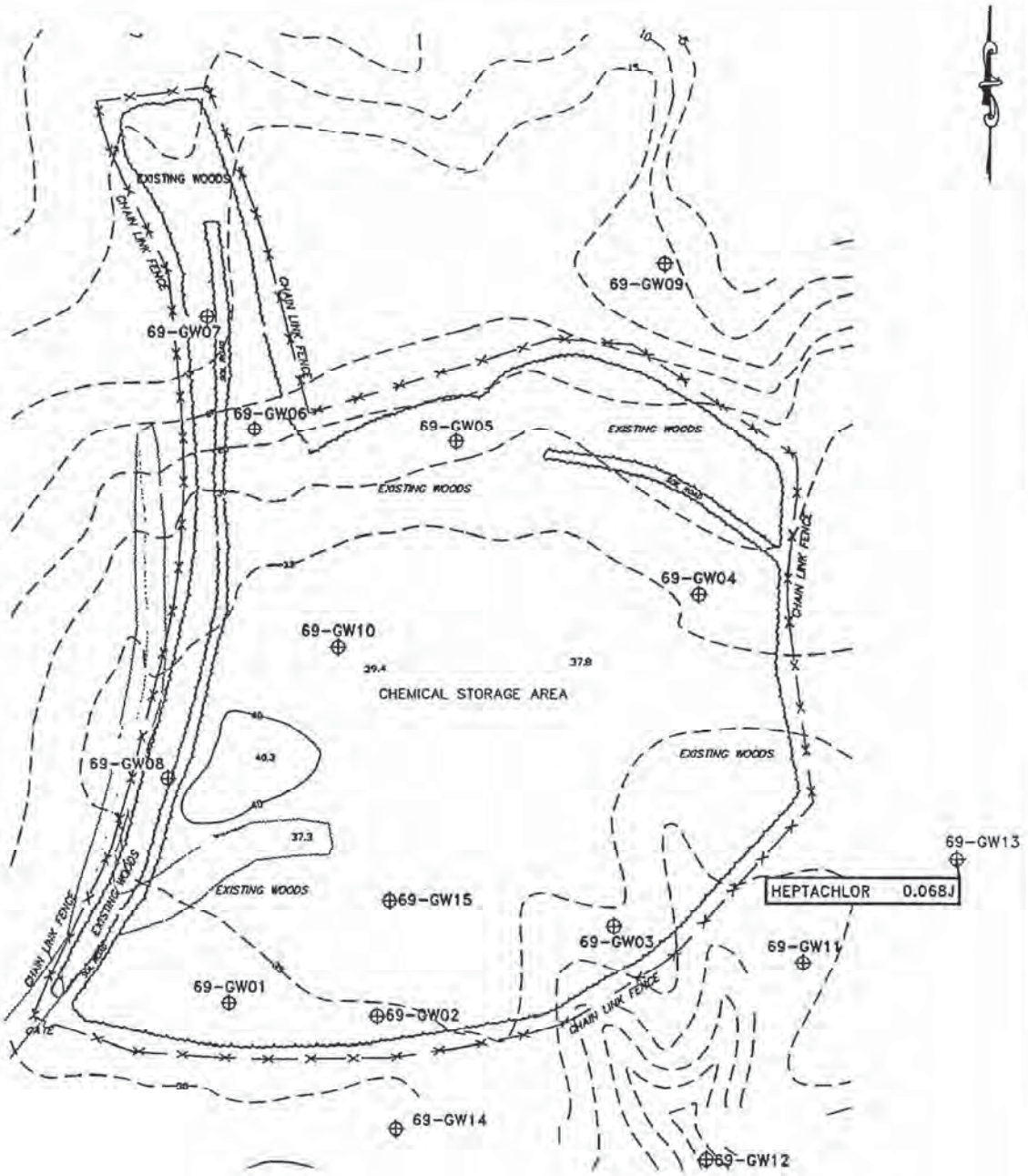
TOPOGRAPHIC ELEVATION LINES (FEET, MSL)

ALL CONCENTRATIONS REPORTED IN MICROGRAMS PER LITER (ug/L).

SOURCE: REVISED FROM LANTDIV, OCT. 1991

FIGURE 4-7
POSITIVE DETECTIONS OF VOLATILES ABOVE FEDERAL MCLs AND/OR NCWQS IN SHALLOW WELLS
SITE 69 - RIFLE RANGE CHEMICAL DUMP
REMEDIAL INVESTIGATION CTO-0212
MARINE CORPS BASE, CAMP LEJEUNE
NORTH CAROLINA

212136RI



200 0 100 200 400

1 inch = 200 ft.

Baker

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LEGEND

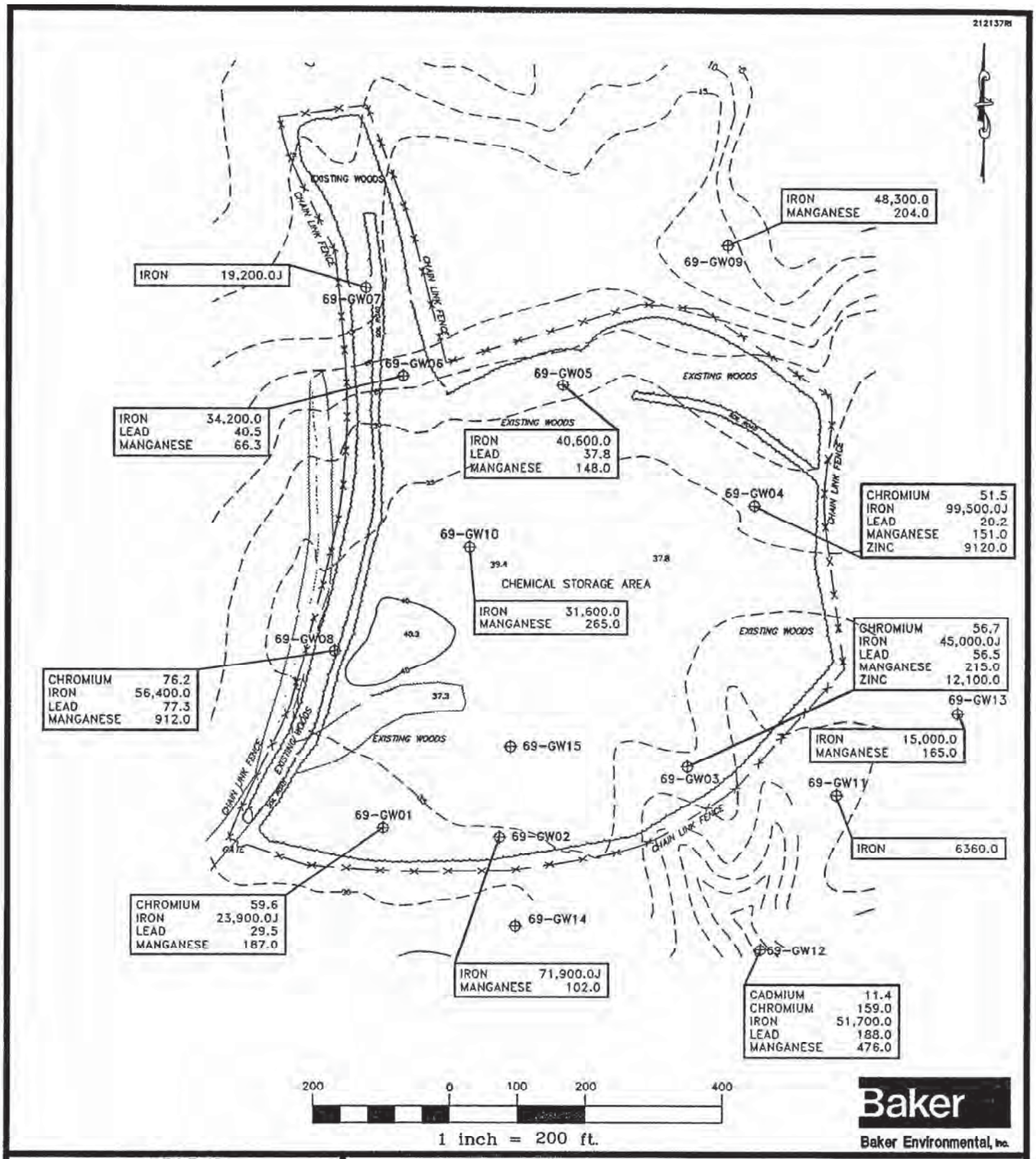
69-GW09 EXISTING SHALLOW WELLS

TOPOGRAPHIC ELEVATION LINES (FEET, MSL)

ALL CONCENTRATIONS REPORTED IN MICROGRAMS PER LITER (ug/L).

SOURCE: REVISED FROM LANTDIV, OCT. 1991

FIGURE 4-8
POSITIVE DETECTIONS OF PESTICIDES FOR ROUND 1 ABOVE FEDERAL MCLs AND/OR NCWQS IN SHALLOW WELLS
SITE 69 - RIFLE RANGE CHEMICAL DUMP
REMEDIAL INVESTIGATION CTO-0212
MARINE CORPS BASE, CAMP LEJEUNE
NORTH CAROLINA



LEGEND

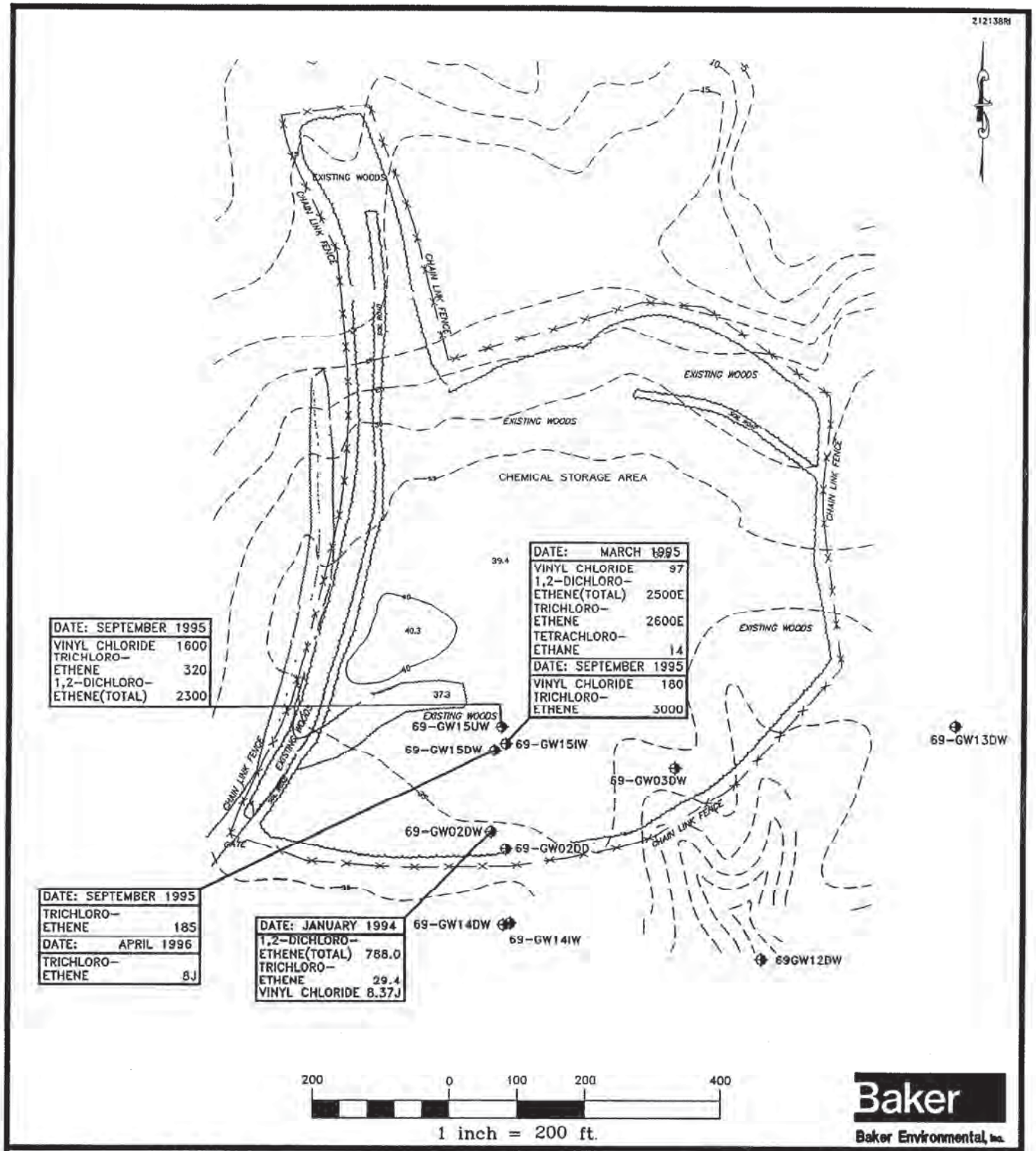
69-GW09 ⊕ EXISTING SHALLOW WELLS

- - 20 - - TOPOGRAPHIC ELEVATION LINES (FEET, MSL)

ALL CONCENTRATIONS REPORTED IN MICROGRAMS PER LITER (ug/L).

SOURCE: REVISED FROM LANTDIV, OCT. 1991

FIGURE 4-9
POSITIVE DETECTIONS OF TAL METALS FOR ROUND 1 ABOVE FEDERAL MCLs AND/OR NCWQS IN SHALLOW WELLS
SITE 69 – RIFLE RANGE CHEMICAL DUMP
REMEDIAL INVESTIGATION CTO-0212
MARINE CORPS BASE, CAMP LEJEUNE
NORTH CAROLINA



LEGEND

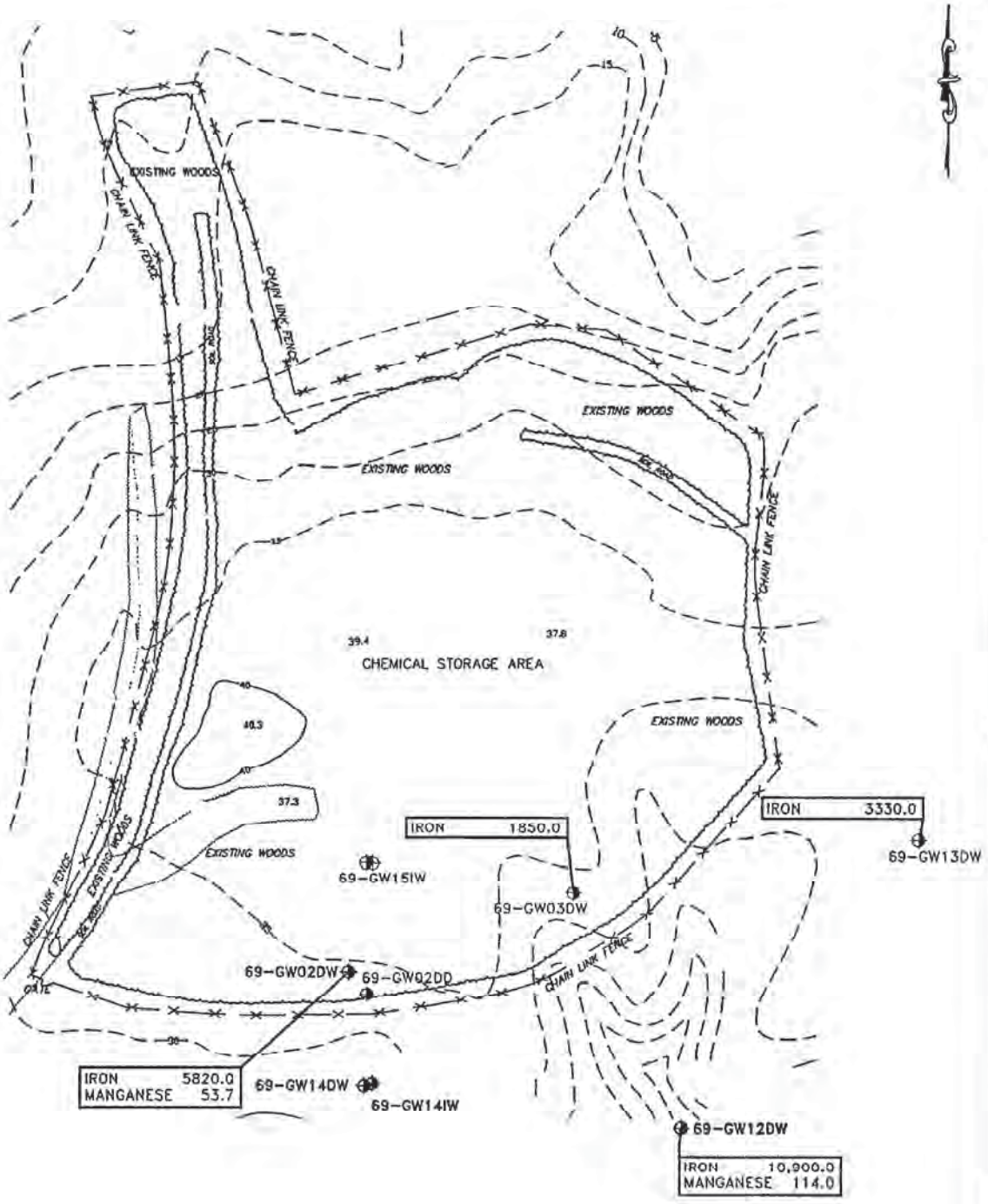
69-GW02DW EXISTING CASTLE HAYNE WELLS

TOPOGRAPHIC ELEVATION LINES (FEET, MSL)

ALL CONCENTRATIONS REPORTED IN MICROGRAMS PER LITER (ug/L).

SOURCE: REVISED FROM LANTDIV, OCT. 1991

FIGURE 4-10
POSITIVE DETECTIONS OF VOLATILES ABOVE FEDERAL MCLs AND/OR NCWQS IN THE CASTLE HAYNE AQUIFER
SITE 69 - RIFLE RANGE CHEMICAL DUMP
REMEDIAL INVESTIGATION CTO-0212
MARINE CORPS BASE, CAMP LEJEUNE
NORTH CAROLINA



LEGEND

69GW02DW EXISTING DEEP WELLS

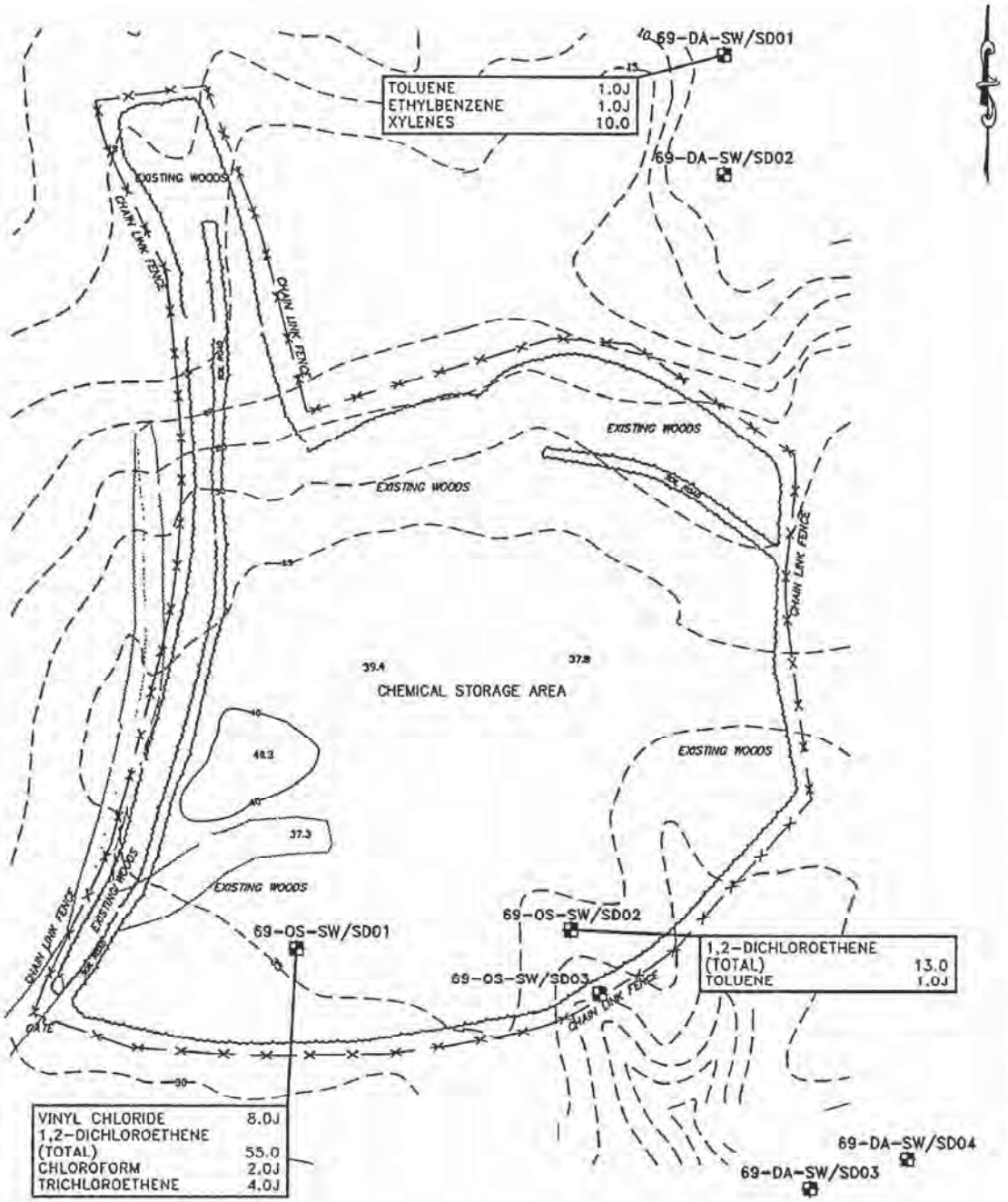
TOPOGRAPHIC ELEVATION LINES (FEET, MSL)

ALL CONCENTRATIONS REPORTED IN MICROGRAMS PER LITER (ug/L).

SOURCE: REVISED FROM LANTDIV, OCT. 1991

FIGURE 4-11
POSITIVE DETECTIONS OF TAL METALS FOR ROUND 1 ABOVE FEDERAL MCLs AND/OR NCWQS IN DEEP WELLS
SITE 69 - RIFLE RANGE CHEMICAL DUMP
REMEDIAL INVESTIGATION CTO-0212
MARINE CORPS BASE, CAMP LEJEUNE
NORTH CAROLINA

212140RI



200 0 100 200 400

1 inch = 200 ft.

Baker

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LEGEND

69-DA-SW/SD01 SURFACE WATER/SEDIMENT SAMPLE LOCATION

FENCE

VEGETATION

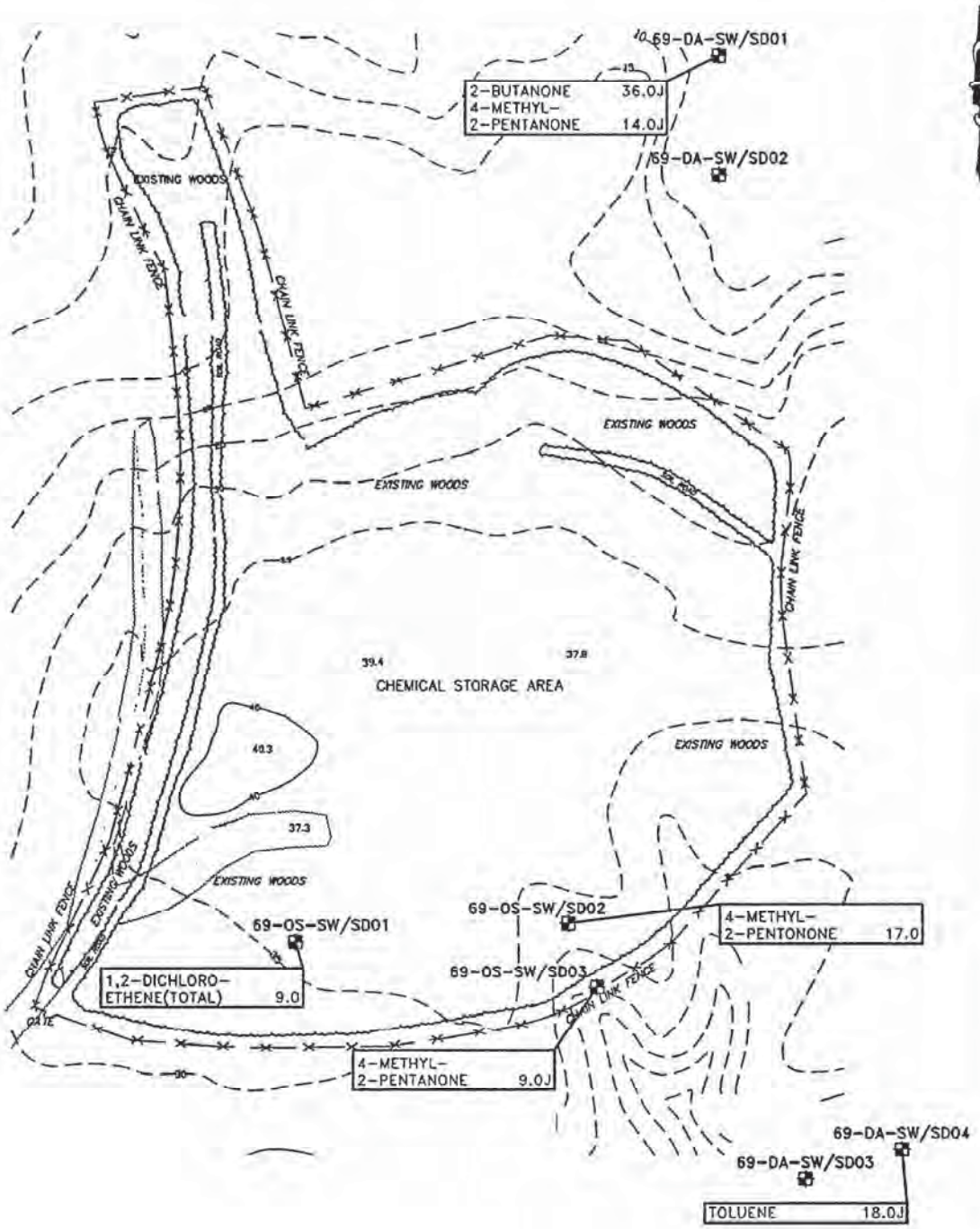
TOPOGRAPHIC ELEVATION LINES (FEET, MSL)

ALL CONCENTRATIONS REPORTED IN MICROGRAMS PER LITER (ug/L).

SOURCE: REVISED FROM LANTDIV, OCT. 1991

FIGURE 4-12
POSITIVE DETECTIONS OF VOLATILES IN SURFACE WATER
SITE 69 - RIFLE RANGE CHEMICAL DUMP
REMEDIAL INVESTIGATION CTO-0212
MARINE CORPS BASE, CAMP LEJEUNE
NORTH CAROLINA

212141R



200 0 100 200 400

1 inch = 200 ft.

Baker

Baker Environmental, Inc.

LEGEND

69-DA-SW/SD01 SURFACE WATER/SEDIMENT SAMPLE LOCATION

FENCE

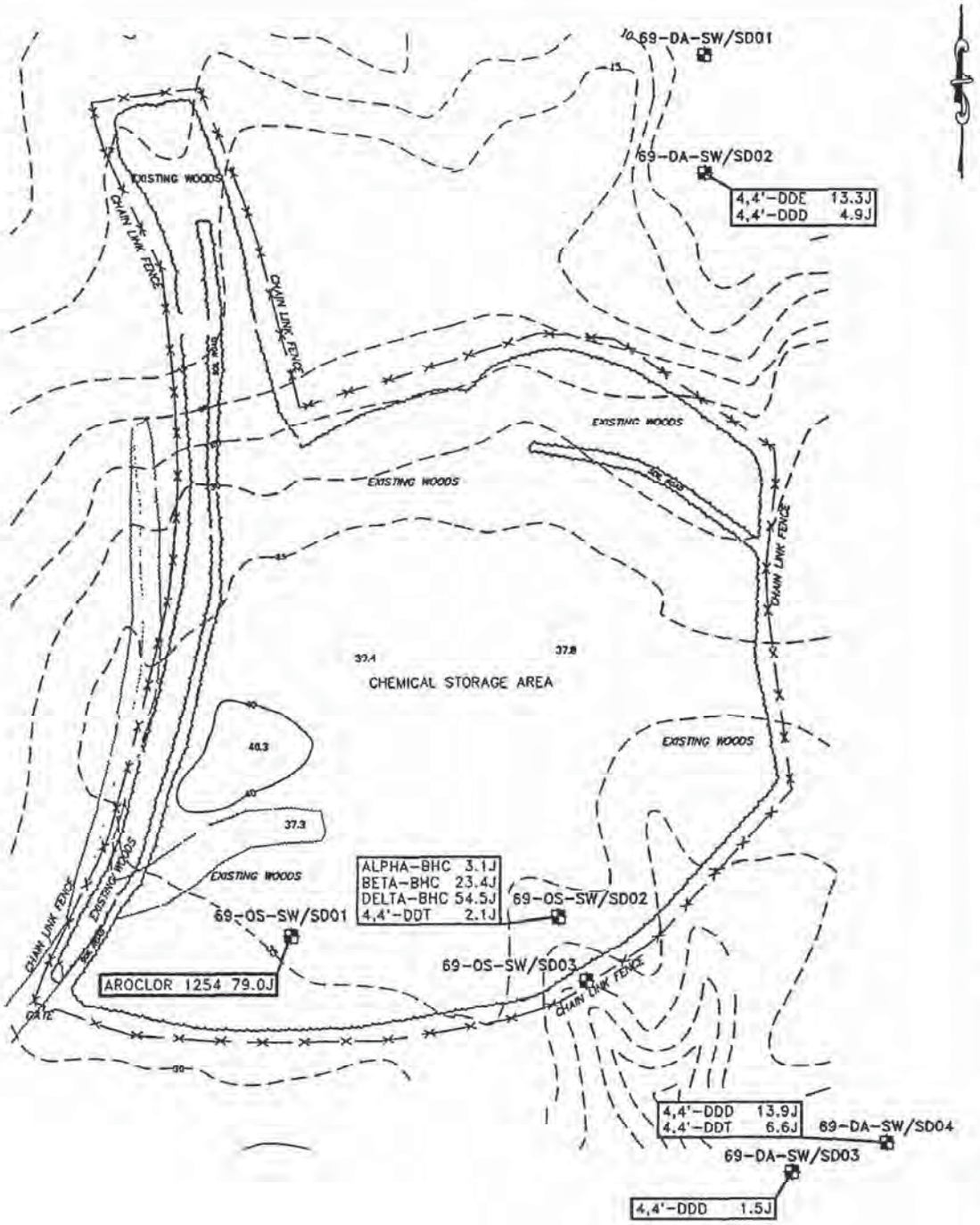
VEGETATION

TOPOGRAPHIC ELEVATION LINES (FEET, MSL)

ALL CONCENTRATIONS REPORTED IN MICROGRAMS PER KILOGRAM (ug/kg).

SOURCE: REVISED FROM LANTDIV, OCT. 1991

FIGURE 4-13
POSITIVE DETECTIONS OF VOLATILES IN SEDIMENT
SITE 69 - RIFLE RANGE CHEMICAL DUMP
REMEDIAL INVESTIGATION CTO-0212
MARINE CORPS BASE, CAMP LEJEUNE
NORTH CAROLINA



200 0 100 200 400

1 inch = 200 ft.

Baker

Baker Environmental, Inc.

LEGEND

69-DA-SW/SD01 — SURFACE WATER/SEDIMENT SAMPLE LOCATION

FENCE

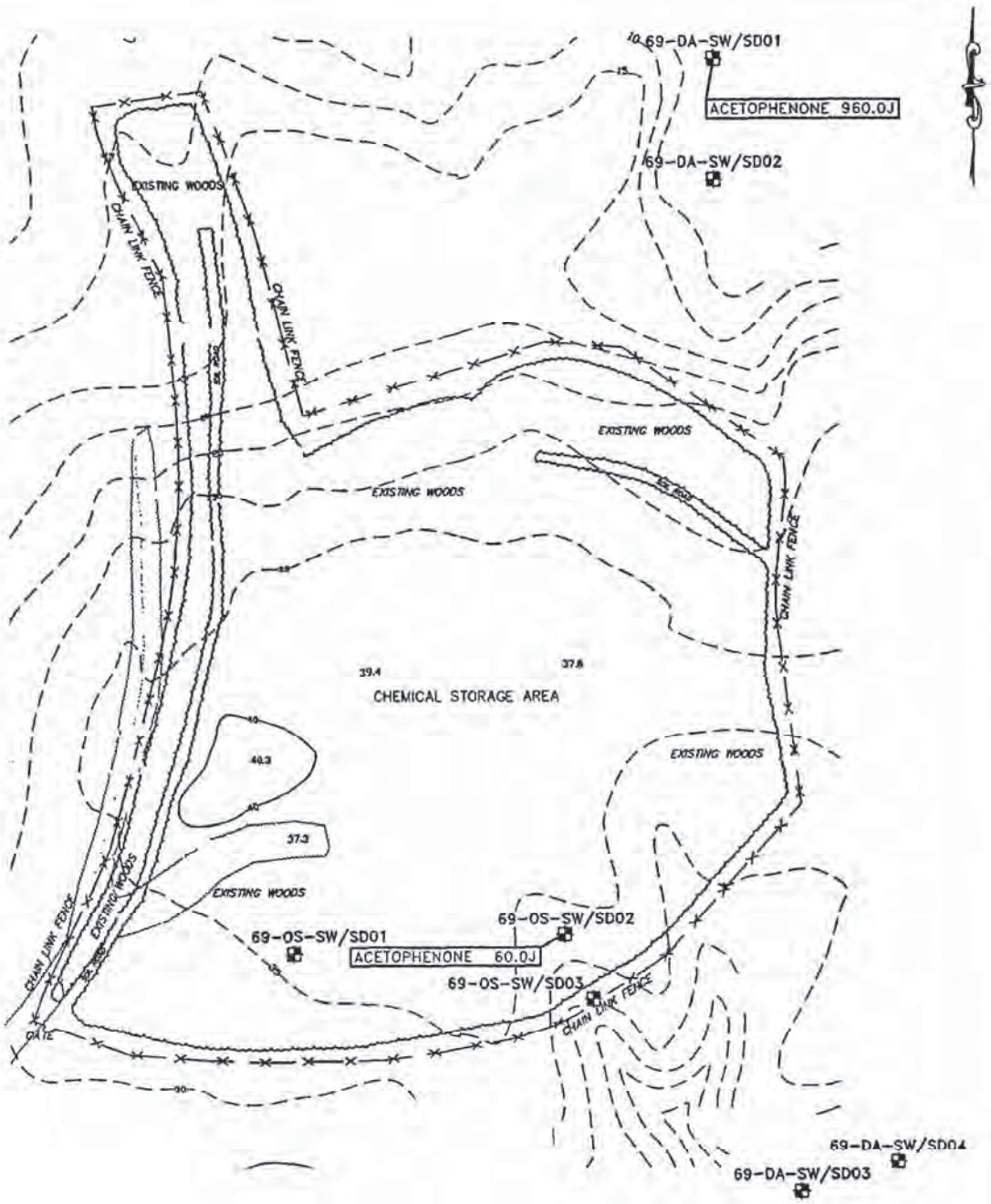
VEGETATION

TOPOGRAPHIC ELEVATION LINES (FEET, MSL)

ALL CONCENTRATIONS REPORTED IN MICROGRAMS PER KILOGRAM (ug/kg).

SOURCE: REVISED FROM LANTDIV, OCT. 1991

FIGURE 4-14
POSITIVE DETECTIONS OF PESTICIDES/ PCBs IN SEDIMENT
SITE 69 - RIFLE RANGE CHEMICAL DUMP
REMEDIAL INVESTIGATION CTO-0212
MARINE CORPS BASE, CAMP LEJEUNE
NORTH CAROLINA



200 0 100 200 400

1 inch = 200 ft.

Baker

Baker Environmental, Inc.

LEGEND

69-DA-SW/SD01 SURFACE WATER/SEDIMENT SAMPLE LOCATION

FENCE

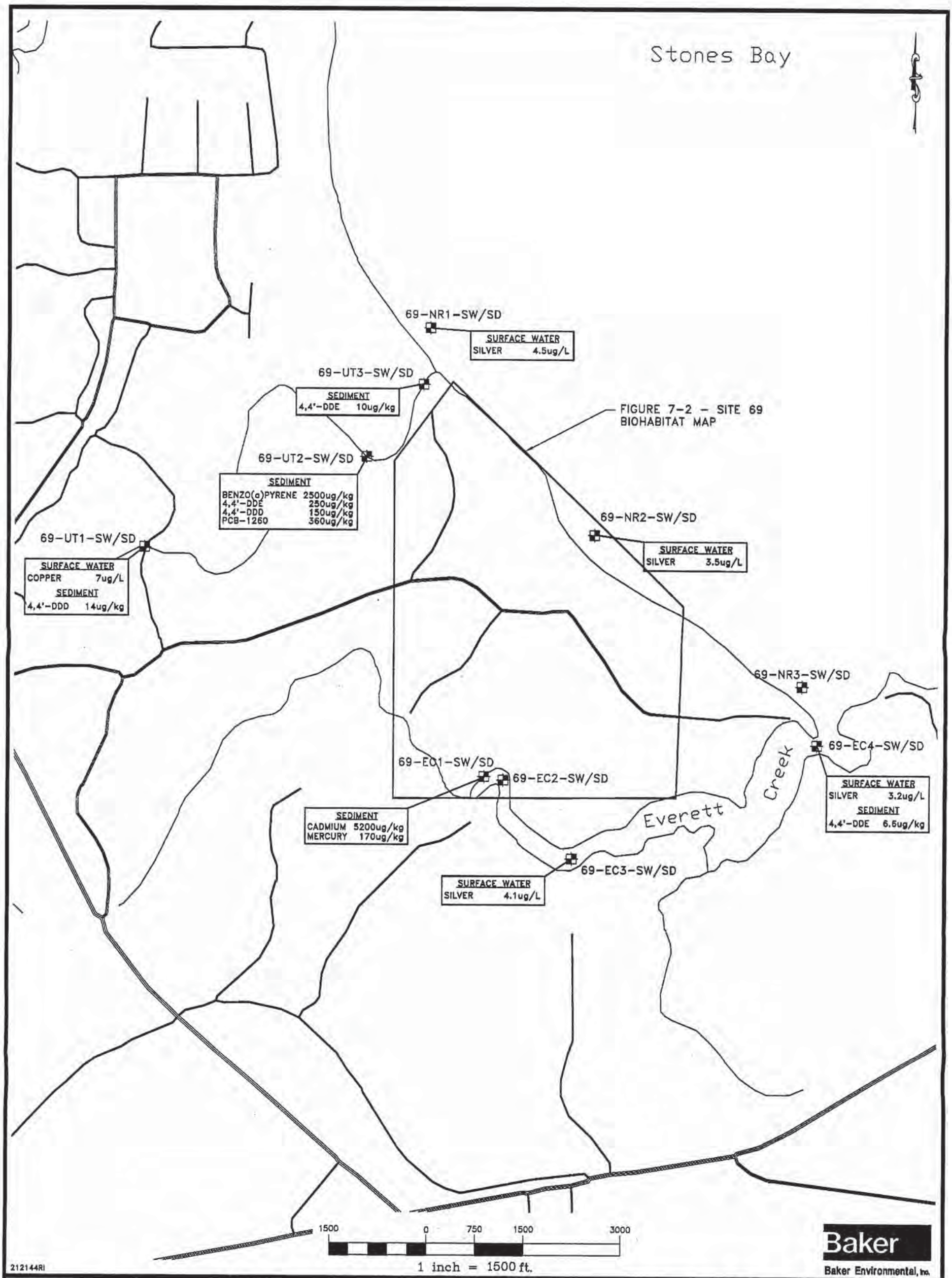
VEGETATION

TOPOGRAPHIC ELEVATION LINES (FEET, MSL)

ALL CONCENTRATIONS REPORTED IN MICROGRAMS PER KILOGRAM (ug/kg).

SOURCE: REVISED FROM LANTDIV, OCT. 1991

FIGURE 4-15
POSITIVE DETECTIONS OF CHEMICAL SURETY MATERIAL IN SEDIMENT
SITE 69 - RIFLE RANGE CHEMICAL DUMP
REMEDIAL INVESTIGATION CTO-0212
MARINE CORPS BASE, CAMP LEJEUNE
NORTH CAROLINA



LEGEND

UT - UNNAMED TRIBUTARY
EC - EVERETT CREEK
NR - NEW RIVER

FIGURE 4-16
POSITIVE DETECTIONS OF TCL ORGANICS AND TAL METALS IN SURFACE WATER AND SEDIMENT ABOVE AQUATIC REFERENCE VALUES AT SITE 69
REMEDIAL INVESTIGATION CTO-0212
MARINE CORPS BASE, CAMP LEJEUNE
NORTH CAROLINA

01761N122

TABLE 4-5

SUMMARY OF SITE CONTAMINATION
OPERABLE UNIT NO. 14 (SITE 69)
REMEDIAL INVESTIGATION, CTO-0212
MCB, CAMP LEJEUNE, NORTH CAROLINA

Media	Fraction	Contaminant	Comparison Criteria	Comparison Criteria	Site Contamination						
					Min.	Max.	Max. Concentration Location	Detection Frequency	Number of Detections Above Comparison Criteria	Number of Detections Above Comparison Criteria	Distribution
					(µg/kg)	(µg/kg)					
Surface Soils	Volatiles	Methylene Chloride	NE	NE	5J	105	69-CSA-SB23-00	15/25	NA	NA	Widespread
		Acetone	NE	NE	31J	340J	69-CSA-SB09-00	5/25	NA	NA	Scattered
		1,2-Dichloroethene (total)	NE	NE	4J	4J	69-CSA-SB20-00	1/25	NA	NA	Southern Area
		2-Butanone	NE	NE	10.9J	10.9J	69-CSA-SB23-00	1/25	NA	NA	Southeast Area
		1,1,1-Trichloroethane	NE	NE	2J	2J	69-CSA-SB18-00	1/25	NA	NA	Southwest Area
		Trichloroethene	NE	NE	3J	3J	69-CSA-SB21-00	1/25	NA	NA	Southern Area
		4-Methyl-2-pentanone	NE	NE	1J	12J	69-CSA-SB11-00	6/25	NA	NA	Scattered
		Tetrachloroethene	NE	NE	2J	2J	69-CSA-SB21-00	1/25	NA	NA	Southern Area
		Xylenes (total)	NE	NE	5J	5J	69-CSA-SB23-00	1/25	NA	NA	Southeast Area
	Semivolatiles	bis(2-Ethylhexyl)phthalate	NE	NE	43J	48J	69-CSA-SB10-00	4/25	NA	NA	Central Area
		di-n-Butylphthalate	NE	NE	36J	280J	69-CSA-SB06-00	23/25	NA	NA	Widespread
	Pesticides/ PCBs	beta-BHC	NE	NE	11J	11J	69-CSA-SB25-00	1/25	NA	NA	Central Area
		4,4'-DDE	NE	NE	4.8J	4.8J	69-CSA-SB17-00	1/25	NA	NA	Southeast Central
		Endosulfan II	NE	NE	3.4J	3.4J	69-CSA-SB15-00	1/25	NA	NA	Central Area
		4,4'-DDT	NE	NE	13.3J	13.3J	69-CSA-SB17-00	1/25	NA	NA	Southeast Central
		Aroclor 1260	NE	NE	94J	94J	69-CSA-SB19-00	1/25	NA	NA	Southwest Area
	Chemical Surety Degradation Compounds	Acetophenone	NE	NE	51J	51J	69-CSA-SB17-00	1/35	NA	NA	Southeast Central
		Hydroxyacetophenone	NE	NE	120J	160J	69-CSA-SB17-00	2/35	NA	NA	Southeast Central

TABLE 4-5 (Continued)

SUMMARY OF SITE CONTAMINATION
OPERABLE UNIT NO. 14 (SITE 69)
REMEDIAL INVESTIGATION, CTO-0212
MCB, CAMP LEJEUNE, NORTH CAROLINA

Media	Fraction	Contaminant	Comparison Criteria	Comparison Criteria	Site Contamination						
					Min.	Max.	Max. Concentration Location	Detection Frequency	Number of Detections Above Comparison Criteria	Number of Detections Above Comparison Criteria	Distribution
Surface Soils (Cont.)				Base Background (mg/kg)	(mg/kg)	(mg/kg)				Base Background	
	Inorganics	Aluminum	NE	17.7-9,570	368	3370	69-CSA-SB12-00	25/25	NA	0	Widespread
		Barium	NE	0.65-20.8	3	6.8	69-CSA-SB21-00	17/25	NA	0	Widespread
		Calcium	NE	4.25-10,700	35.8	101	69-CSA-SB19-00	8/25	NA	0	Scattered
		Chromium	NE	0.33-12.5	1.6	3.6	69-CSA-SB18-00	18/25	NA	0	Widespread
		Iron	NE	69.7-9,640	235	2360	69-CSA-SB12-00	25/25	NA	0	Widespread
		Lead	NE	0.47-142	1.1J	12.5	69-CSA-SB17-00	25/25	NA	0	Widespread
		Magnesium	NE	2.55-610	12.9	67.7	69-CSA-SB18-00	24/25	NA	0	Widespread
		Manganese	NE	0.87-66	1.3	15.5	69-CSA-SB01-00	22/25	NA	0	Widespread
		Potassium	NE	1-416	66.1	66.4	69-CSA-SB13-00	2/25	NA	0	Scattered
		Selenium	NE	0.075-1.3	1.1	1.1	69-CSA-SB21-00	1/25	NA	0	Southern Area
		Silver	NE	0.0435-4.3	0.09J	10.2J	69-CSA-SB25-00	4/25	NA	1	Central Area
		Vanadium	NE	0.305-18.2	3.9	5.3	69-CSA-SB12-00	3/25	NA	0	Scattered
		Zinc	NE	0.3-28.3	1.5	66	69-CSA-SB19-00	12/25	NA	1	Scattered
		Total Cyanide	NE	NE	1.1	2.3	69-CSA-SB15-00	12/25	NA	NA	Scattered

TABLE 4-5 (Continued)

SUMMARY OF SITE CONTAMINATION
OPERABLE UNIT NO. 14 (SITE 69)
REMEDIAL INVESTIGATION, CTO-0212
MCB, CAMP LEJEUNE, NORTH CAROLINA

Media	Fraction	Contaminant	Comparison Criteria	Comparison Criteria	Site Contamination						
					Min.	Max.	Max. Concentration Location	Detection Frequency	Number of Detections Above Comparison Criteria	Number of Detections Above Comparison Criteria	Distribution
					(µg/kg)	(µg/kg)					
Sub-surface Soil	Volatiles	Methylene chloride	NE	NE	6J	58	69-GW11-02	7/20	NA	NA	Widespread
		Acetone	NE	NE	13J	45000	69-GW12-01	8/20	NA	NA	Widespread
		1,2-Dichloroethene (total)	NE	NE	2J	2J	69-DA-HP01	1/20	NA	NA	Central Area
		1,1,1-Trichloroethane	NE	NE	2J	2J	69-GW11-02	1/20	NA	NA	Southeast of Site
		1,1,2-Trichloroethane	NE	NE	3J	3J	69-DA-HP02	1/20	NA	NA	Central Area
		Ethylbenzene	NE	NE	2J	2J	69-GW12DW-01	2/20	NA	NA	Scattered
	Semivolatiles	bis(2-Ethylhexyl)phthalate	NE	NE	53J	53J	69-GW11-02	1/10	NA	NA	Southeast of Site
		Diethylphthalate	NE	NE	260J	260J	69-GW02DW-03	1/10	NA	NA	Southern Area
		di-n-Butylphthalate	NE	NE	53J	120J	69-GW09-05	5/10	NA	NA	Scattered
	Pesticides	4,4'-DDE	NE	NE	1.2J	1.2J	69-GW10-01	1/10	NA	NA	Central Area
		Endrin	NE	NE	1.2J	1.2J	69-GW02DW-01	1/10	NA	NA	Southern Area
		4,4'-DDD	NE	NE	5.7J	5.7J	69-GW10-01	1/10	NA	NA	Central Area
		4,4'-DDT	NE	NE	1.6J	1.6J	69-GW02DW-01	1/10	NA	NA	Southern Area
				Base Background (mg/kg)	(mg/kg)	(mg/kg)				Base Background	
	Inorganics	Aluminum	NE	16.9-11,000	832	9990	69-GW09-05	10/10	NA	0	Widespread
		Arsenic	NE	0.033-15.4	1.15	2.9	69-GW09-05	2/10	NA	0	Scattered
		Barium	NE	0.65-22.6	3.8	14.6	69-GW09-05	7/10	NA	0	Widespread
		Beryllium	NE	0.01-0.31	0.36	0.36	69-GW09-05	1/10	NA	1	Northeast of Site
		Cadmium	NE	0.155-1.2	0.74	0.74	69-GW09-05	1/10	NA	0	Northeast of Site
		Calcium	NE	4.75-4,410	29.2	688	69-GW09-05	8/10	NA	0	Widespread
		Chromium	NE	0.65-66.4	1.76	17.7	69-GW09-05	8/10	NA	0	Widespread
		Copper	NE	0.47-9.5	5.1	5.1	69-GW09-05	1/10	NA	0	Northeast of Site

TABLE 4-5 (Continued)

SUMMARY OF SITE CONTAMINATION
OPERABLE UNIT NO. 14 (SITE 69)
REMEDIAL INVESTIGATION, CTO-0212
MCB, CAMP LEJEUNE, NORTH CAROLINA

Media	Fraction	Contaminant	Comparison Criteria	Comparison Criteria	Site Contamination						
					Min.	Max.	Max. Concentration Location	Detection Frequency	Number of Detections Above Comparison Criteria	Number of Detections Above Comparison Criteria	Distribution
Sub-surface Soil (Cont.)	Inorganics (Cont.)			Base Background (mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)			Base Background	
		Iron	NE	63.3-90,500	354	19900	69-GW09-05	10/10	NA	0	Widespread
		Lead	NE	0.465-21.4	1.78	6	69-GW09-05	10/10	NA	0	Widespread
		Magnesium	NE	2.85-852	26.9	574	69-GW09-05	10/10	NA	0	Widespread
		Manganese	NE	0.395-19.9	1.6	39	69-GW09-05	10/10	NA	2	Widespread
		Mercury	NE	0.01-0.68	0.04	0.07	69-GW11-02	2/10	NA	0	Scattered
		Nickel	NE	0.45-4.7	3.4	3.9	69-GW09-05	3/10	NA	0	Scattered
		Potassium	NE	1.05-1,250	149	516J	69-GW09-05	3/10	NA	0	Scattered
		Silver	NE	0.175-1	0.43J	0.43J	69-GW09-02	1/10	NA	0	Northeast of Site
		Sodium	NE	5.4-141	130	130	69-GW09-05	1/10	NA	0	Northeast of Site
		Vanadium	NE	0.34-69.4	4.4	22.6	69-GW09-05	4/10	NA	0	Scattered
		Zinc	NE	0.32-26.6	3.4	13.7	69-GW09-05	3/10	NA	0	Scattered
		Total Cyanide	NE	NE	1.2	2.6	69-GW09-05	3/10	NA	NA	Scattered
			MCL (µg/L)	NCWQS (µg/L)	(µg/L)	(µg/L)			MCL	NCWQS	
Shallow Ground-water	Volatiles	Vinyl Chloride	2	0.15	5	55J	69-GW15-01	3/32	2	2	Southern Area
		Chloroform	80	0.19	6	6	69-GW04	1/32	0	1	East Central Area
		Carbon Disulfide	NE	NE	1J	1J	69-GW10-01	1/32	NA	NA	Central Area
		1,1-Dichloroethane	NE	700	1J	1J	69-GW03-01	1/32	NA	0	Southeast Area
		1,2-Dichloroethene (total)	70	NE	2J	2,400	69-GW02-01	8/32	4	NA	Scattered
		Trans-1,2-Dichloroethene	100	70	230	230	69-GW02	1/32	1	1	Southern Area
		Trichloroethene	5	2.8	1J	150J	69-GW15-01	6/32	5	5	Southern Area
		Tetrachloroethene	NE	0.7	1J	33J	69-GW15-01	2/32	NA	2	Southern Area

TABLE 4-5 (Continued)

SUMMARY OF SITE CONTAMINATION
OPERABLE UNIT NO. 14 (SITE 69)
REMEDIAL INVESTIGATION, CTO-0212
MCB, CAMP LEJEUNE, NORTH CAROLINA

Media	Fraction	Contaminant	Comparison Criteria	Comparison Criteria	Site Contamination						
					Min.	Max.	Max. Concentration Location	Detection Frequency	Number of Detections Above Comparison Criteria	Number of Detections Above Comparison Criteria	Distribution
Shallow Ground-water (Cont.)	Volatiles (Cont.)		MCL (µg/L)	NCWQS (µg/L)	(µg/L)	(µg/L)			MCL	NCWQS	
		1,1,2,2-Tetrachloroethane	NE	NE	1J	22J	69-GW02-01	3/32	NA	NA	Scattered
		Toluene	1,000	1,000	1J	4J	69-GW03-01	2/32	0	0	Southeast Area
		Chlorobenzene	NE	50	25J	25J	69-GW03-01	1/32	NA	0	Southeast Area
	Semi-Volatiles	1,4-Dichlorobenzene	NE	NE	2J	2J	69-GW03-01	1/12	NA	NA	Southeast Area
	Pesticides/PCBs	alpha-BHC	NE	NE	0.056	0.056	69-GW03-01	1/12	NA	NA	Southeast Area
		delta-BHC	NE	NE	2.3	2.3	69-GW03-01	1/12	NA	NA	Southeast Area
	Inorganics	Aluminum	50-200[1]	NE	304	211,000	69-GW12-01	12/12	12	NA	Widespread
		Antimony	6	NE	8.59J	8.59J	69-GW06-01	1/6	1	NA	Widespread
		Arsenic	50	50	2.94J	19.9	69-GW10-01	6/12	0	0	Widespread
		Barium	2,000	2,000	29.6	850	69-GW12-01	12/12	0	0	Widespread
		Beryllium	4	NE	2.1	10.6	69-GW12-01	5/12	2	NA	Widespread
		Cadmium	5	5	3.12	11.4	69-GW12-01	3/12	1	1	Scattered
		Calcium	NE	NE	2,010	38,700	69-GW08-01	12/12	NA	NA	Widespread
		Chromium	100	50	15.1	159	69-GW12-01	10/12	1	3	Widespread
		Cobalt	NE	NE	25.9	25.9	69-GW12-01	1/12	NA	NA	Southeast of Site
		Copper	1,000 [1]	1,000	16.5	70.8	69-GW12-01	3/12	0	0	Scattered
		Iron	300 [1]	300	1,610	99,500J	69-GW04-01	12/12	12	12	Widespread
		Lead	15 [2]	15	4.4	188	69-GW12-01	11/12	5	5	Widespread
		Magnesium	NE	NE	371	13,200	69-GW12-01	12/12	NA	NA	Widespread
		Manganese	50 [1]	50	13	912	69-GW08-01	12/12	9	9	Widespread
		Mercury	2	1.10	0.068	0.936	69-GW12-01	6/12	0	0	Widespread
		Nickel	100	100	16.7	99.8	69-GW12-01	4/12	0	0	Scattered

TABLE 4-5 (Continued)

SUMMARY OF SITE CONTAMINATION
OPERABLE UNIT NO. 14 (SITE 69)
REMEDIAL INVESTIGATION, CTO-0212
MCB, CAMP LEJEUNE, NORTH CAROLINA

Media	Fraction	Contaminant	Comparison Criteria	Comparison Criteria	Site Contamination						
					Min.	Max.	Max. Concentration Location	Detection Frequency	Number of Detections Above Comparison Criteria	Number of Detections Above Comparison Criteria	Distribution
Shallow Ground-water (Cont.)	Inorganics (Cont.)		MCL (µg/L)	NCWQS (µg/L)	(µg/L)	(µg/L)			MCL	NCWQS	
		Potassium	NE	NE	1,410J	7,610	69-GW12-01	10/12	NA	NA	Widespread
		Selenium	50	50	3.81J	5.28J	69-GW12-01	3/12	0	0	Scatterd
		Sodium	NE	NE	4,130	14,100	69-GW02-01	12/12	NA	NA	Widespread
		Vanadium	NE	NE	17.2	210	69-GW12-01	10/12	NA	NA	Widespread
		Zinc	5,000 (1)	2,100	52.1	9,120J	69-GW04-01	10/12	1	1	Widespread
Castle Hayne Aquifer	Volatiles	Vinyl Chloride	2	0.015	8.37J	8.37J	69-GW02-DW-01	1/18	1	1	Southern Area
		1,2-Dichloroethene (total)	70	NE	788	2,500	69-GW15IW-01	2/18	2	NA	Southern Area
		Trans-1,2-Dichloroethene	100	70	8	8	69-GW02DW	1/18	0	0	Southern Area
		Trichloroethene	5	2.8	29.4	2,600	69-GW15IW-01	2/18	2	2	Southern Area
		1,1,2-Trichloroethane	5	NE	13	13	69-GW15IW	1/18	1	NA	Cetral Area
	Inorganics	Aluminum	50-200 (1)	NE	3,030	4,680J	69-GW12DW-01	2/2	2	NA	Southeast Area
		Arsenic	50	50	3.54J	3.54J	69-GW12DW-01	1/2	0	0	Southeast of Site
		Barium	2,000	2,000	42.3	58	69-GW12DW-01	2/2	0	0	Southeast Area
		Beryllium	4	NE	0.89	0.89	69-GW12DW-01	1/2	0	NA	Southeast of Site
		Calcium	NE	NE	59,300	180,000	69-GW12DW-01	2/2	NA	NA	Southeast Area
		Chromium	100	50	20.7	20.7	69-GW12DW-01	1/2	0	0	Southeast of Site
		Iron	300 (1)	300	5,820	10,900	69-GW12DW-01	2/2	2	2	Southeast Area
		Lead	15 (2)	15	3.1	3.1	69-GW02DW-01	1/2	0	0	Southern Area
		Magnesium	NE	NE	2,590	4,890	69-GW12DW-01	2/2	NA	NA	Southeast Area
		Manganese	50 (1)	50	53.7	114	69-GW12DW-01	2/2	2	2	Southeast Area
		Mercury	2	1.10	0.174	0.174	69-GW02DW-01	1/2	0	0	Southern Area
		Potassium	NE	NE	1,660	1,850	69-GW02DW-01	2/2	NA	NA	Southeast Area

TABLE 4-5 (Continued)

SUMMARY OF SITE CONTAMINATION
OPERABLE UNIT NO. 14 (SITE 69)
REMEDIAL INVESTIGATION, CTO-0212
MCB, CAMP LEJEUNE, NORTH CAROLINA

Media	Fraction	Contaminant	Comparison Criteria	Comparison Criteria	Site Contamination						
					Min.	Max.	Max. Concentration Location	Detection Frequency	Number of Detections Above Comparison Criteria	Number of Detections Above Comparison Criteria	Distribution
			MCL (µg/L)	NCWQS (µg/L)	(µg/L)	(µg/L)			MCL	NCWQS	
Castle Hayne Aquifer (Cont.)	Inorganics (Cont.)	Sodium	NE	NE	10,900	33,000	69-GW02DW-01	2/2	NA	NA	Southeast Area
		Zinc	5,000 (1)	2,100	31.1	31.1	69-GW02DW-01	1/2	0	0	Southern Area
			AWQC (µg/L)	NCWQS (µg/L)	(µg/L)	(µg/L)			AWQC	NCWQS	
Surface Water On-Site and Drainage Areas	Volatiles	Vinyl Chloride	2	525	8J	8J	69-OS-SW01	1/7	1	0	Southern Area
		Acetone	NE	NE	3J	9J	69-DA-SW04	2/7	NA	NA	N and S of Site
		1,2-Dichloroethene (total)	NE	NE	13	55	69-OS-SW01	2/7	NA	NA	Southern Area
		Chloroform	5.7	NE	2J	2J	69-OS-SW01	1/7	0	NA	Southern Area
		Trichloroethene	2.7	NE	4J	4J	69-OS-SW01	1/7	NA	NA	Southern Area
		Toluene	6800	NE	1J	1J	69-OS-SW02 and 69-DA-SW01	2/7	0	NA	Widespread
		Ethylbenzene	3100	NE	1J	1J	69-DA-SW01	1/7	0	NA	Northeast of Site
		Xylenes (total)	NE	NE	10	10	69-DA-SW04	1/7	NA	NA	Southeast of Site
	Semi-Volatiles	di-n-Butylphthalate	2700	NE	1J	1J	69-DA-SW01	1/7	0	NA	Northeast of Site

TABLE 4-5 (Continued)

SUMMARY OF SITE CONTAMINATION
OPERABLE UNIT NO. 14 (SITE 69)
REMEDIAL INVESTIGATION, CTO-0212
MCB, CAMP LEJEUNE, NORTH CAROLINA

Media	Fraction	Contaminant	Comparison Criteria	Comparison Criteria	Site Contamination						
					Min.	Max.	Max. Concentration Location	Detection Frequency	Number of Detections Above Comparison Criteria	Number of Detections Above Comparison Criteria	Distribution
Surface Water On-Site and Drainage Areas (Cont.)	Inorganics		AWQC (µg/L)	NCWQS (µg/L)	(µg/L)	(µg/L)			AWQC	NCWQS	
		Aluminum	NE	NE	487	29,200	69-DA-SW02	7/7	NA	NA	Widespread
		Arsenic	0.018	NE	4.1	32.8	69-DA-SW03	2/7	2	NA	Southern Area
		Barium	1,000	NE	45.1	373	69-DA-SW02	7/7	0	NA	Widespread
		Beryllium	NE	.117	1.6	6.0	69-DA-SW02	2/7	NA	2	N and S of Site
		Calcium	NE	NE	3,080	73,000	69-DA-SW01	7/7	NA	NA	Widespread
		Chromium	NE	NE	23.8	23.8	69-DA-SW02	1/7	NA	NA	North of Site
		Copper	NE	NE	22.8	35.9	69-DA-SW03	3/7	NA	NA	Scattered
		Iron	300	NE	1,090	38,400	69-DA-SW03	7/7	7	NA	Widespread
		Lead	NE	NE	3.1	85.8	69-DA-SW02	6/7	NA	NA	Widespread
		Magnesium	4	NE	885	143,000	69-DA-SW01	7/7	7	NA	Widespread
		Manganese	50	NE	73.4	421	69-DA-SW02	7/7	7	NA	Widespread
		Mercury	0.14	NE	0.43	0.43	69-DA-SW02	1/7	1	NA	North of Site
		Nickel	610	NE	17.8	17.8	69-DA-SW02	1/7	0	NA	North of Site
		Potassium	NE	NE	365	37,600	69-DA-SW01	6/7	NA	NA	Widespread
		Silver	NE	NE	0.74J	2.3J	69-DA-SW04	3/7	NA	NA	N and S of Site
		Sodium	NE	NE	4,900	1,460,000	69-DA-SW01	7/7	NA	NA	Widespread
		Vanadium	NE	NE	23.3	24	69-DA-SW02	2/7	NA	NA	N and S of Site
		Zinc	NE	NE	96	4,370	69-OS-SW01	7/7	NA	NA	Widespread

TABLE 4-5 (Continued)

SUMMARY OF SITE CONTAMINATION
OPERABLE UNIT NO. 14 (SITE 69)
REMEDIAL INVESTIGATION, CTO-0212
MCB, CAMP LEJEUNE, NORTH CAROLINA

Media	Fraction	Contaminant	Comparison Criteria	Comparison Criteria	Site Contamination						
					Min.	Max.	Max. Concentration Location	Detection Frequency	Number of Detections Above Comparison Criteria	Number of Detections Above Comparison Criteria	Distribution
New River Surface Water	Inorganics		AWQC (µg/L)	NCWQS (µg/L)	(µg/L)	(µg/L)			AWQC	NCWQS	
		Aluminum	NE	NE	554	1,840	69-NR1-SW06	3/3	NA	NA	N and E of Site
		Barium	1,000	NE	11.7JB	15.2JB	69-NR1-SW06	3/3	0	NA	N and E of Site
		Calcium	NE	NE	95,700	110,000	69-NR1-SW06 & 69-NR2-SW06	3/3	NA	NA	N and E of Site
		Iron	300	NE	682	1,330	69-NR2-SW06	3/3	3	NA	N and E of Site
		Magnesium	NE	NE	267,000	308,000	69-NR1-SW06	3/3	NA	NA	N and E of Site
		Manganese	50	NE	19.2J	21.7J	69-NR2-SW06	3/3	0	NA	N and E of Site
		Potassium	NE	NE	84,900	111,000	69-NR1-SW06	3/3	NA	NA	N and E of Site
		Silver	NE	NE	3.5JB	4.5JB	69-NR1-SW06	2/3	NA	NA	N and E of Site
		Sodium	NE	NE	3,080,000	5,830,000	69-NR2-SW06	3/3	NA	NA	N and E of Site
		Thallium	1.7	NE	11.3JB	11.3JB	69-NR2-SW06	1/3	1	NA	East of Site
Unnamed Tributary Surface Water	Inorganics	Aluminum	NE	NE	881	3,490	69-UT3-SW06	3/3	NA	NA	N and W of Site
		Barium	1,000	NE	15.2JB	23B	69-UT1-SW06	3/3	0	NA	N and W of Site
		Cadmium	NE	NE	3JB	3JB	69-UT1-SW06	1/3	NA	NA	West of Site
		Calcium	NE	NE	1,380B	92,300	69-UT3-SW06	3/3	NA	NA	N and W of Site
		Cobalt	NE	NE	8JB	8JB	69-UT1-SW06	1/3	NA	NA	West of Site
		Copper	NE	NE	7JB	7JB	69-UT1-SW06	1/3	NA	NA	West of Site
		Iron	300	NE	740	1,840	69-UT3-SW06	3/3	3	NA	N and W of Site
		Lead	NE	NE	2B	2B	69-UT2-SW06	1/3	NA	NA	West of Site
		Magnesium	NE	NE	846B	257,000	69-UT3-SW06	3/3	NA	NA	N and W of Site
		Manganese	50	NE	9JB	17.7J	69-UT2-SW06	3/3	0	NA	N and W of Site

TABLE 4-5 (Continued)

SUMMARY OF SITE CONTAMINATION
OPERABLE UNIT NO. 14 (SITE 69)
REMEDIAL INVESTIGATION, CTO-0212
MCB, CAMP LEJEUNE, NORTH CAROLINA

Media	Fraction	Contaminant	Comparison Criteria	Comparison Criteria	Site Contamination						
					Min.	Max.	Max. Concentration Location	Detection Frequency	Number of Detections Above Comparison Criteria	Number of Detections Above Comparison Criteria	Distribution
Unnamed Tributary Surface Water (Cont.)	Inorganics (Cont.)		AWQC (µg/L)	NCWQS (µg/L)	(µg/L)	(µg/L)			AWQC	NCWQS	
		Potassium	NE	NE	385B	86,000	69-UT3-SW06	3/3	NA	NA	N and W of Site
		Sodium	NE	NE	4,790JB	2,220,000	69-UT3-SW06	3/3	NA	NA	N and W of Site
		Vanadium	NE	NE	4.2JB	10JB	69-UT1-SW06	2/3	NA	NA	N and W of Site
		Zinc	NE	NE	18B	18B	69-UT1-SW06	1/3	NA	NA	West of Site
Everett Creek Surface Water	Inorganics	Aluminum	NE	NE	445	501	69-EC3-SW06	2/3	NA	NA	Southeast of Site
		Barium	1,000	NE	10.4JB	22.2JB	69-EC1-SW06	3/3	0	NA	South of Site
		Calcium	NE	NE	26,400	85,200	69-EC1-SW06	3/3	NA	NA	South of Site
		Copper	NE	NE	2.6JB	2.6JB	69-EC1-SW06	1/3	NA	NA	Southwest of Site
		Iron	300	NE	490	667	69-EC1-SW06	3/3	3	NA	South of Site
		Lead	NE	NE	1.4B	2.3J	69-EC3-SW06	2/3	NA	NA	Southeast of Site
		Magnesium	NE	NE	73,800	229,000	69-EC1-SW06	3/3	NA	NA	South of Site
		Manganese	50	NE	14.3JB	32.5	69-EC1-SW06	3/3	0	NA	South of Site
		Potassium	NE	NE	22,600	88,700	69-EC1-SW06	3/3	NA	NA	South of Site
		Silver	NE	NE	3.2J	4.1J	69-EC3-SW06	2/3	NA	NA	Southeast of Site
		Sodium	NE	NE	727,000	2,130,000	69-EC1-SW06	3/3	NA	NA	South of Site

TABLE 4-5 (Continued)

SUMMARY OF SITE CONTAMINATION
OPERABLE UNIT NO. 14 (SITE 69)
REMEDIAL INVESTIGATION, CTO-0212
MCB, CAMP LEJEUNE, NORTH CAROLINA

Media	Fraction	Contaminant	Comparison Criteria	Comparison Criteria	Site Contamination						
					Min.	Max.	Max. Concentration Location	Detection Frequency	Number of Detections Above Comparison Criteria	Number of Detections Above Comparison Criteria	Distribution
			NOAA ER-L (µg/kg)	NOAA ER-M (µg/kg)	(µg/kg)	(µg/kg)			NOAA ER-L	NOAA ER-M	
Sediment On-Site and Drainage Areas	Volatiles	Methylene Chloride	NE	NE	8J	48	69-DA-SD04-06	5/7	NA	NA	Widespread
		Acetone	NE	NE	9J	850J	69-OS-SD02-06	3/7	NA	NA	Southern Area
		1,2-Dichloroethene (total)	NE	NE	9J	9J	69-OS-SD01-06	1/7	NA	NA	Southern Area
		2-Butanone	NE	NE	36J	36J	69-DA-SD01-06	1/7	NA	NA	Northeast of Site
		4-Methyl-2pentenone	NE	NE	9J	17	69-OS-SD02-06	3/7	NA	NA	Scattered
		Toluene	NE	NE	18J	18J	69-DA-SD04-06	1/7	NA	NA	Southeast of Site
	Semi-Volatiles	di-n-Butylphthalate	NE	NE	110J	110J	69-OS-SD03-06 and 69-OS-SD02-06	2/7	NA	NA	Southeast Area
	Pesticides/PCBs	alpha-BHC	NE	NE	3.1J	3.1J	69-OS-SD02-06	1/7	NA	NA	Southeast Area
		beta-BHC	NE	NE	23.4J	23.4J	69-OS-SD02-06	1/7	NA	NA	Southeast Area
		delta-BHC	NE	NE	54.5J	54.5J	69-OS-SD02-06	1/7	NA	NA	Southeast Area
		4,4'-DDE	2.2	27	13.3J	13.3J	69-DA-SD02-06	1/7	1	0	Northeast of Site
		4,4'-DDD	2	20	1.5J	13.9J	69-DA-SD04-06	3/7	2	0	N and S of Site
		4,4'-DDT	1.58	46.1	2.1J	6.6J	69-DA-SD04-06	2/7	2	0	Southeast Area
		Aroclor 1254	22.7[3]	180[3]	79J	79J	69-OS-SD01-06	1/7	1	0	Southern Area
	Chemical Surety Material	Acetophenone	NE	NE	60J	960J	69-DA-SD01-06	2/7	NA	NA	Scattered

TABLE 4-5 (Continued)

SUMMARY OF SITE CONTAMINATION
OPERABLE UNIT NO. 14 (SITE 69)
REMEDIAL INVESTIGATION, CTO-0212
MCB, CAMP LEJEUNE, NORTH CAROLINA

Media	Fraction	Contaminant	Comparison Criteria	Comparison Criteria	Site Contamination						
					Min.	Max.	Max. Concentration Location	Detection Frequency	Number of Detections Above Comparison Criteria	Number of Detections Above Comparison Criteria	Distribution
Sediment On-Site and Drainage Areas	Inorganics		NOAA ER-L (mg/kg)	NOAA ER-M (mg/kg)	(mg/kg)	(mg/kg)			NOAA ER-L	NOAA ER-M	
		Aluminum	NE	NE	1,050	23,700	69-DA-SD04-06	7/7	NA	NA	Widespread
		Barium	NE	NE	6.8	131	69-DA-SD04-06	4/7	NA	NA	Scattered
		Beryllium	NE	NE	0.94	2	69-DA-SD04-06	2/7	NA	NA	N and S of Site
		Calcium	NE	NE	107	5,600	69-DA-SD04-06	5/7	NA	NA	Widespread
		Chromium	81	370	2.9	21.5	69-DA-SD04-06	3/7	0	0	Scattered
		Copper	34	270	21.7	21.7	69-OS-SD02-06	1/7	0	0	Southeast Area
		Iron	NE	NE	369	8,930	69-DA-SD04-06	7/7	NA	NA	Widespread
		Lead	46.7	218	3.1J	45.5	69-DA-SD04-06	7/7	0	0	Widespread
		Magnesium	NE	NE	28	5,190	69-DA-SD01-06	7/7	NA	NA	Widespread
		Manganese	NE	NE	1.4	44.1	69-DA-SD04-06	6/7	NA	NA	Widespread
		Mercury	0.15	0.71	0.5	0.56	69-DA-SD01-06	2/7	2	0	N and S of Site
		Potassium	NE	NE	104	452J	69-DA-SD02-06	2/7	NA	NA	N and S of Site
		Silver	1	3.7	0.26J	74.5J	69-DA-SD01-06	3/7	2	2	Scattered
		Sodium	NE	NE	1,410	17,800	69-DA-SD01-06	2/7	NA	NA	Northeast of Site
		Zinc	150	410	15.7	551	69-DA-SD04-06	6/7	1	1	Widespread

TABLE 4-5 (Continued)

SUMMARY OF SITE CONTAMINATION
OPERABLE UNIT NO. 14 (SITE 69)
REMEDIAL INVESTIGATION, CTO-0212
MCB, CAMP LEJEUNE, NORTH CAROLINA

Media	Fraction	Contaminant	Comparison Criteria	Comparison Criteria	Site Contamination						
					Min.	Max.	Max. Concentration Location	Detection Frequency	Number of Detections Above Comparison Criteria	Number of Detections Above Comparison Criteria	Distribution
Everett Creek Sediment	Volatiles		NOAA ER-L (µg/kg)	NOAA ER-M (µg/kg)	(µg/kg)	(µg/kg)			NOAA ER-L	NOAA ER-M	
		Methylene Chloride	NE	NE	1,200J	1,200J	69-EC3-SD-03	1/5	NA	NA	Southeast of Site
		Acetone	NE	NE	240	4,600	69-EC3-SD-03	2/5	NA	NA	Southeast of Site
		Carbon Disulfide	NE	NE	35	35	69-EC3-SD-612	1/5	NA	NA	Southeast of Site
		2-Butanone	NE	NE	5,300	5,300	69-EC3-SD-03	1/5	NA	NA	Southeast of Site
	Semi-Volatiles	Bis(2-Ethylhexyl)phthalate	NE	NE	85J	130J	69-EC4-SD-6122	2/5	NA	NA	Southeast of Site
	Pesticides	4,4'-DDE	2	15	6.6J	6.6J	69-EC4-SD-6122	1/5	1	0	Southeast of Site
	Inorganics		NOAA ER-L (mg/kg)	NOAA ER-M (mg/kg)	(mg/kg)	(mg/kg)			NOAA ER-L	NOAA ER-M	
		Aluminum	NE	NE	888J	32,700	69-EC3-SD-03	5/5	NA	NA	South of Site
		Arsenic	8.2	70	4.4B	5.3B	69-EC4-SD-6122	3/5	0	0	South of Site
		Barium	NE	NE	13JB	26.4B	69-EC3-SD-03	3/5	NA	NA	South of Site
		Beryllium	NE	NE	0.13JB	0.96B	69-EC3-SD-03	5/5	NA	NA	South of Site
		Cadmium	1.2	9.6	0.52JB	5.2JB	69-EC1-SD-06	5/5	4	0	South of Site
		Calcium	NE	NE	627JB	5,500B	69-EC1-SD-06	5/5	NA	NA	South of Site
		Chromium	81	370	3.6J	43.8	69-EC3-SD-03	5/5	0	0	South of Site
		Cobalt	NE	NE	1.3B	7JB	69-EC1-SD-06	4/5	NA	NA	South of Site
		Copper	34	270	6.5JB	16.2JB	69-EC1-SD-06	3/5	0	0	South of Site
		Iron	NE	NE	4,150J	28,900	69-EC3-SD-03	5/5	NA	NA	South of Site
		Lead	46.7	218	7.5J	30.8	69-EC1-SD-06	4/5	0	0	South of Site

TABLE 4-5 (Continued)

SUMMARY OF SITE CONTAMINATION
OPERABLE UNIT NO. 14 (SITE 69)
REMEDIAL INVESTIGATION, CTO-0212
MCB, CAMP LEJEUNE, NORTH CAROLINA

Media	Fraction	Contaminant	Comparison Criteria	Comparison Criteria	Site Contamination						
					Min.	Max.	Max. Concentration Location	Detection Frequency	Number of Detections Above Comparison Criteria	Number of Detections Above Comparison Criteria	Distribution
Everett Creek Sediment (Cont.)	Inorganics (Cont.)		NOAA ER-L (mg/kg)	NOAA ER-M (mg/kg)	(mg/kg)	(mg/kg)			NOAA ER-L	NOAA ER-M	
		Magnesium	NE	NE	313JB	7,250	69-EC3-SD-03	5/5	NA	NA	South of Site
		Manganese	NE	NE	4.1J	85.9	69-EC3-SD-612	5/5	NA	NA	South of Site
		Mercury	0.15	0.71	0.17B	0.17B	69-EC1-SD-06	1/5	1	0	Southwest of Site
		Potassium	NE	NE	129JB	4,290	69-EC3-SD-03	5/5	NA	NA	South of Site
		Sodium	NE	NE	1,100JB	21,800	69-EC3-SD-03	5/5	NA	NA	South of Site
		Vanadium	NE	NE	7.2JB	48.8	69-EC3-SD-03	5/5	NA	NA	South of Site
		Zinc	150	410	31.8	62	69-EC1-SD-06	3/5	0	0	South of Site

TABLE 4-5 (Continued)

SUMMARY OF SITE CONTAMINATION
OPERABLE UNIT NO. 14 (SITE 69)
REMEDIAL INVESTIGATION, CTO-0212
MCB, CAMP LEJEUNE, NORTH CAROLINA

Media	Fraction	Contaminant	Comparison Criteria	Comparison Criteria	Site Contamination						
					Min.	Max.	Max. Concentration Location	Detection Frequency	Number of Detections Above Comparison Criteria	Number of Detections Above Comparison Criteria	Distribution
New River Sediment	Volatiles		NOAA ER-L (µg/kg)	NOAA ER-M (µg/kg)	(µg/kg)	(µg/kg)			NOAA ER-L	NOAA ER-M	
		Acetone	NE	NE	22	120	69-NR3-SD-612	3/5	NA	NA	N and SE of Site
	Semi-Volatiles	Bis(2-Ethylhexyl)phthalate	NE	NE	47J	92J	69-NR2-SD-062	2/5	NA	NA	East of Site
			NOAA ER-L (mg/kg)	NOAA ER-M (mg/kg)	(mg/kg)	(mg/kg)			NOAA ER-L	NOAA ER-M	
	Inorganics	Aluminum	NE	NE	3,450	16,200	69-NR1-SD-06	5/5	NA	NA	N and E of Site
		Arsenic	8.2	70	1.6B	5.6	69-NR2-SD-6122	4/5	0	0	N and E of Site
		Barium	NE	NE	4.6B	12.5B	69-NR1-SD-06	3/5	NA	NA	N and SE of Site
		Beryllium	NE	NE	0.24JB	0.37JB	69-NR2-SD-6122	4/5	NA	NA	N and E of Site
		Cadmium	1.2	96	0.53BJ	1.2J	69-NR3-SD-612	3/5	0	0	N and E of Site
		Calcium	NE	NE	376B	525JB	69-NR2-SD-062	5/5	NA	NA	N and E of Site
		Chromium	81	370	6.2	17.7	69-NR1-SD-06	5/5	0	0	N and E of Site
		Cobalt	NE	NE	0.58B	1.2B	69-NR1-SD-06 and 69-NR3-SD-612	5/5	NA	NA	N and E of Site
		Copper	34	270	1.6JB	2.5JB	69-NR3-SD-612	3/5	0	0	N and SE of Site
		Iron	NE	NE	4,320J	14,500	69-NR3-SD-612	5/5	NA	NA	N and E of Site
		Lead	46.7	218	3.6	6	69-NR1-SD-06	5/5	0	0	N and E of Site
		Magnesium	NE	NE	808JB	1,120B	69-NR1-SD-06	5/5	NA	NA	N and E of Site
		Manganese	NE	NE	13.6J	28.9	69-NR2-SD-6122	5/5	NA	NA	N and E of Site
		Potassium	NE	NE	614B	1,040B	69-NR1-SD-06	3/5	NA	NA	N and E of Site
		Sodium	NE	NE	1,240J	2,560J	69-NR3-SD-612	5/5	NA	NA	N and E of Site
		Vanadium	NE	NE	10.3B	35.3	69-NR1-SD-06	5/5	NA	NA	N and E of Site
		Zinc	150	410	7	10.7	69-NR3-SD-612	3/5	0	0	N and SE of Site

TABLE 4-5 (Continued)

SUMMARY OF SITE CONTAMINATION
OPERABLE UNIT NO. 14 (SITE 69)
REMEDIAL INVESTIGATION, CTO-0212
MCB, CAMP LEJEUNE, NORTH CAROLINA

Media	Fraction	Contaminant	Comparison Criteria	Comparison Criteria	Site Contamination						
					Min.	Max.	Max. Concentration Location	Detection Frequency	Number of Detections Above Comparison Criteria	Number of Detections Above Comparison Criteria	Distribution
Unnamed Tributary Sediment	Volatiles		NOAA ER-L (µg/kg)	NOAA ER-M (µg/kg)	(µg/kg)	(µg/kg)			NOAA ER-L	NOAA ER-M	
		Acetone	NE	NE	39J	65	69-UT3-SD-6122	3/5	NA	NA	N and W of Site
		Carbon Disulfide	NE	NE	18J	88	69-UT2-SD-06	4/5	NA	NA	N and W of Site
		Toluene	NE	NE	2J	2J	69-UT1-SD-06	1/5	NA	NA	West of Site
	Semi-Volatiles	Diethylphthalate	NE	NE	500J	500J	69-UT2-SD-612	1/5	NA	NA	Northwest of Site
		Bis(2-Ethylhexyl)phthalate	NE	NE	52J	81J	69-UT3-SD-062	2/5	NA	NA	North of Site
		Benzo(a)pyrene	430	1600	290J	2,500	69-UT2-SD-612	2/5	1	1	Northwest of Site
	Pesticides/PCBs	4,4'-DDE	2.2	27	10J	250	69-UT2-SD-612	3/5	3	2	Northwest of Site
		4,4'-DDD	2	20	14J	150	69-UT2-SD-612	3/5	3	2	N and W of Site
		PCB-1260	22.7(3)	180(3)	360	360	69-UT3-SD-6122	1/5	1	1	North of Site

TABLE 4-5 (Continued)

SUMMARY OF SITE CONTAMINATION
OPERABLE UNIT NO. 14 (SITE 69)
REMEDIAL INVESTIGATION, CTO-0212
MCB, CAMP LEJEUNE, NORTH CAROLINA

Media	Fraction	Contaminant	Comparison Criteria	Comparison Criteria	Site Contamination						
					Min.	Max.	Max. Concentration Location	Detection Frequency	Number of Detections Above Comparison Criteria	Number of Detections Above Comparison Criteria	Distribution
Unnamed Tributary Sediment (Cont.)			NOAA ER-L (mg/kg)	NOAA ER-M (mg/kg)	(mg/kg)	(mg/kg)			NOAA ER-L	NOAA ER-M	
	Inorganics	Aluminum	NE	NE	1,240	23,400	69-UT2-SD-612	5/5	NA	NA	N and Wof Site
		Arsenic	8.2	70	4.7B	7.1	69-UT3-SD-6122	4/5	0	0	N and Wof Site
		Barium	NE	NE	14.2B	23.1B	69-UT2-SD-612	2/5	NA	NA	Northwest of Site
		Beryllium	NE	NE	0.52JB	0.61JB	69-UT3-SD-6122	2/5	NA	NA	North of Site
		Cadmium	1.2	9.6	1.8JB	2.1J	69-UT3-SD-062	3/5	[illegible]	0	North of Site
		Calcium	NE	NE	264B	6,270	69-UT2-SD-06	5/5	NA	NA	N and W of Site
		Chromium	81	370	3.3	22.4	69-UT3-SD-6122	3/5	0	0	N and W of Site
		Cobalt	NE	NE	1.4B	2.1B	69-UT3-SD-6122	2/5	NA	NA	North of Site
		Copper	34	270	7.2B	24.1	69-UT2-SD-612	4/5	0	0	N and W of Site
		Iron	NE	NE	3,530	17,900	69-UT2-SD-612	5/5	NA	NA	N and W of Site
		Lead	46.7	218	1	34.1	69-UT2-SD-612	5/5	0	0	N and W of Site
		Magnesium	NE	NE	48.9B	6,670	69-UT2-SD-612	5/5	NA	NA	N and W of Site
		Manganese	NE	NE	2.9J	69.3	69-UT2-SD-612	5/5	NA	NA	N and W of Site
		Potassium	NE	NE	81.1B	2,040	69-UT3-SD-6122	3/5	NA	NA	N and W of Site
		Sodium	NE	NE	122JB	21,100	69-UT2-SD-06	5/5	NA	NA	N and W of Site
		Vanadium	NE	NE	25.8	41.1B	69-UT2-SD-612	4/5	NA	NA	N and W of Site
		Zinc	150	410	22.4	24.6	69-UT3-SD-6122	2/5	0	0	North of Site

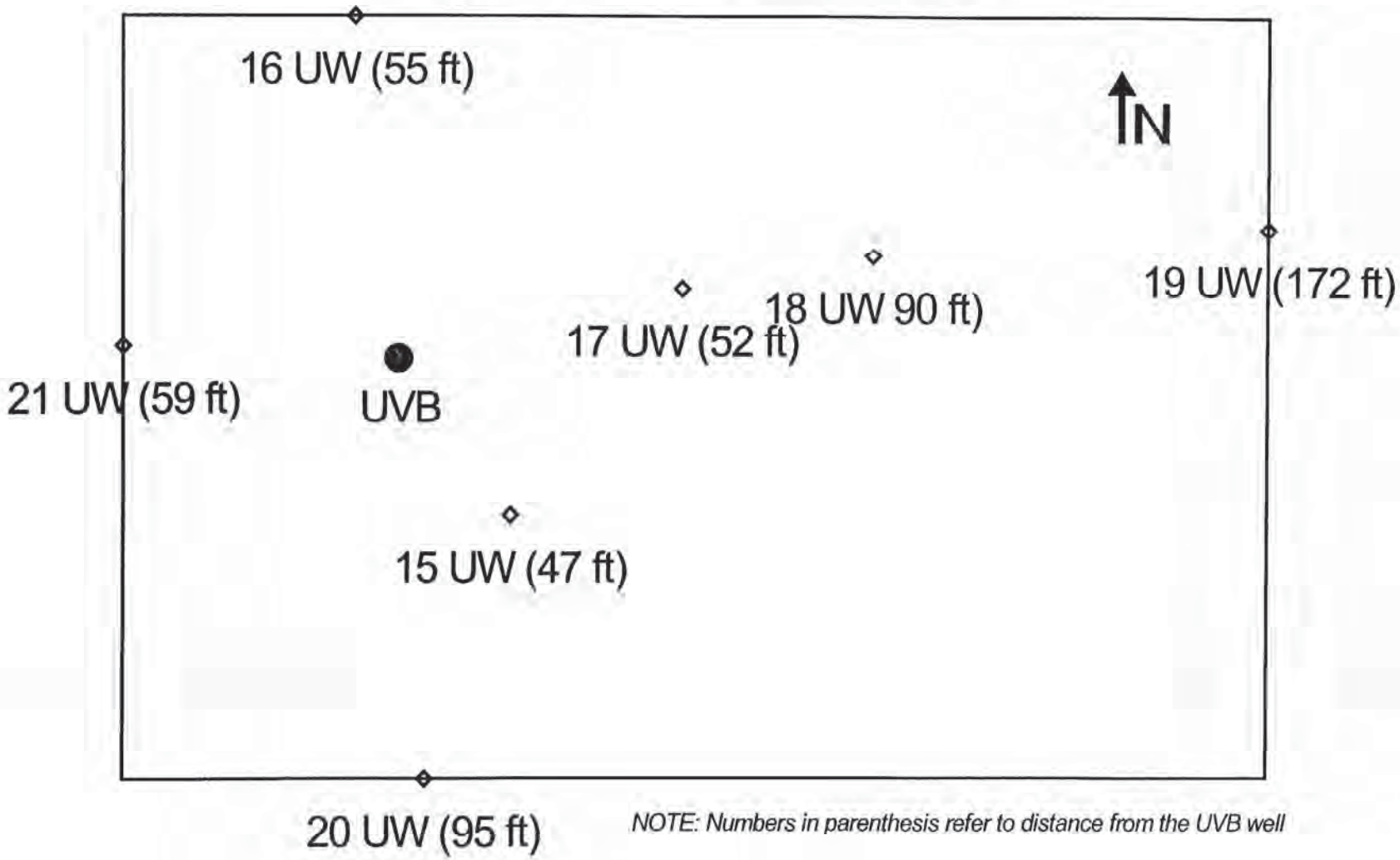
(1) SMCL = Secondary Maximum Contaminant Level
(2) Action Level
(3) For Total PCBs
NE = No Criteria Established
NA = Not Applicable

J = Value is Estimated
B = Compounds detected in Method Blank associated with this sample.

N = North
E = East
W = West
S = South

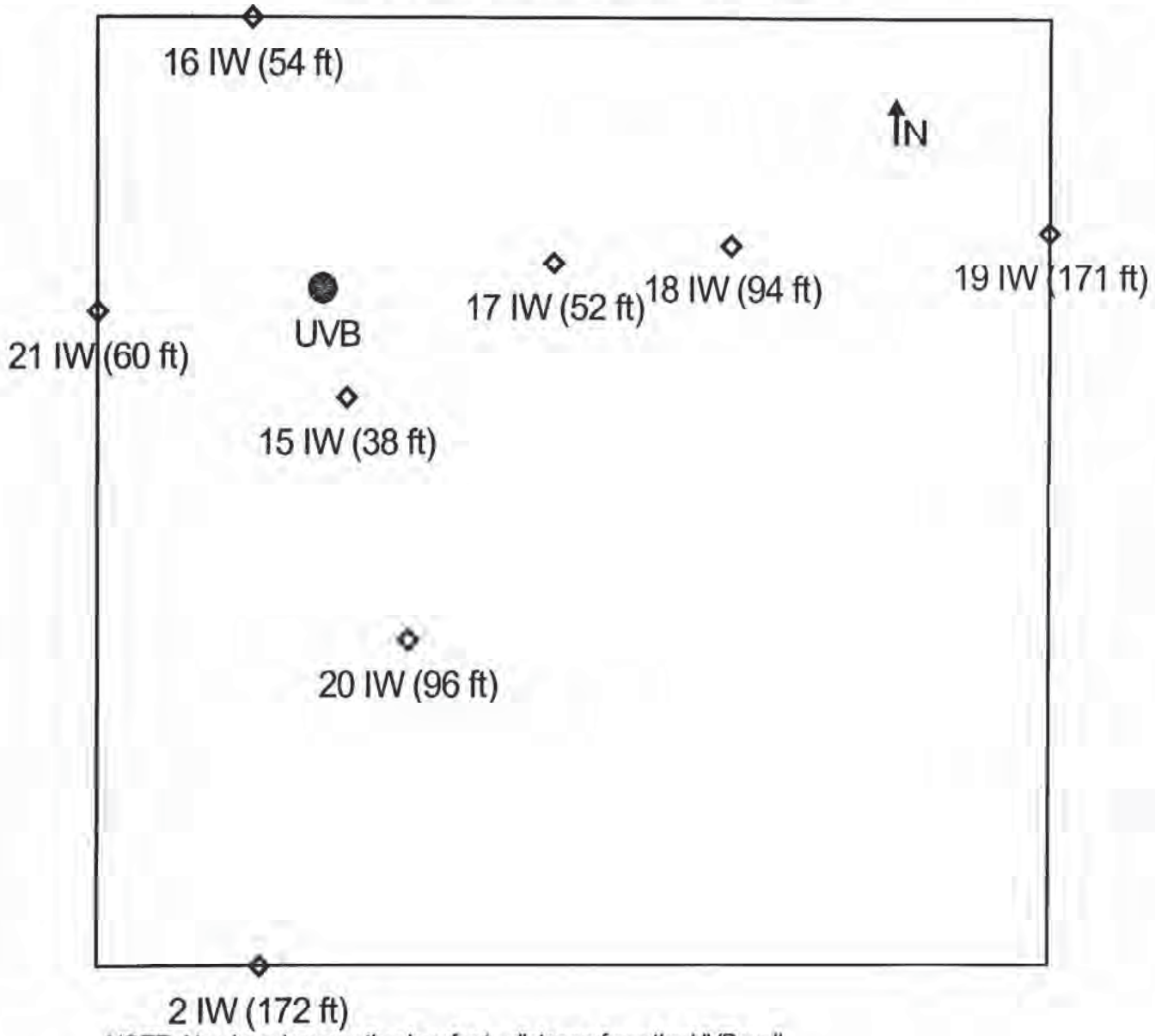
Appendix A-4
Treatability Study (Baker and SBP Technologies, 1998)

Figure 3-8: Layout of the UVB and Shallow UVB Monitoring Wells Site 69, MCB Camp Lejeune



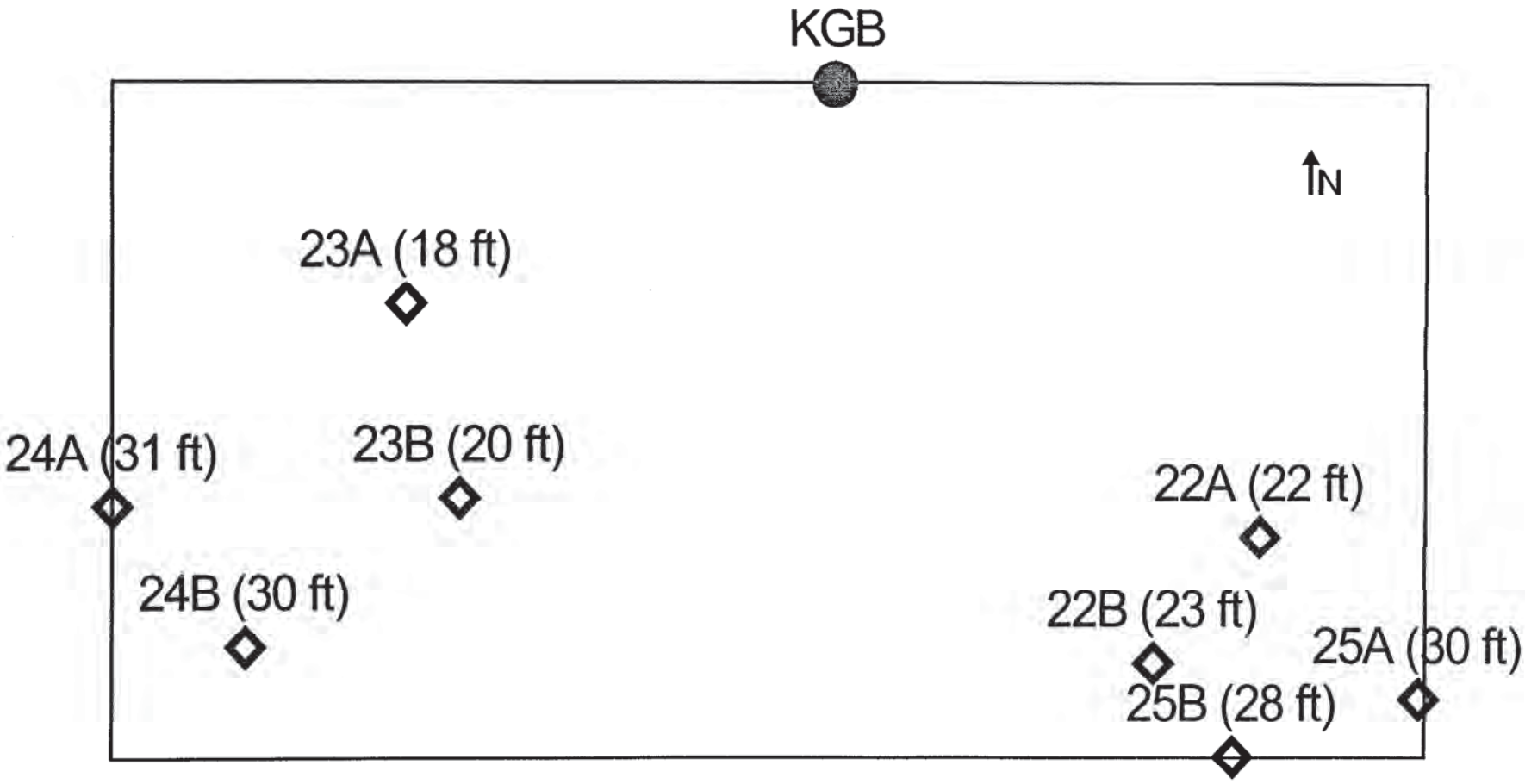
NOTE: Numbers in parenthesis refer to distance from the UVB well

Figure 3-9: Layout of the UVB and Deep UVB Monitoring Wells Site 69, MCB Camp Lejeune



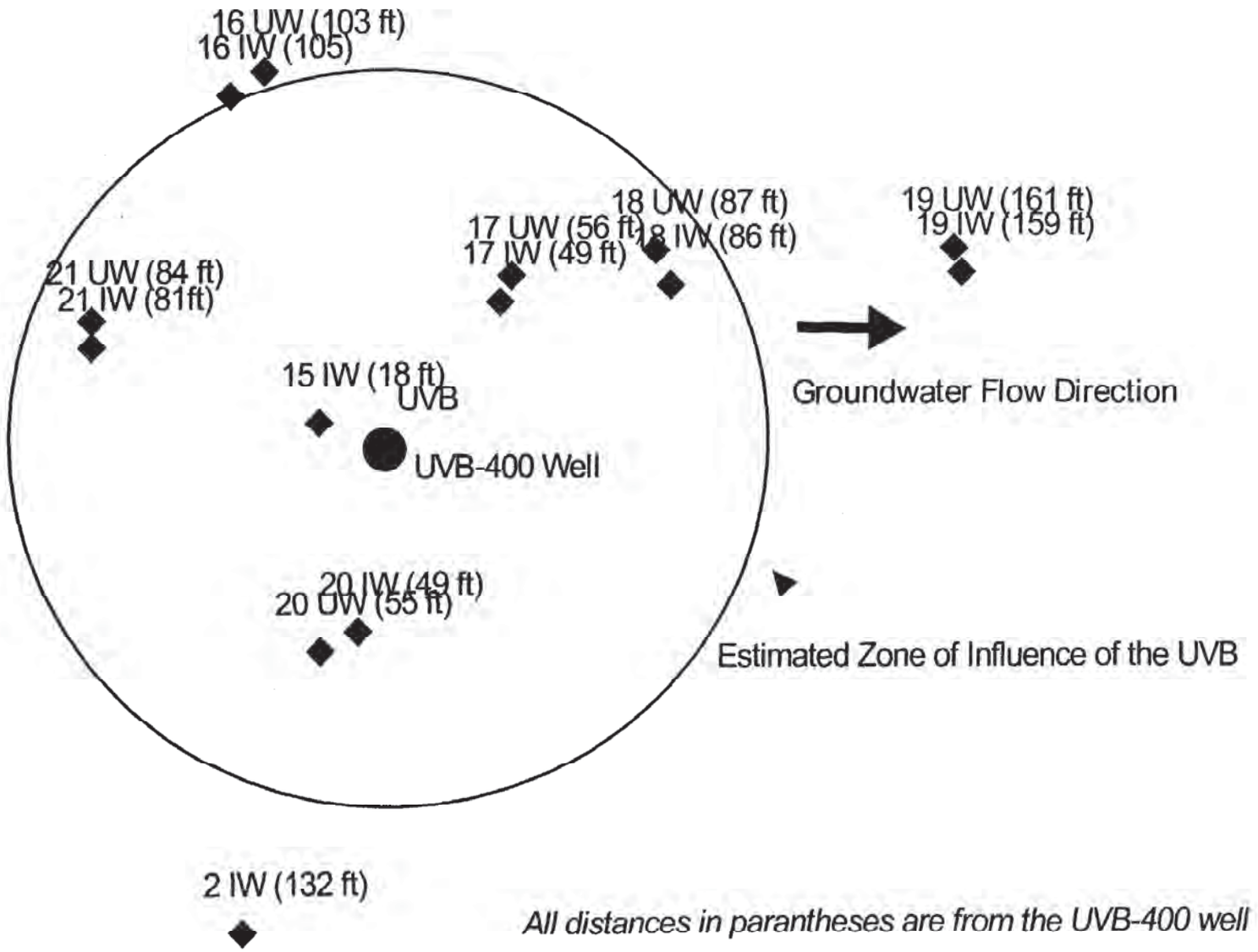
NOTE: Numbers in parenthesis refer to distance from the UVB well

Figure 3-10: Layout of the KGB and KGB Monitoring Wells Site 69, MCB Camp Lejeune



NOTE: Numbers in parenthesis refer to distance from the KGB well

Figure 7-3: UVB and Monitoring Wells Layout: Phase II Treatability Study
MCB Camp Lejeune



All distances in parantheses are from the UVB-400 well

Appendix A-5
Long-term Monitoring Report
(Engineering and Environment, 2005)

Sample ID	IR69-GW10-04D
Date	25-Oct-04
VOLATILES (ug/L)	
Benzene	0.1 J
Ethylbenzene	0.2 J
Toluene	0.9 J
Xylenes (Total)	1 J

Sample ID	IR69-GW13-04D
Date	24-Oct-04
VOLATILES (ug/L)	
	NO DETECTIONS

Sample ID	IR69-GW15-04D
Date	24-Oct-04
VOLATILES (ug/L)	
1,1,2,2-Tetrachloroethane	100
1,1,2-Trichloroethane	0.8 J
1,1-Dichloroethene	7
1,2-Dichloroethane	1 J
Benzene	8
Chlorobenzene	470 D
Cis-1,2-Dichloroethene	380 D
Ethylbenzene	1 J
Tetrachloroethene	0.8 J
Toluene	4 J
trans-1,2-Dichloroethene	490 D
Trichloroethene	29
Vinyl Chloride	570 D
Xylenes (Total)	7 J

Sample ID	IR69-GW15DW-04D
Date	23-Oct-04
VOLATILES (ug/L)	
Ethylbenzene	0.2 J
Toluene	0.5 J
Xylenes (Total)	0.6 J

Sample ID	IR69-GW15IW-04D
Date	24-Oct-04
VOLATILES (ug/L)	
1,2-Dichloroethane	14 J
Chlorobenzene	86 J
Cis-1,2-Dichloroethene	39000 D
trans-1,2-Dichloroethene	610
Trichloroethene	90 J
Vinyl Chloride	2700

Sample ID	IR69-GW02-04D
Date	23-Oct-04
VOLATILES (ug/L)	
1,1,2,2-Tetrachloroethane	13
1,1,2-Trichloroethane	7
1,1-Dichloroethene	0.9 J
1,2-Dichloroethane	4 J
Benzene	0.2 J
Chlorobenzene	0.3 J
Cis-1,2-Dichloroethene	590 D
Ethylbenzene	0.3 J
Tetrachloroethene	0.5 J
Toluene	1 J
trans-1,2-Dichloroethene	120
Trichloroethene	6
Vinyl Chloride	83
Xylenes (Total)	0.7 J

Sample ID	IR69-GW03-04D
Date	24-Oct-04
VOLATILES (ug/L)	
1,1,2-Trichloroethane	2 J
1,1-Dichloroethane	0.2 J
1,1-Dichloroethene	1 J
1,2-Dichloroethane	1 J
Benzene	0.9 J
Chlorobenzene	9
Cis-1,2-Dichloroethene	340 D
Ethylbenzene	0.5 J
Tetrachloroethene	4 J
Toluene	2 J
trans-1,2-Dichloroethene	9
Trichloroethene	12
Vinyl Chloride	4
Xylenes (Total)	0.9 J

Sample ID	IR69-GW13DW-04D
Date	23-Oct-04
VOLATILES (ug/L)	
Cis-1,2-Dichloroethene	50
Ethylbenzene	0.2 J
Toluene	0.8 J
Vinyl Chloride	2 J
Xylenes (Total)	1 J

Sample ID	IR69-GW01-04D
Date	25-Oct-04
VOLATILES (ug/L)	
Toluene	0.2 J

Sample ID	IR69-GW03DW-04D
Date	23-Oct-04
VOLATILES (ug/L)	
Ethylbenzene	0.2 J
Toluene	0.8 J
Xylenes (Total)	1 J

Sample ID	IR69-GW12-04D
Date	24-Oct-04
VOLATILES (ug/L)	
Cis-1,2-Dichloroethene	6
Toluene	0.2 J
trans-1,2-Dichloroethene	1 J
Trichloroethene	0.6 J
Vinyl Chloride	0.2 J

Sample ID	IR69-GW02DW-04D
Date	25-Oct-04
VOLATILES (ug/L)	
Cis-1,2-Dichloroethene	15
Toluene	0.4 J
trans-1,2-Dichloroethene	0.5 J
Vinyl Chloride	4

Sample ID	IR69-GW14IW-04D
Date	25-Oct-04
VOLATILES (ug/L)	
Toluene	0.3 J

Sample ID	IR69-GW14-04D
Date	23-Oct-04
VOLATILES (ug/L)	
Cis-1,2-Dichloroethene	0.5 J
Ethylbenzene	0.2 J
Toluene	0.9 J
trans-1,2-Dichloroethene	0.2 J
Xylenes (Total)	1 J

Sample ID	IR69-GW12DW-04D
Date	23-Oct-04
VOLATILES (ug/L)	
Cis-1,2-Dichloroethene	0.7 J
Toluene	0.3 J

50 100 200 300 400 Feet

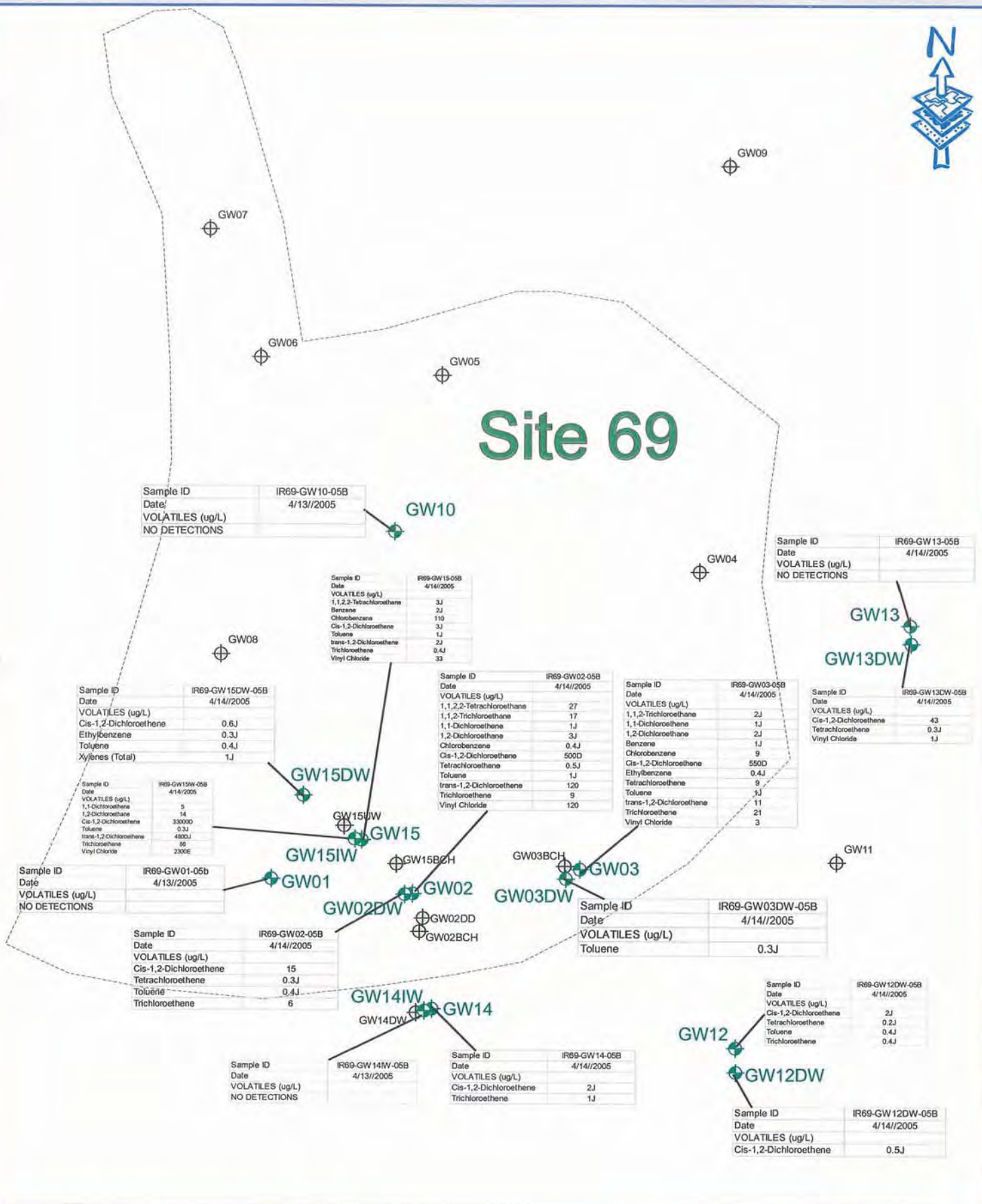
1:1,836

Engineering & Environment, Inc.
www.eeiinfo.com

Date: 10/10/05
EEI #: LD04-001
Data Source:
MCB, Camp Lejeune 2001

Monitoring Well Included in LTM Program
Monitoring Well
Chain Link Fence

Figure 4
Positive Detections of VOC's
in Groundwater - October 2004
Operable Unit # 14 - Site 69
Long-Term Monitoring (LTM) Program
Marine Corps Base, Camp Lejeune
North Carolina



Sample ID	IR69-GW10-05B
Date	4/13//2005
VOLATILES (ug/L)	
NO DETECTIONS	

Sample ID	IR69-GW13-05B
Date	4/14//2005
VOLATILES (ug/L)	
NO DETECTIONS	

Sample ID	IR69-GW15-05B
Date	4/14//2005
VOLATILES (ug/L)	
1,1,2,2-Tetrachloroethane	3J
Benzene	2J
Chlorobenzene	110
Cis-1,2-Dichloroethene	3J
Toluene	1J
trans-1,2-Dichloroethene	2J
Trichloroethene	0.4J
Vinyl Chloride	33

Sample ID	IR69-GW15DW-05B
Date	4/14//2005
VOLATILES (ug/L)	
Cis-1,2-Dichloroethene	0.6J
Ethylbenzene	0.3J
Toluene	0.4J
Xylenes (Total)	1J

Sample ID	IR69-GW15IW-05B
Date	4/14//2005
VOLATILES (ug/L)	
1,1-Dichloroethene	5
1,2-Dichloroethane	14
Cis-1,2-Dichloroethene	33000D
Toluene	0.3J
trans-1,2-Dichloroethene	4800J
Trichloroethene	66
Vinyl Chloride	2300E

Sample ID	IR69-GW02-05B
Date	4/14//2005
VOLATILES (ug/L)	
1,1,2,2-Tetrachloroethane	27
1,1,2-Trichloroethane	17
1,1-Dichloroethene	1J
1,2-Dichloroethane	3J
Chlorobenzene	0.4J
Cis-1,2-Dichloroethene	500D
Tetrachloroethene	0.5J
Toluene	1J
trans-1,2-Dichloroethene	120
Trichloroethene	9
Vinyl Chloride	120

Sample ID	IR69-GW03-05B
Date	4/14//2005
VOLATILES (ug/L)	
1,1,2-Trichloroethane	2J
1,1-Dichloroethene	1J
1,2-Dichloroethane	2J
Benzene	1J
Chlorobenzene	9
Cis-1,2-Dichloroethene	550D
Ethylbenzene	0.4J
Tetrachloroethene	9
Toluene	1J
trans-1,2-Dichloroethene	11
Trichloroethene	21
Vinyl Chloride	3

Sample ID	IR69-GW13DW-05B
Date	4/14//2005
VOLATILES (ug/L)	
Cis-1,2-Dichloroethene	43
Tetrachloroethene	0.3J
Vinyl Chloride	1J

Sample ID	IR69-GW01-05b
Date	4/13//2005
VOLATILES (ug/L)	
NO DETECTIONS	

Sample ID	IR69-GW02-05B
Date	4/14//2005
VOLATILES (ug/L)	
Cis-1,2-Dichloroethene	15
Tetrachloroethene	0.3J
Toluene	0.4J
Trichloroethene	6

Sample ID	IR69-GW03DW-05B
Date	4/14//2005
VOLATILES (ug/L)	
Toluene	0.3J

Sample ID	IR69-GW12DW-05B
Date	4/14//2005
VOLATILES (ug/L)	
Cis-1,2-Dichloroethene	2J
Tetrachloroethene	0.2J
Toluene	0.4J
Trichloroethene	0.4J

Sample ID	IR69-GW14IW-05B
Date	4/13//2005
VOLATILES (ug/L)	
NO DETECTIONS	

Sample ID	IR69-GW14-05B
Date	4/14//2005
VOLATILES (ug/L)	
Cis-1,2-Dichloroethene	2J
Trichloroethene	1J

Sample ID	IR69-GW12DW-05B
Date	4/14//2005
VOLATILES (ug/L)	
Cis-1,2-Dichloroethene	0.5J

0 50 100 200 300 400 Feet

1:1,836

Engineering & Environment, Inc.
www.eeiinfo.com

Date: 10/10/05
EEI #: LD04-001
Data Source:
MCB, Camp Lejeune 2001

Monitoring Well Included in LTM Program
Monitoring Well
Chain Link Fence

Figure 5
Positive Detections of VOCs in Groundwater - April 2005
Operable Unit # 14 - Site 69
Long-Term Monitoring (LTM) Program
Marine Corps Base, Camp Lejeune
North Carolina

Appendix B
Geophysical Investigation Report

NAeVA GEOPHYSICS INC.

THE LEADER IN SUBSURFACE DETECTION

Subsurface Geophysical Surveys

GPR
MAGNETICS
ELECTROMAGNETICS
SEISMICS
RESISTIVITY
UTILITY LOCATION
UXO DETECTION
BOREHOLE CAMERA
STAFF SUPPORT

GEOPHYSICAL INVESTIGATION REPORT

Preliminary Assessment / Site Inspection
Site 69, Rifle Range Chemical Dump and Site UXO-02, Unnamed Explosives Range
Marine Corps Base (MCB) Camp Lejeune, North Carolina

Contract Task Order 0223 & 0014

Dates of Investigation:

February 10th – 25th, 2010

FINAL SUBMITTAL
July 13, 2010

PREPARED FOR

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APPENDICES

Appendix A: GPO Color Contour Maps
Appendix B: Sample EM31, G858 and EM61-MK2 QC Tests
Contents of CD: Project Deliverables

ACRONYMS AND ABBREVIATIONS

AHA	Activity Hazard Analysis
CWM	Chemical Warfare Material
DGM	Digital Geophysical Mapping
DQOs	Data Quality Objectives
GPO	Geophysical Prove-Out
GPS	Global Positioning System
MCB	Marine Corps Base
MEC	Munitions and Explosives of Concern
MOA	Master Ordering Agreement
MR	Munitions Response
MRP	Munitions Response Program
mV	Millivolts
NAD83	North American Datum of 1983
QA/QC	Quality Assurance / Quality Control
QC	Quality Control
SI	Site Inspection
SOPs	Standard Operating Procedures
TO	Task Order
UTM	Universal Transverse Mercator

1 INTRODUCTION

NAEVA Geophysics, Inc. was contracted by CH2M HILL to conduct digital geophysical mapping (DGM) from February 10th to the 25th, 2010 at two sites within the Marine Corps Base (MCB) Camp Lejeune, North Carolina. MCB Camp Lejeune is located immediately southeast of the City of Jacksonville, North Carolina. The western and northwestern boundaries are U.S. Route 17 and North Carolina State Route 24, respectively. Site 69 is 14-acre portion of land known as Installation Restoration (IR) Site 69/ Operable Unit (OU) 14 (Rifle Range Chemical Dump) which is located in the Stone Bay area of MCB Camp Lejeune. The site can be accessed through the Stone Bay Entrance located off NC Highway 210 on the southwestern base perimeter. Site UXO-02 is approximately 127 acres in size and includes within it Site 69. The investigation area has gently sloping terrain and is mostly heavily wooded with thick undergrowth.

From 1950 to 1976, Site 69 was reportedly used for the disposal of chemical wastes, including polychlorinated biphenyls, solvents, and pesticides. The Site also has a reported history of chemical warfare material (CWM) disposal in the form of 50 to 60 drums containing mustard or nerve agent. The purpose of the geophysical investigation at Site 69 was to identify potential targets of interest including waste disposal trenches and buried drums. In 1990, a fence was constructed around Site 69 to prevent exposure to potential site contaminants by military personnel performing military exercises in the area. The results of the DGM survey will also be used to confirm that all buried waste, associated with Site 69 is located within the current fence boundary.

The objective of the investigation of UXO-02 was to attempt to locate anomalies potentially representing Munitions and Explosives of Concern (MEC) resulting from the historic range activities. No MEC was reported on the surface of the site. Prior to the start of mapping at both sites, a Geophysical Prove-Out (GPO) was completed for the purpose of documenting the acceptable performance of equipment and personnel and establishing an appropriate anomaly targeting threshold.

2 METHODS

Professional land surveyors were contracted by CH2M HILL to install survey points along predetermined transects to allow NAEVA to reference fiducial markers used during the DGM survey. Transects, generally parallel and in a roughly north-south orientation, were identified with stakes spaced approximately 20-30 meters apart (depending on terrain). A Geonics EM31 and a Geometrics G-858 Magnetometer were used to map the GPO and transects for Site 69. A Geonics EM61-MK2 was used to map the GPO and transects throughout UXO-02. The EM61-MK2 mounted on wheels was used to collect data in local coordinates due to tree canopy.

Transects would be placed throughout the site approximately 10 feet apart which would allow adequate coverage with both the EM31 and the magnetometer to identify buried waste material. Transects were also placed outside of the fenced area in order to confirm the current fence configuration encompassed all to the buried waste associated with Site 69.

Each transect in UXO-02 was covered by two data passes approximately 5 feet apart, named (T)-1 and (T)-2 respectively (where T is the transect number). The DGM of each transect was accomplished by collecting (T)-1 in one direction and returning along (T)-2 in the opposite direction.

The survey stakes used to identify the transects for both sites were also used to position the data sets. While collecting, fiducial marks were placed in the data whenever a stake was crossed. Using these marks, the data could then be accurately positioned along these transects. Locations for these stakes were recorded in UTM's by the surveyor and were then used by NAEVA during data processing to transform the geophysical data from a local coordinate system to geodetic coordinates.

All daily logs, field notes, and sketches were input digitally into a Palm TREO PDA. At the end of each day, this information was uploaded to the project database for use in preprocessing the geophysical data.

2.1 Geonics EM31 Terrain Conductivity Meter

The EM-31 consists of a transmitter coil mounted at one end and a receiver coil mounted at the other end of a 3.7-meter long plastic boom. Electrical conductivity and in-phase field strength are measured simultaneously and stored along with line and station numbers in a digital data logger. The in-phase component is primarily used in searching for buried metal, measuring in units of relative parts per thousand (ppt) of the primary magnetic field. A negative response is most often observed over areas of shallow buried metal debris. The quadrature-phase measures electrical conductivity in milliSiemens per meter. Electrical conductivity is a function of porosity, conductivity of included soil moisture or contaminants, degree of saturation, and the type of soil and rock. The absolute values of terrain conductivity are not diagnostic, but their spatial variations are important; permitting identification of lateral changes in the shallow subsurface conditions. For this survey the EM31 was operated in vertical dipole mode. The vertical dipole mode has very low sensitivity to near surface materials. The sensitivity then increases with depth, becomes a maximum and then falls away beyond that depth. In the horizontal dipole mode the relative sensitivity is greatest to material at the near surface and then decreases with depth. This means that deeper anomalies are detected in the vertical mode and shallow anomalies in the horizontal orientation. The EM31, in vertical dipole mode, has the greatest portion of response affected by material in the 3-9 foot depth range but can provide information to a maximum of approximately 18 feet. Data were collected in automatic mode, at a rate of 5 readings per second.

2.2 Geometrics G-858 Cesium Vapor Magnetometer

A Geometrics G-858 total field magnetometer, operated in vertical gradient mode, was employed for the magnetics survey. The G-858 system comprises a belt-mounted display/logging console connected to two cesium sensors mounted one directly on top of the other on a handheld counterbalanced staff. The console contains electronics to acquire magnetic field data with position and display it on an LCD screen for review and edit. The use of vertical gradient mode (two vertically-separated sensors operating simultaneously), eliminated the need for a magnetics base

station. Ferrous material typically manifests a remnant magnetic field that varies in orientation from that of the Earth's magnetic field. The summation of the remnant field to the Earth's field results in distortions in the overall field. These local, high frequency (short wavelength) anomalies in the Earth's magnetic field can therefore be interpreted as being caused by subsurface ferrous material. Magnetics data were collected at a rate of 10 readings per second.

2.3 Geonics EM61-MK2 Electromagnetic Metal Detector

The EM61-MK2 is a time-domain electromagnetic (EM) instrument designed to detect, with high spatial resolution, shallow ferrous and non-ferrous metallic objects. The applicability of the instrument for MEC detection has been widely demonstrated. The instrument consists of one air-cored coil (1 m x 0.5 m), batteries, processing electronics, and a digital data recorder. The secondary coil is used for collection of data in differential mode. While differential mode has been known to allow the detection of depth of large anomalies (tanks, utilities, etc.), it has not been proven accurate for MEC applications. The primary function of the coil is as an EM transmitter and receiver. Secondary currents induced in the coil are measured in millivolts (mV). For this survey, the EM61-MK2 was set up to collect data with 4 time gates (Channels) from the bottom coil which are geometrically spaced in time after the termination of the transmitter pulse. Based on results from numerous projects on Camp Lejeune and completion of the GPO's have set the threshold at 3mV in channel 2.

The EM61-MK2 was operated in fiducial mode with the bottom coil mounted on manufacturer-supplied wheels, 40 cm above the ground surface recording a reading every 10 centimeters. The EM61-MK2 data were recorded with an Allegro CX data logger.

3 GEOPHYSICAL PROVE-OUT (GPO)

The purpose of surveying a GPO is to demonstrate the effectiveness of all instrumentation, methods, and personnel prior to the initiation of fieldwork. Serial number identifications were recorded for all instrumentation (i.e. data loggers,

sensors and system electronics), and the GPO was mapped using the same personnel, equipment, and methodologies employed for the DGM surveys.

The GPO, located just north of the intersection of Toledo Road and Camp Knox Road, was collected on February 9th, 2010. Its dimensions are approximately 12 meters by 20 meters. The GPO was mapped with fiducial markers entered into the data every 10 meters. The GPO was collected using both the EM61-MK2 and the G-858 magnetometer. The EM61-MK2 collection was performed with survey lines spaced 0.75 meters apart. This spacing results in coil overlap on successive lines, reducing the likelihood of data gaps and improving the chance of detecting small MEC items. The GPO had been seeded for previous work, so a background survey was not performed. The G-858 magnetometer GPO implemented a transect-like survey with each line spaced 1.5 meters apart. This was deemed acceptable by CH2M HILL's on-site representatives for use as the prove-out. A daily instrument verification strip (IVS) was collected in order to verify proper instrument function following completion of GPO.

The EM31 was not demonstrated in the GPO due to the instrument's limited capabilities in detecting small metallic items. Instead, a dynamic test was run over a large metallic item (in this case a manhole cover) in order to demonstrate that the instrument was working correctly.

Magnetics data and data from Channel 2 of the EM61-MK2 were processed and used to generate final target selections in the GPO as well as in the field area. Color contour maps of the data from the surveys of the GPO are included in Appendix A. The results were reviewed by the QC Geophysicist and showed good correlation to previous surveys of the same GPO. After the QC review, the GPO results were provided to CH2M HILL for final approval.

4 FIELD DATA ACQUISITION

From February 10th through the 25th, a total of 204 transects for Site 69 and 130 transects for UXO-02 were mapped. Transects were previously cleared of vegetation to allow for access to perform geophysical surveys. Survey points were then placed

within the lanes at 20 - 30 meter increments by a professional land surveyor. A survey point was placed at the start and end of each transect and whenever the transect changed direction to follow the cleared path. Survey points were also placed on both sides of obstructions intersecting the transect, providing for appropriate stop and start points and avoiding excessive data gaps.

Prior to collection, initial QC tests were performed for each instrument following daily instrument calibration in accordance with the manufacturer's specifications, as described in Section 5.1. G-858 magnetometer, EM31, and EM61-MK2 QC tests consisted of static tests with a standard response item, cable shake tests, and personnel tests. Dynamic tests were performed for each of the instruments in order confirm proper functionality. The EM31 test consisted of surveying a circular metal lid while the EM61-MK2 and G-858 magnetometer tests consisted of surveying an IVS line. The QC static tests for each instrument were done before, between, and after collection of separate grid blocks. The dynamic test was done at the beginning and end of each day to record responses and correct for drift throughout the day.

Data were collected first at Site 69 with both the EM31 and the magnetometer. Due to the size of the site the field team was split up for simultaneous collection in order to maximize efficiency. In order to minimize the effect of one instrument upon the other, a minimum distance of 15 transects (150 feet) was maintained between instruments.

The site, being irregularly shaped and partially inside a fence, was divided into three areas; IF (inside fence), OF (outside fence) and OFN (outside fence north). The total acreage collected for Site 69_IF was approximately 5.42 acres spread over 123 transects, Site 69_OF measured 2.54 acres collected across 98 transects, and Site 69_OFN totaled 1.05 acres collected over 83 transects.

Due to the size of the site and the presence of wetlands located in the middle of the area, UXO-02 was divided into four sections. Section 1 was located to the northeast, Section 2 composed the middle, Section 3 was located to the west, and Section 4 was the southernmost portion. The presence of wetland areas reduced the available survey area; therefore, the distance between transects were changed from

approximately 25m apart to 7m in order to cover the acreage specified in the Scope of Work.

UXO-02 Section 1, located to the northeast, had a total of 20 two-pass transects. Approximately 1.35 acres of data were collected in this area. These transects ranged greatly in length due to swampy conditions located both to the north and to east. The western border of Section 1 was a road running alongside a fence. This road made easy access to Section 1 and allowed the field crew to collect the transects from south to north. Numerous transects were bisected by swampland to the east, diminishing the continuous coverage in the area. Additional transects were created in order to compensate for this loss of coverage.

Section 2, located in the middle of the site, is covered by 37 two-pass transects totaling approximately 3.10 acres. Stones Bay creates the eastern boundary for this section, while Site 69 provides the western boundary. Wetland areas occupy both the northern and southern boundaries. The transects gradually increase in length as the collectable area increases in size to the east. The general conditions of this section were predominately flat areas with a few slopes relating to the inlets from Stones Bay. A road surrounding Site 69 provided access to this section and favors collection from north to south. Large trees were often found lying across transects, creating data gaps.

Section 3, to the west, covered 4.15 acres over 36 two-pass transects. This section was bounded by a road to the west, Site 69 and a road to the north and an inlet from Stones Bay to the east. Standing water from the inlet stretches its way throughout Section 3 creating a series of gaps that could not be cleared of brush. This section was generally flat with gentle slopes related to the inlet. A number of downed trees were noted on the transects and were carefully traversed in order to maintain the appropriate data density. The section was collected from the north to the south due to roads surrounding the area. As a result of a wetland bisecting the area, collection took place in two stages. First, the northern portion of the area was collected, followed by the southern.

Section 4, which includes 37 two-pass transects, covers 2.68 acres. Much like

Sections 2 and 3, this area was flat with isolated slopes relating to the inlet from Stones Bay to the north. The amount of wetland related to the inlet on transects was minimal with the large gaps being created by steep slopes along which the brush crews could not navigate. A road formed a portion of the southern border of Section 4 with Stones Bay bounding it to the east. Large trees were relatively spread out compared to the rest of the site thus reducing the number of obstacles on the transects. With the road lying along the southern boundary, collection was performed starting on the southern end proceeding north.

5 QUALITY CONTROL DATA

To establish confidence in the data reliability, Quality Control (QC) tests were conducted throughout the project. Tests were conducted prior to, during, and after all data collection sessions. All QC tests for all instruments were conducted after a minimum 10-minute warm-up period for the electronics. Sample graphical displays of QC data are included in Appendix B. All quality control data are included on the enclosed CD.

5.1 QC Test Descriptions and Acceptance Criteria

Personnel Test: A personnel test was conducted each day with the coil in a stationary position. The test included briefly logging background response and then the response while one team member operated the equipment and the other walked in the vicinity of the coil. The objective was to demonstrate that clothing or objects carried by personnel had no effect on instrument response.

Cable Shake Test: Prior to beginning data collection each day, data were recorded with the coil held in a stationary position, and the cables and connections were tested for possible shorts by shaking them. The operator monitored the response for any spikes during the process.

Static Background / Spike Test: A location identified as having minimal background response was designated as a calibration point. Readings were collected in a stationary position to ensure a stable response. Data were collected for a period of one minute with no object placed below the coil. An Industry Standard Object

(ISO), attached 42 cm above a wooden board, was then placed on top of the coil. Data were recorded for one minute with the object in place. The item was then removed, and static readings continued for an additional minute. This test was performed at the beginning, between data sets, and end of each day to establish that the instrument was functioning properly, as indicated by a stable and repeatable response with no spikes or other anomalous activity. A response of ± 20% after background correction was acceptable.

IVS Line: Following the morning static test for both the EM61-MK2 and G-858, a single line was collected over an Instrument Verification Strip (IVS). This test was used to document the repeatable responses of known objects at known depths.

Dynamic Test: The Dynamic test was used for the EM31 due to the lack of sensitivity to small metallic items. A single line was collected over a large metallic item in order to record a significant response and ensure proper functionality.

Repeat Data: This test was performed to verify the repeatability of the data and was performed at the end of each grid block. At least 2% of the survey lines were repeated and evaluated for consistency. Since small deviations in line path can affect the instrument response the profiles were evaluated qualitatively. The spike test is used to assess quantitative repeatability.

5.2 QC Test Results

QC data were evaluated using Geosoft's QA/QC software. Static, spike, cable shake, and personnel test profiles were plotted with an acceptance criterion of ± 2 mV from the mean. Any readings outside this range were flagged on the profiles, and an associated failure percentage was reported.

Personnel Test: No deviation from background response was observed.

Cable Shake Test: No spikes were observed in any of the tests.

Static Background / Spike Test: All static and spike tests were well within acceptance criteria; stable, repeatable, and without spikes.

IVS Test: IVS tests were plotted showing the line path and gridded response. A comparison of tests shows that response amplitudes are consistent and test item

positions are accurate.

Dynamic test: Daily comparisons of tests showed that response amplitudes were consistent and test item positions were accurate.

Repeat Data: Repeat lines showed repeatability within the acceptance criteria.

6 DATA PROCESSING

EM31 data were temporarily stored in an Allegro CX data logger using Geonics EM31CX software version 1.18 and then downloaded into a laptop computer for further on-site processing using Geonics DAT31 version 2.07. G-858 magnetometer data were stored on the instrument console and then transferred to a laptop computer for processing through MagMap 2000 version 4.88. EM61-MK2 data were temporarily stored in an Allegro CX data logger using Geonics' EM61-MK2 software and then downloaded into a laptop computer for further on-site processing using Geonics' DAT61MK2 version 2.37. Initial data processing was performed by the field team. This included reviewing data for integrity and repeatability and positioning the data based on the local distance from the first stake on each transect.

Once in-field review was completed, the data were transferred to NAEVA's Charlottesville, Virginia office for preprocessing, analysis/target selection, and final map production using Geosoft's Oasis Montaj software version 7.1.1.

6.1 Preprocessing

Converted raw data files were imported into Geosoft's Oasis Montaj to perform the following:

- Review and finalize all QC tests (cable shake, personnel, and static) prior to processing DGM data for that day;
- Conversion of raw coordinates to projected NAD83 UTM Zone 18N coordinates using meters;
- Evaluation of data density;
- Application of auto leveling and instrument drift corrections for EM61-MK2 data;
- Application of default lag correction;
- Generation of preliminary contour map(s) from gridded data;
- Generation of preliminary original versus repeat profiles by grid block;
- Generation of formatted ASCII files containing preprocessed data by grid

block.

Coordinate conversion from raw to projected coordinates was accomplished by matching fiducial marker locations with surveyed control points provided by a licensed land surveyor; this method was used for all three geophysical systems.

6.2 Final Processing

After completion of preprocessing, the data were further evaluated and processed to generate final processed data files. Final processing steps included:

- Evaluation and refinement of auto leveling and instrument drift corrections for EM61-MK2;
- Application of heading correction to magnetic data, if needed;
- De-spiking of magnetic data, if needed;
- Evaluation and refinement of lag correction;
- Additional digital filtering and enhancement, as necessary;
- Targeting of data, as described below;
- Generation of formatted ASCII files containing processed data by grid block;
- Generation of final maps for each grid or block showing contoured, gridded data, target locations, areas of interest and culture;
- Generation of final original versus repeat profiles by grid block.

For the EM31, final processing was performed on both the inphase and terrain conductivity (quadrature) measurements. The G-858 magnetometer total field data from the top and bottom sensors was despiked as needed and if necessary the vertical gradient recalculated. All other corrections and processing steps were applied to the vertical gradient data. All final processing steps were applied to Channel 2 of the EM61-MK2.

6.3 Analysis and Target Selection

Final processed XYZ (ASCII) files and geophysical contour maps were created for the Site 69 and UXO-02 surveys. All raw and processed data can be found on the enclosed CD.

6.3.1 Site 69 EM31 Potential Areas of Interest

Since no individual targets were selected for the EM31, potential areas of interest were identified in both the conductivity and inphase components. A composite image of all data collected at the site and known cultural features was used for data interpretation. Areas showing distinct deviations from background values were

outlined and identified as areas of interest on Plates 1 & 2.

6.3.2 Site 69 Magnetics Potential Areas of Interest and Target Selection

The primary objective of the investigation was to identify metallic anomalies that may be related to previously buried chemical waste. This was accomplished using a composite image of all vertical gradient data collected at the site and known cultural features. Potential areas of interest were identified around spatially large anomalous features likely to represent large concentrations of subsurface metal on Plate 3.

The secondary objective was to use the magnetics data to identify smaller anomalies that potentially represent MEC. The vertical gradient profile data was analyzed by a trained geophysicist and targeted by selecting apparent local anomalous features that likely represent point-source anomalies. Prior to target selection, a digital filter was used to capture local minimum and maximum values in the vertical gradient response associated with the peak and trough values for dipole anomalies. During target selection, the selected target location and associated vertical gradient, local minimum and local maximum were all recorded. Target locations were placed at the inversion point for dipole features and positive or negative peak location for monopoles. A "magnitude" channel was calculated for each target that represents the range of response across the anomaly; the maximum minus the minimum. All target selections were performed on final processed vertical gradient data from the G-858 magnetometer.

6.3.3 UXO-02 EM61-MK2 Target Selection

The UX-Detect module within Oasis Montaj identifies peak amplitude responses associated with, but not limited to, MEC items. Single-source anomalies may generate multiple target designations depending on shape and orientation. Initial target selections were auto-selected using a peak picking algorithm based on the Channel 2 profile data. Data profiles corresponding to the anomalies selected by Geosoft were then analyzed by trained geophysicists, with the targets evaluated as to their validity and position. Targets found to be invalid or incorrectly located were removed or adjusted. Additionally, anomalies that were not selected by the UX-Detect module, yet deemed to represent potential MEC targets, were manually

selected. All anomalies that occurred at or above the targeting threshold of 3 mV were identified using an ID number. All targets were selected from final processed Channel 2 data of the EM61-MK2 bottom coil.

6.4 Deliverables

Final processed XYZ (ASCII) files for Site 69 and UXO-02 were created by block, and individual target lists were created for each transect. Each target list provides a Target ID, Transect ID, Easting (x) and Northing (y) UTM coordinate location for each target, and the recorded peak response in instrument units. The target IDs were assigned by numbering the targets with increasing IDs starting from south end of each transect. In addition, some targets were assigned a type, a numerical value with "4" representing known culture, "5" for probable noise/data spikes, and "6" representing suspected culture.

All target lists and both raw and processed data have been submitted to CH2M HILL's geophysicist and can be found on the attached CD. Also included are processing reports, a copy of the MRSIMS database, and target lists in MRSIMS format.

7 RESULTS OF SITE 69

The geophysical data collected at Site 69 as displayed on Plates 1, 2 & 3 show the localized subsurface metallic concentrations across the site. The area inside the fence has the greatest likelihood of containing drums and other large metallic items indicative of trenching. Large anomalies are present in the south-central portion of the survey area surrounding numerous monitoring wells. Areas outside of the fenced area to the north and east are relatively clean in comparison.

EM31 terrain conductivity data (Plate 1) shows significant anomalies located on the southern margin of the site, likely indicative of landfill material. AOI 1 is likely a result of an increase in subsurface saturation, either from ground water, contaminate liquid, or both. Standing water in this area may also contribute to this change in conductivity. AOI 2 and 3 have similar responses to the large anomaly previously mentioned. Yet, these anomalies had no surface indications of saturation and may

warrant further investigation. Elevated responses can also be observed near the edges of the surveyed area outside the fence. These responses are probably related to standing water observed in the area from Stones Bay inlet.

The in-phase data (Plate 2) collected with the EM31 correlates well with the conductivity data. The response of AOI 1 and 2 is related to the monitoring wells. AOI's 3, 4, 5 and 6, however, are not associated with monitoring wells. Similar sizes and locations of major anomalies are apparent within the fence line. AOI's 1 and 2 from the conductivity map and AOI's 2, 3 and 4 from the in-phase show very good correlation. Both these sets of data show a reverse "L" shape trend located in the middle of the fenced in area.

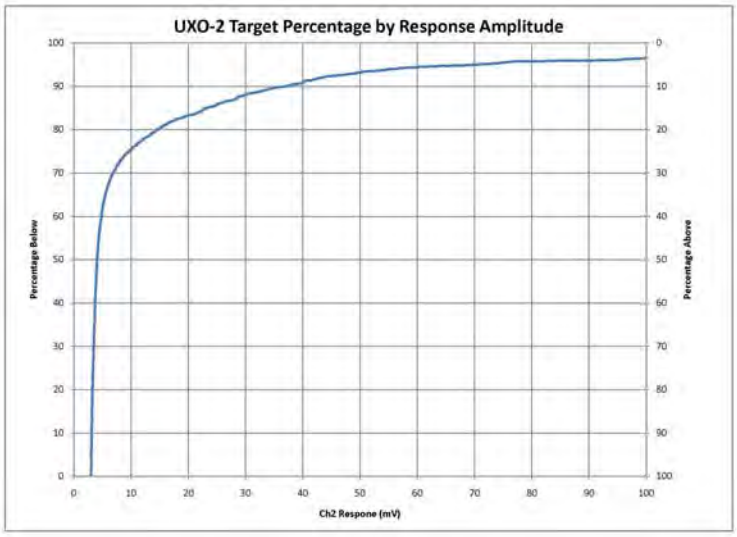
Some differences were detected between the in-phase and conductivity data. The large conductivity anomaly AOI 3 is observed without a corresponding in-phase anomaly. This feature is likely due to a subsurface change in the ground composition resulting in a change in subsurface conductivity. Likewise, the in-phase anomalies AOI 5 and AOI 6 are located inside the fence to the north and have no conductivity counterpart. Most likely the result of individual buried metallic items.

The magnetometer data (Plate 3) confirms the presence of widespread anomalous response throughout the southern portion of the site. The G858 is more sensitive to smaller quantities of ferrous metal than the EM31, and as a result the area of landfill debris for Site 69 appears larger than what is evident in the EM31 data (Plate 3). A total of 847 point targets were selected within Site 69. These targets are shown in more detail on their block maps located on the CD attached. AOI 2 has linear, high-response patterns within the suspected burial area which is a good indicator of trenching activities. Some of this response is likely due to debris that is either visible at the surface or in the shallow subsurface. A number of magnetic anomalies appear throughout the site that are not seen in the EM31 data sets. Most of these can be explained by their proximity to monitoring wells. AOI's 1, 3, 4, 5, 6 and 7, however, have no surface indicators to explain their presence. These anomalies appear to be the result of small, isolated pieces of ferrous metal rather than extensive landfill material.

The anomalous areas show similar trends among all three maps (Plates 1, 2, & 3) which confirm the locations of the contamination. Several smaller anomalies spread throughout the fenced area are likely independent burials, distinct from the main feature located in the area's center.

8 RESULTS OF UXO-02

Within UXO–02, 1,457 targets were selected at a threshold of 3 mV in Channel 2: 273 targets in Section 1 (Plate 4), 369 targets in Section 2 (Plate 5), 515 targets in Section 3 (Plate 6), and 300 targets in Section 4 (Plate 7). In general, targets were evenly distributed throughout the site. Throughout UXO-02 the response values for any given section were generally below 10 mV. Among the 1,457 targets selected in UXO-02 a number of them were determined to culture or noise. There were 69 Type 4 anomalies which represent known culture, 205 Type 5 anomalies which are suspected noise, and 34 Type 6 anomalies which are suspected culture. These three types of anomalies account for approximately 21% of the total targets selected. The total number of targets correlates directly with the size of the section collected. Within each section, an area could be identified in which an increase in target density occurred. The graph below shows target selection as a function of response amplitude. This illustrates the amount of targets that would be selected should the mV threshold change. For example, if the threshold was changed to 10 mV, the percentage of targets eliminated would be 75%.



Section 1 contains the smallest acreage covered with the lowest number of targets selected (Plate 4). Approximately two-thirds of the targets are located in the northern half of the collection area. Of these, the majority are concentrated to the east in a low-lying area near the wetlands. This could be a result of trash/debris flowing downstream or from military activity in Stones Bay washing inland during times of elevated water levels.

Section 2 (Plate 5) has a relatively even distribution of targets throughout the area compared to Section 1. A slight increase in density is evident within the middle portion of the area. Unlike Section 1, transects near the water's edge were relatively clean compared to the rest of the area. This could be due to the topography of this section. Cliffs as high as 40 feet mark the eastern edge of this section which then drops off again to the west. This change in elevation creates a valley which would tend to trap metallic items from military exercises from entering the bay due to the surrounding highlands.

Section 3 (Plate 6) of UXO-02 has the largest acreage covered and consequently the most targets selected. This area has numerous wetlands and gaps related to water stretching inland from Stones Bay. The majority of the targets are not associated with the drainage to the wetland boundary but rather the roads that create the northern and western boundaries. The northern boundary is the main access road for UXO-02 and Site 69. An increase in targets is also observed along the fence line of Site 69. The increase in density could likely be related to road traffic and associated debris.

Section 4 (Plate 7) has the greatest concentration of targets to the east, near the water. A large response area with multiple targets is observed on the eastern portion of the site. This anomaly grouping appears to be related to a localized trash site. A metallic drum was observed on the surface in this area.

REFERENCES

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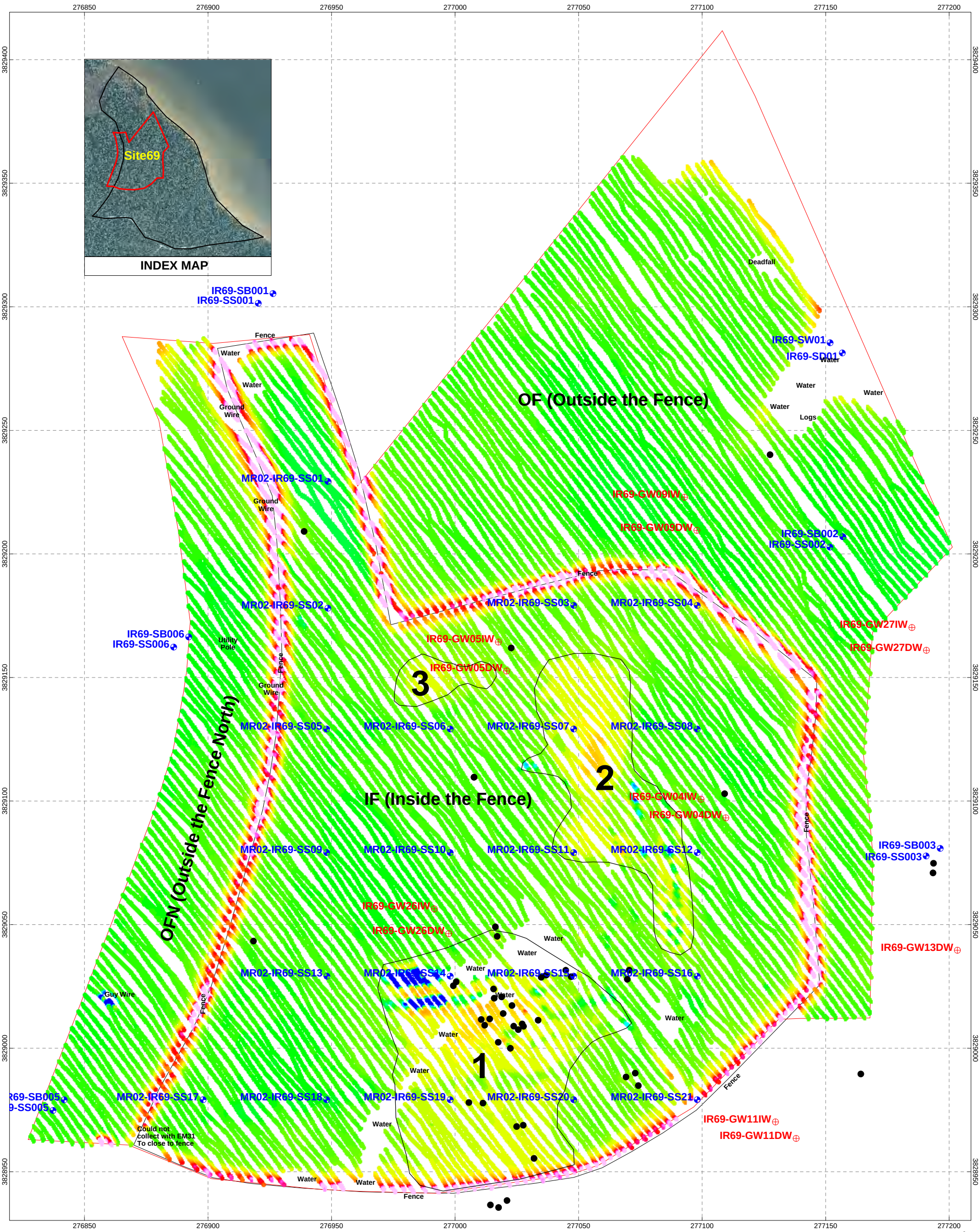
CH2M HILL, 2009. Site Specific Work Plan Addendum for Preliminary Assessment/Site Inspection Site UXO-02, Unnamed Explosives Range, ASR #2.201, Marine Corps Base Camp Lejeune, Jacksonville, North Carolina. November 2009.

PLATES



Legend

- Culture (if noted) Locations recorded with a 3 to 5 meter accuracy GPS
- Proposed MW
- Proposed Sample
- Potential Area of Interest (AOI)

NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Plate 1

Client: CH2M HILL

EM31 Condictivity
Site Mosaic
Site 69
Marine Corps Base, Camp Lejeune
Jacksonville, North Carolina

Date of Survey: 02/11/2010 - 02/19/2010
Date of Map Creation: 03/03/2010

Map Approver: J. Guillard

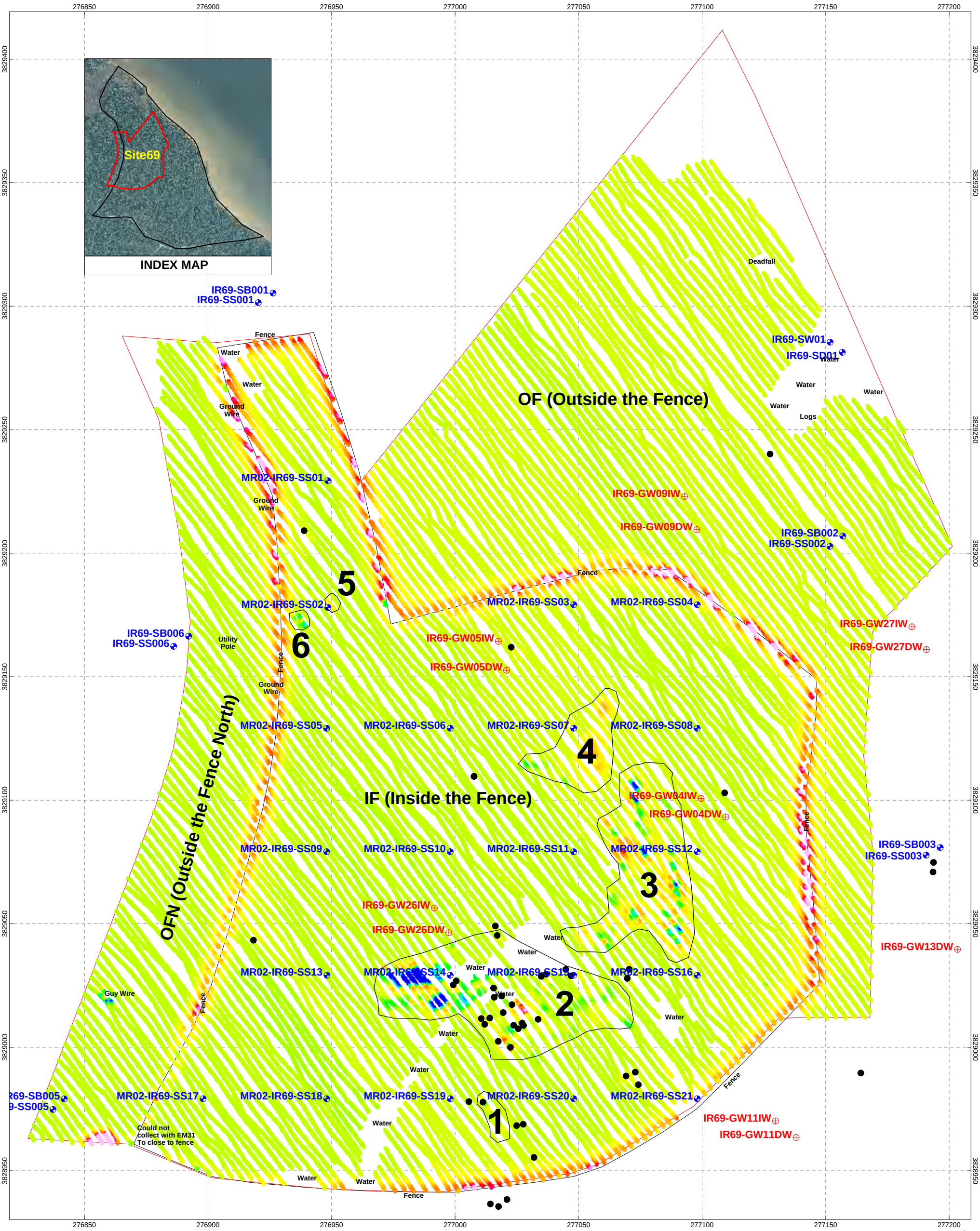


Plate 2

Legend

- Culture (if noted) Locations recorded with a 3 to 5 meter accuracy GPS
- Proposed MW
- Proposed Sample
- Potential Area of Interest (AOI)

ppt

-15 -14 -13 -12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 1 2 2 3 3 4 4 5 5 6 6 7 7 8 8 9 9 10 11 12 13 14 15

10 0 10 20 30 40 50

(meters)

NAD83 / UTM zone 18N

NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Client: CH2M HILL

EM31 Inphase
Site Mosaic
Site 69
Marine Corps Base, Camp Lejeune
Jacksonville, North Carolina

Date of Survey: 02/11/2010 - 02/19/2010
Date of Map Creation: 03/03/2010

Map Approver: J. Guillard

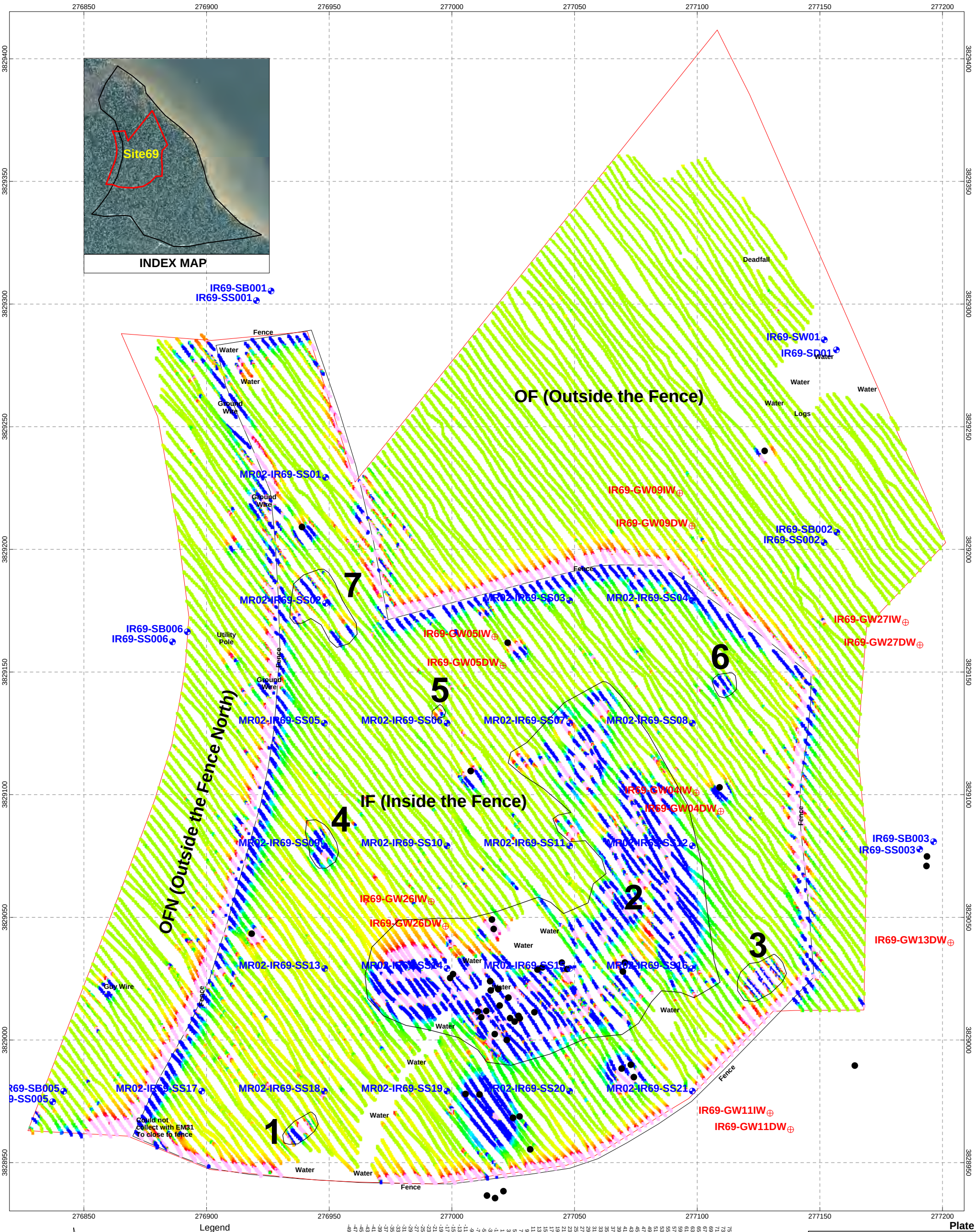


Plate 3

Legend

- Culture (if noted) Locations recorded with a 3 to 5 meter accuracy GPS
- Proposed MW
- Proposed Sample
- Potential Area of Interest (AOI)

nT/m

(meters)

NAD83 / UTM zone 18N

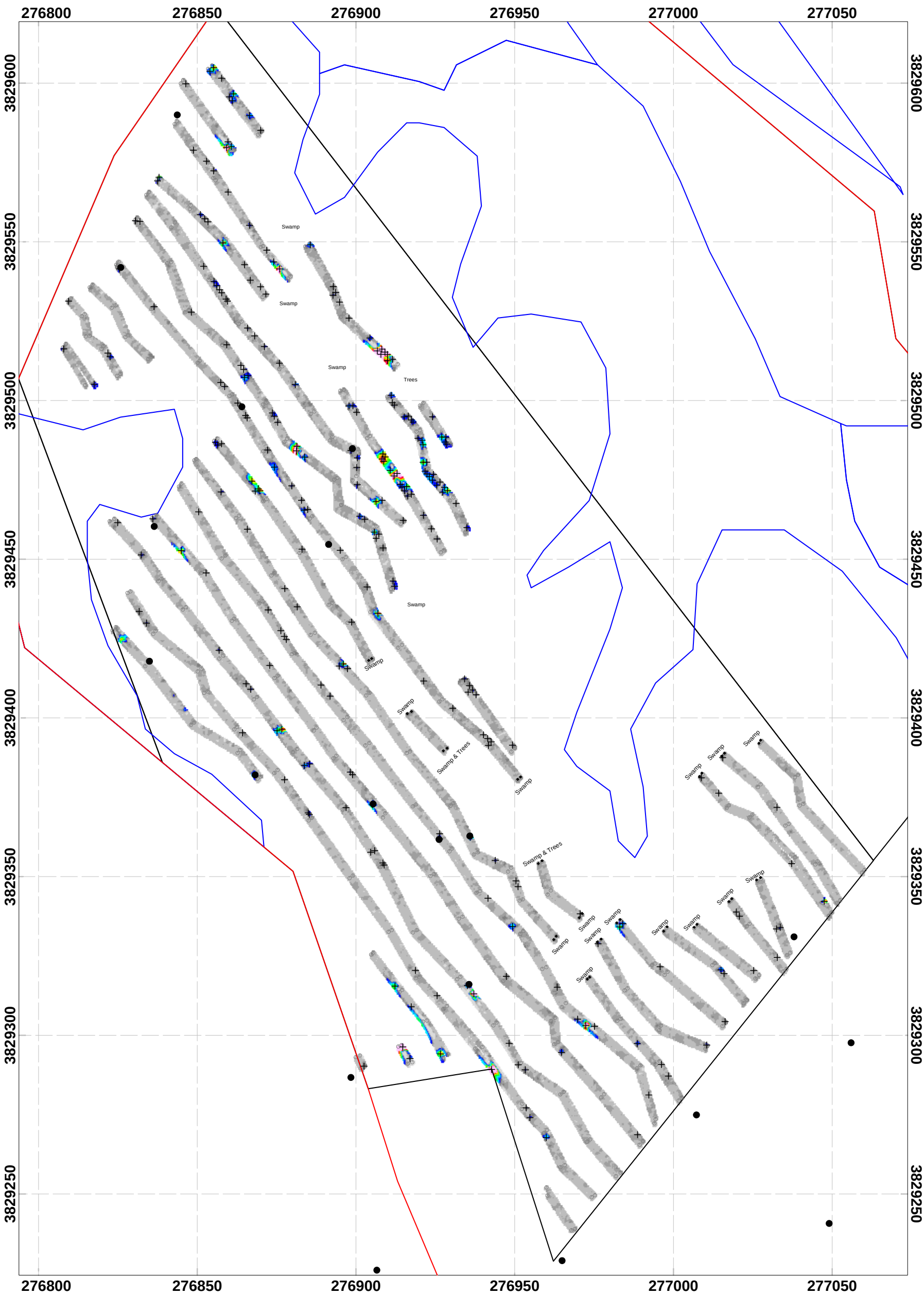
NAeVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

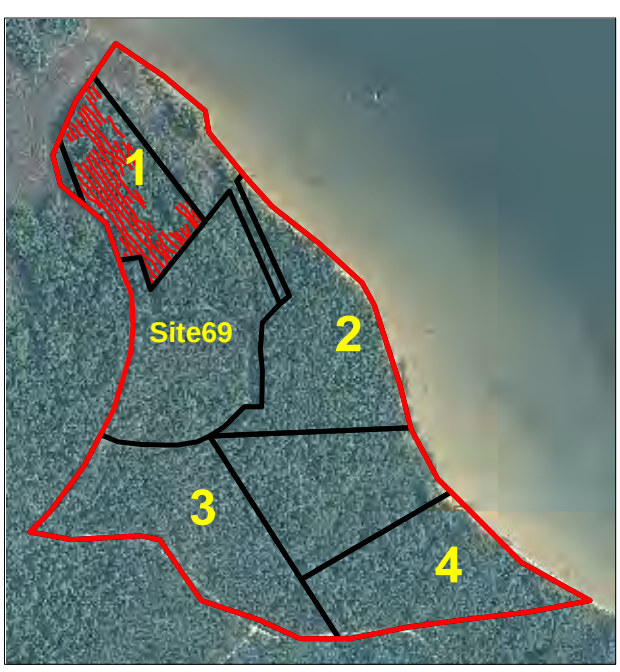
Client: CH2M HILL

G-858 Magnetometer Vertical Gradient
Site Mosaic
Site 69
Marine Corps Base, Camp Lejeune
Jacksonville, North Carolina

Date of Survey: 02/11/2010 - 02/19/2010
Date of Map Creation: 03/03/2010

Map Approver: J. Guillard





mV

0 2 4 6 8 10 13 16 19 22 25 28 31 34 37 40 43 46 49

25 0 25

(meters)

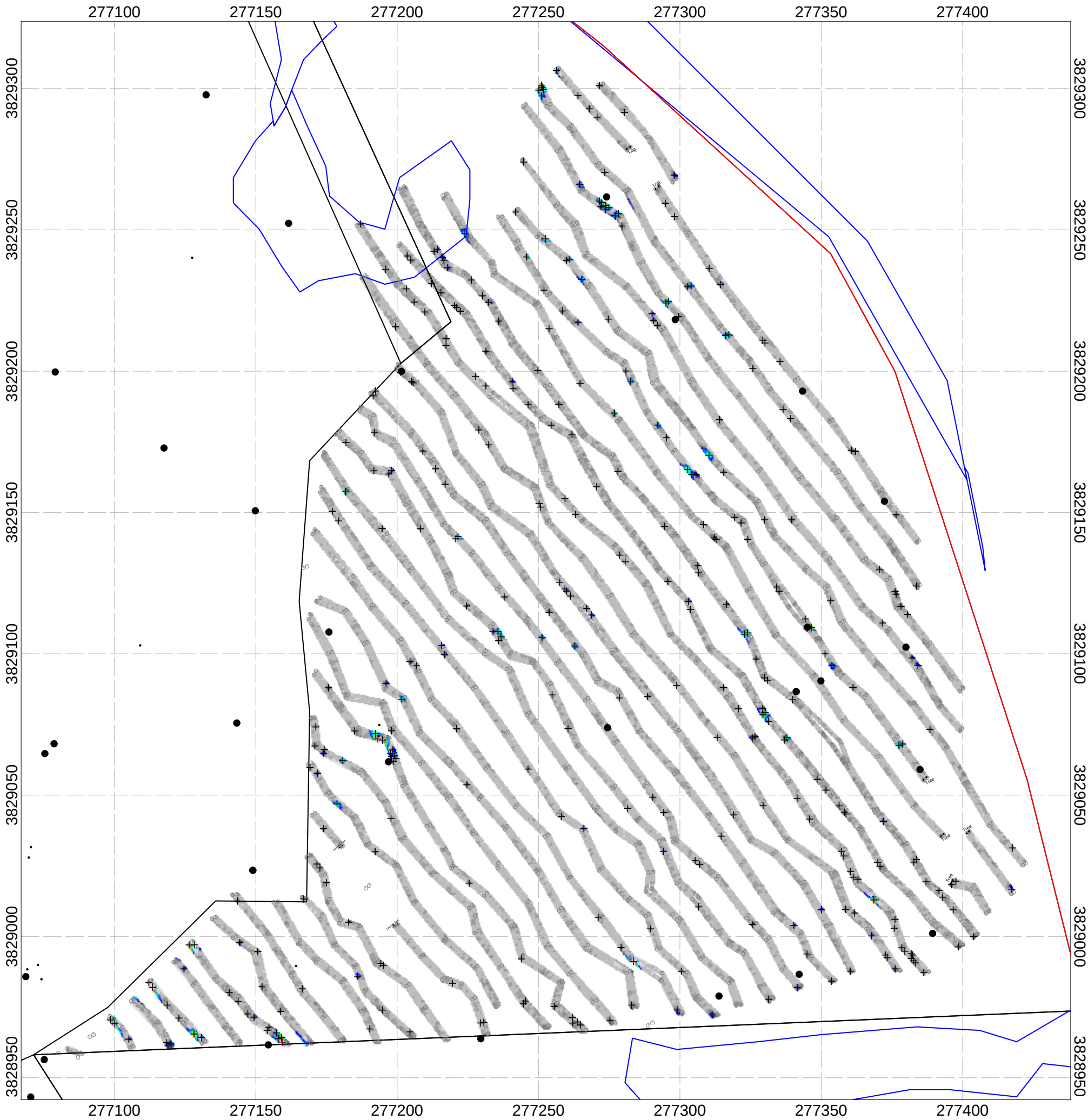
Legend

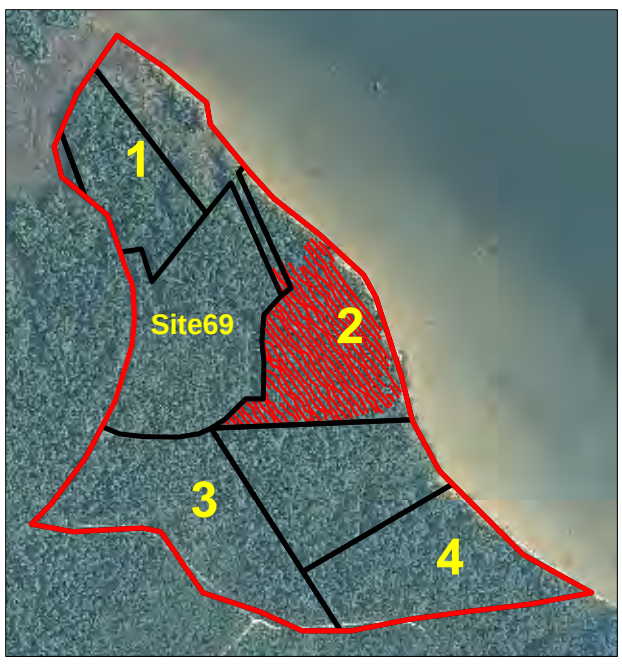
- Culture (if noted) Locations recorded with a 3 to 5 meter accuracy GPS
- Targets
- Stake Locations
- Site Boundary
- Wetlands Area

NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Plate 4

Client: CH2M HILL
EM61 Mk2 Bottom Coil Ch2 Site Mosaic UXO-02 Section 1 Marine Corps Base, Camp Lejeune Jacksonville, North Carolina
Date of Survey: 02/16/2010 - 02/25/2010 Date of Map Creation: 03/03/2010
Map Approver: J. Guillard





mV

0 2 4 6 8 10 13 16 19 22 25 28 31 34 37 40 43 46 49

25 0 25 50
(meters)

Legend

- Culture (if noted) Locations recorded with a 3 to 5 meter accuracy GPS
- Targets
- Stake Locations
- Site Boundary
- Wetlands Area

NAeVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

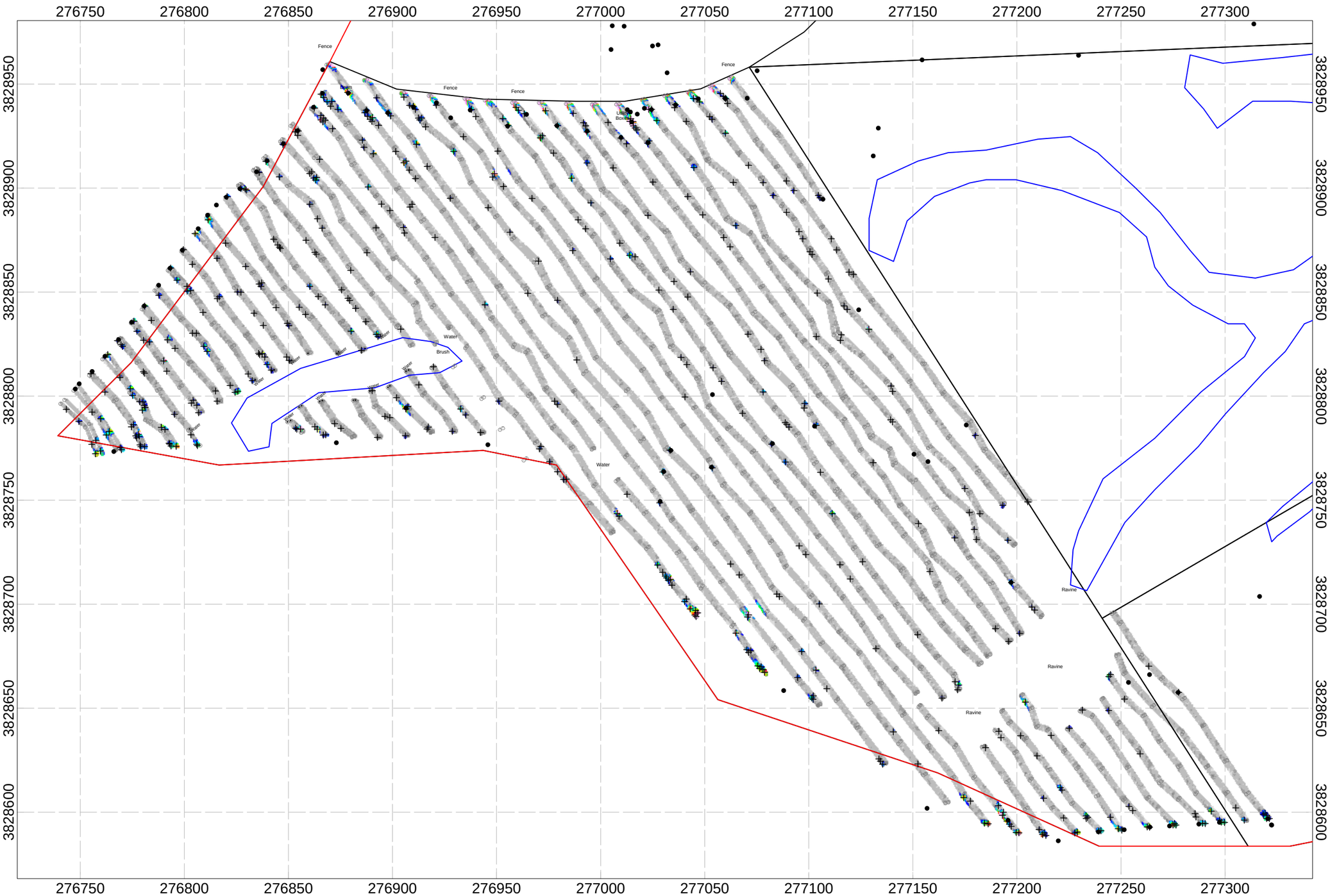
Plate 5

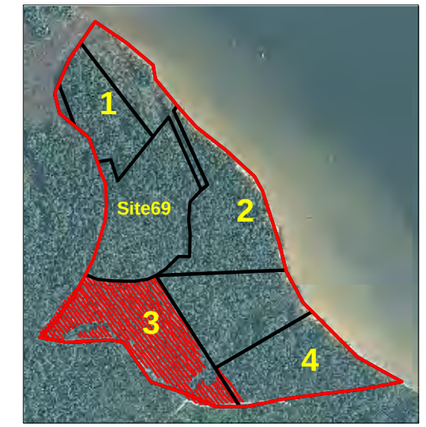
Client: CH2M HILL

EM61 Mk2 Bottom Coil Ch2
Site Mosaic
UXO-02 Section 2
Marine Corps Base, Camp Lejeune
Jacksonville, North Carolina

Date of Survey: 02/16/2010 - 02/25/2010
Date of Map Creation: 03/03/2010

Map Approver: J. Guillard





Legend

- Culture (if noted) Locations recorded with a 3 to 5 meter accuracy GPS
- Targets
- Stake Locations
- Site Boundary
- Wetlands Area

50, 48, 46, 44, 42, 40, 38, 36, 34, 32, 30, 28, 26, 24, 22, 20, 18, 16, 14, 12, 10, 8, 6, 4, 2, 0

mV

Plate 6

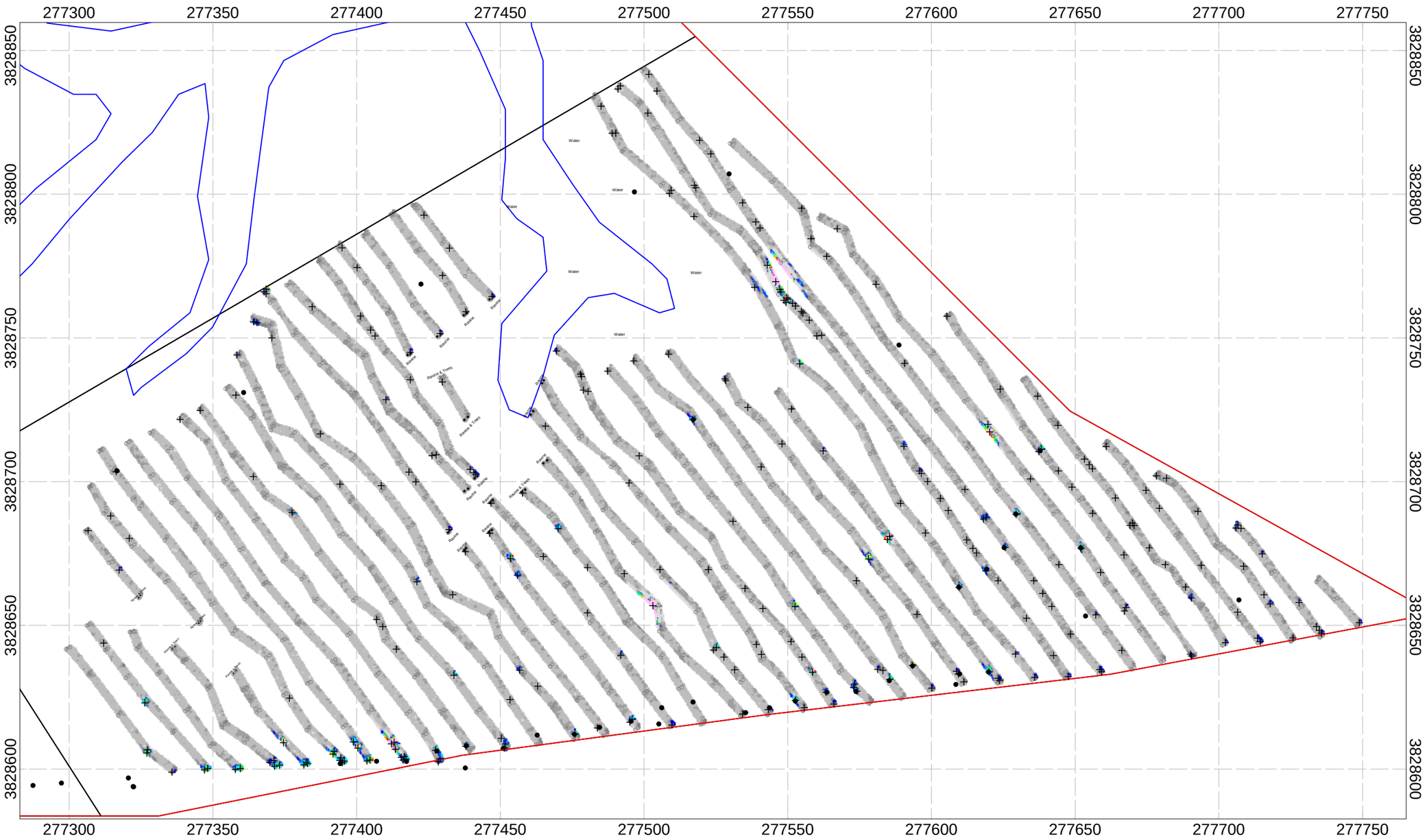
Client: CH2M HILL

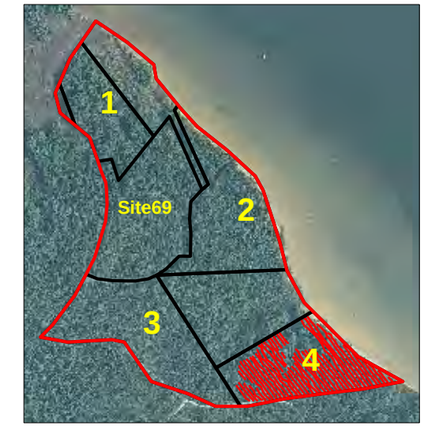
EM61 Mk2 Bottom Coil Ch2
Site Mosaic
UXO-02 Section 3
Marine Corps Base, Camp Lejeune
Jacksonville, North Carolina

Date of Survey: 02/16/2010 - 02/25/2010
Date of Map Creation: 03/03/2010

Map Approver: J. Guillard

NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys





Legend

- Culture (if noted) Locations recorded with a 3 to 5 meter accuracy GPS
- Targets
- Stake Locations
- Site Boundary
- Wetlands Area

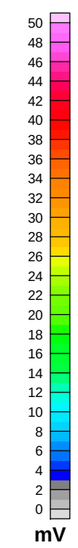


Plate 7

NAeVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

25 0 25 50 75
(meters)

Client: CH2M HILL

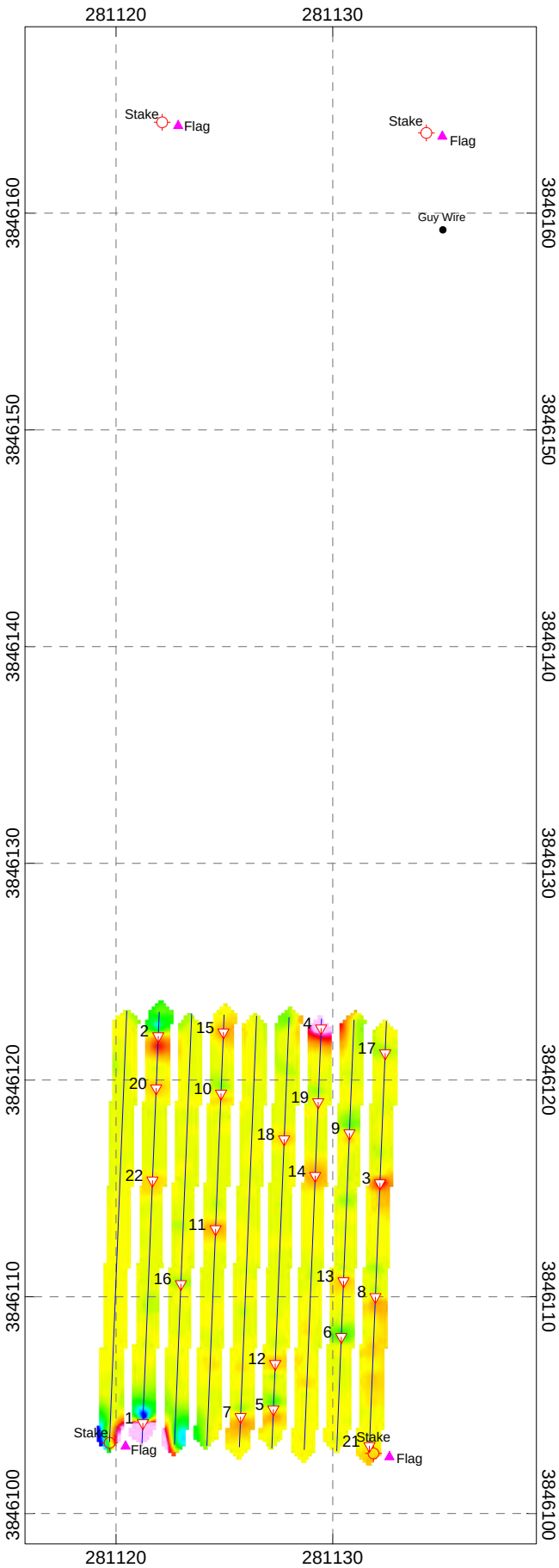
EM61 Mk2 Bottom Coil Ch2
Site Mosaic
UXO-02 Section 4
Marine Corps Base, Camp Lejeune
Jacksonville, North Carolina

Date of Survey: 02/16/2010 - 02/25/2010
Date of Map Creation: 03/03/2010

Map Approver: J. Guillard

APPENDIX A

NAeVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys



Legend

2 Selected Target
(See Target Pick List For Response and Location)
(Unique Target ID is XXX, eg. 002)

brush Culture (if noted)

Grid Corner (Idealized)

Flag Location

Scale 1:300

5 0 5

(meters)

NAD83(NSRS2007) / UTM zone 18N

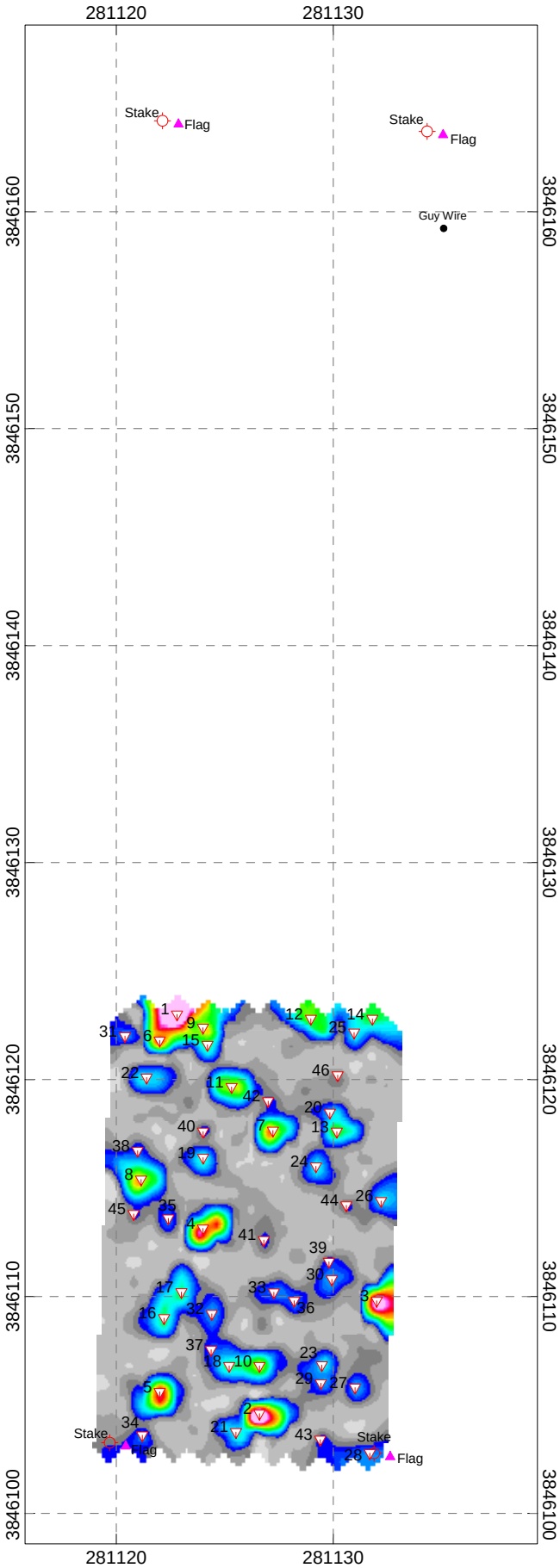
Client: CH2M HILL

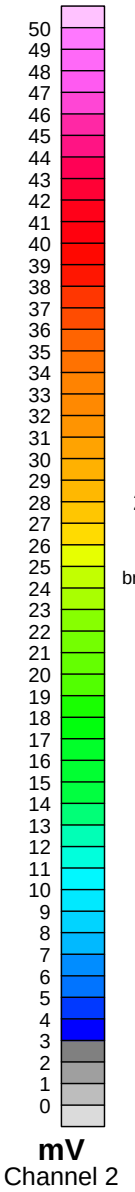
Vertical Gradient from Total Field Magnetics (G-858)
Geophysical Prove Out (GPO - Warped Fiducials)
Site 69 and UXO-02
Marine Corps Base, Camp Lejeune, North Carolina

Date of Survey: 02/09/2010
Date of Map Creation: 02/12/2010

Map Approver: J. Guillard

NAeVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys





Legend

- Selected Target (See Target Pick List For Response and Location) (Unique Target ID is XXX, eg. 002)
- Culture (if noted)
- Grid Corner (Idealized)
- Flag Location

Scale 1:300

5 0 5

(meters)

NAD83(NSRS2007) / UTM zone 18N

Client: CH2M HILL

EM61 MK2 Bottom Coil
Geophysical Prove Out (GPO - Warp Fiducials)
Site 69 and UXO-02
Marine Corps Base, Camp Lejeune, North Carolina

Date of Survey: 02/09/2010
Date of Map Creation: 02/10/2010

Map Approver: J. Guillard

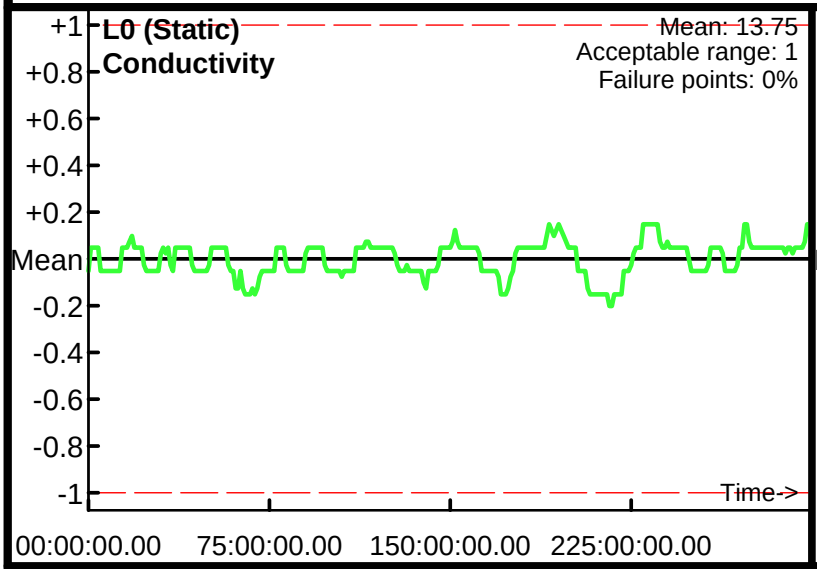
APPENDIX B

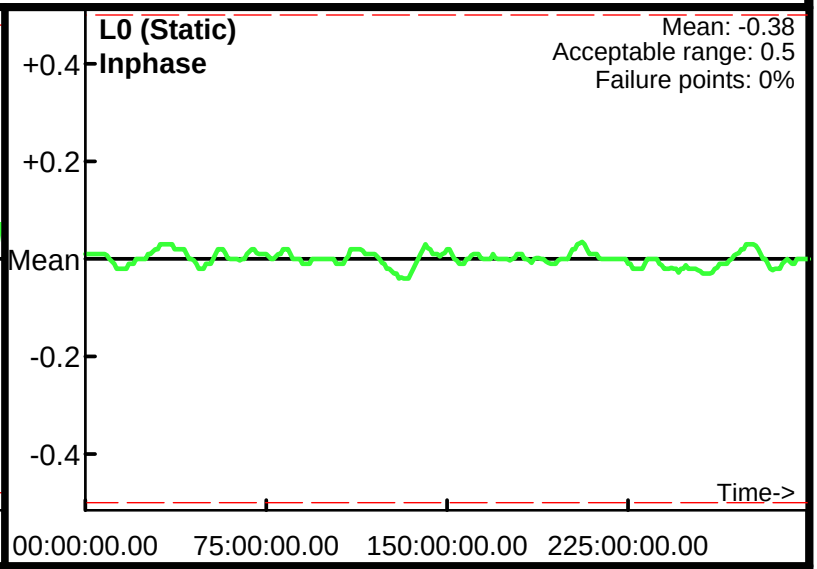
Static, Cable Shake and Personnel Test

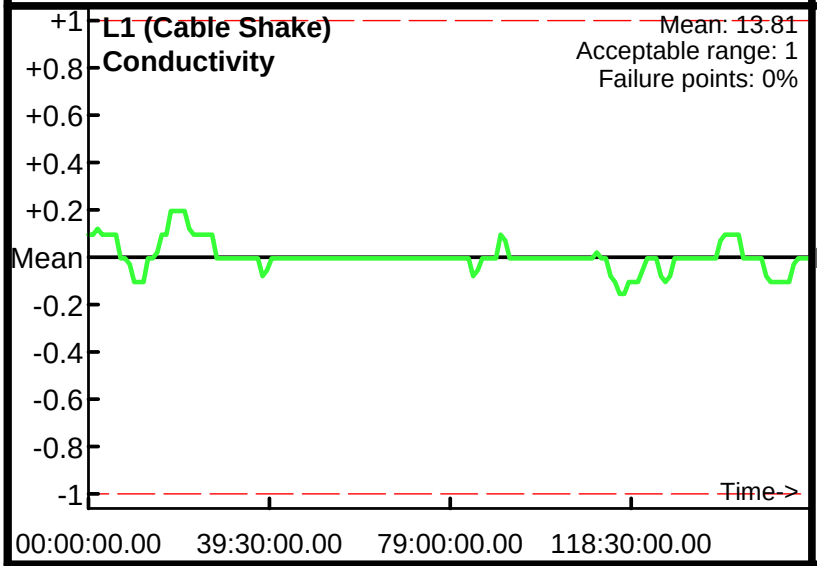
Project: Site 69 and UXO-02
Equipment: EM31
Grid/Location: Localized QC Area

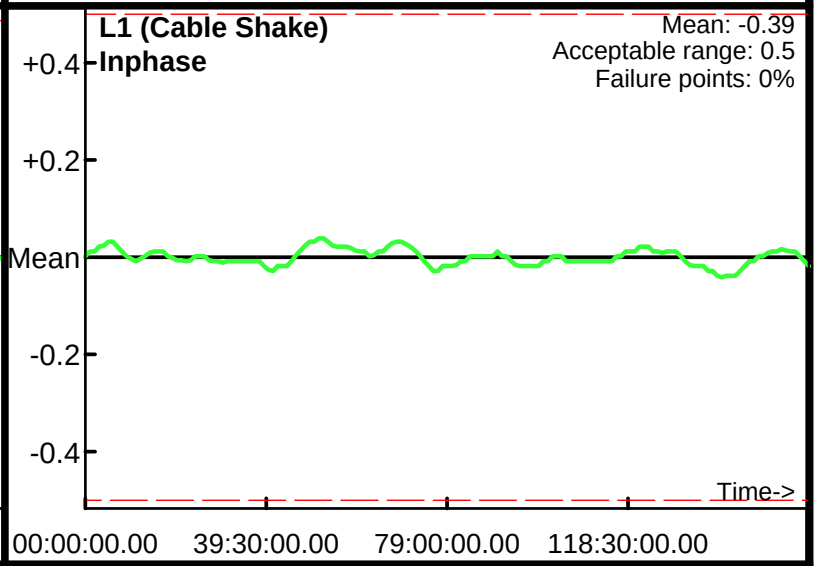
Outside range
Acceptable limits

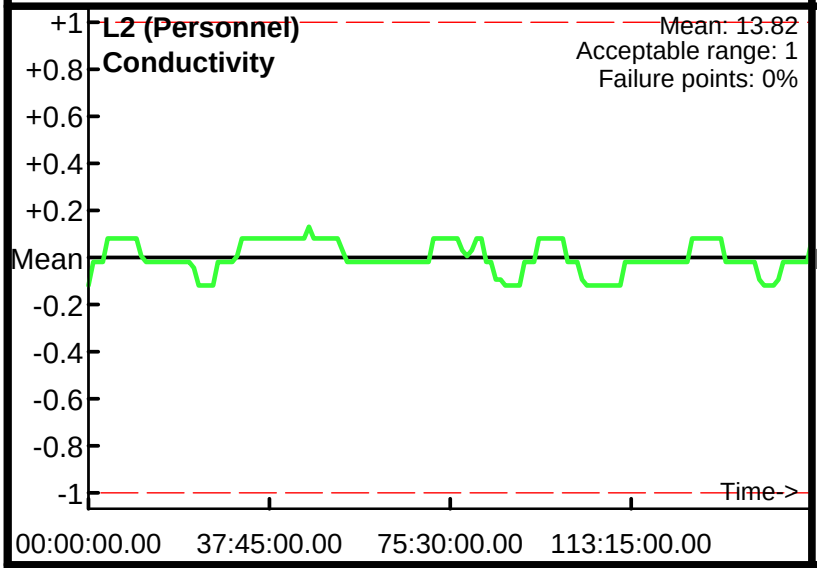
QC1 test
Operator: GeoA
Date: 2/12/2010

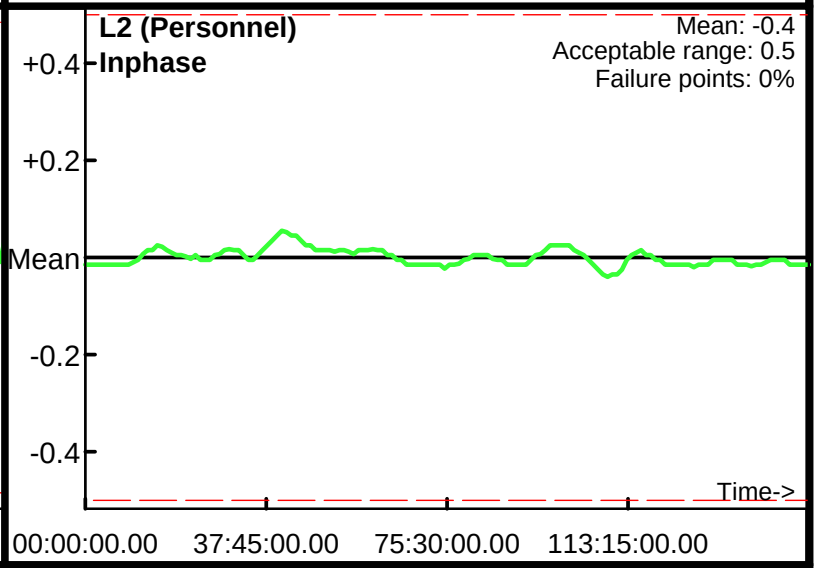












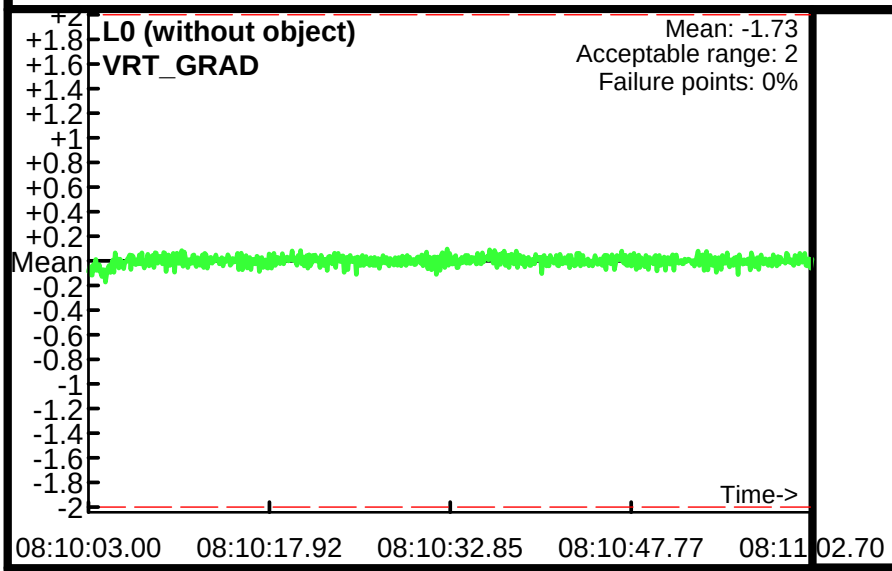
Database: Q:\Virginia Office\CH2M HILL\Camp Lejeune\Site 69\Data\Geosoft\QC\021210\0212AQC1.gdb
Line Name: L0 L1 L2

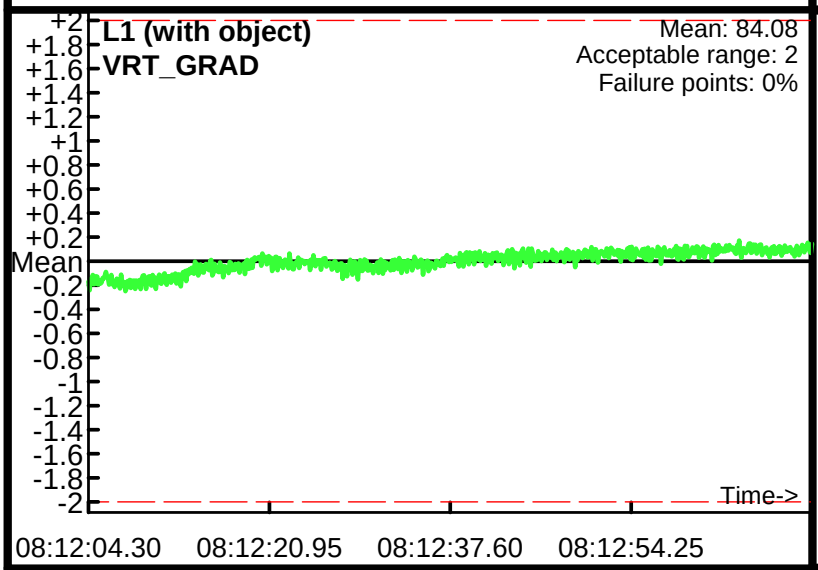
Static Calibration Test

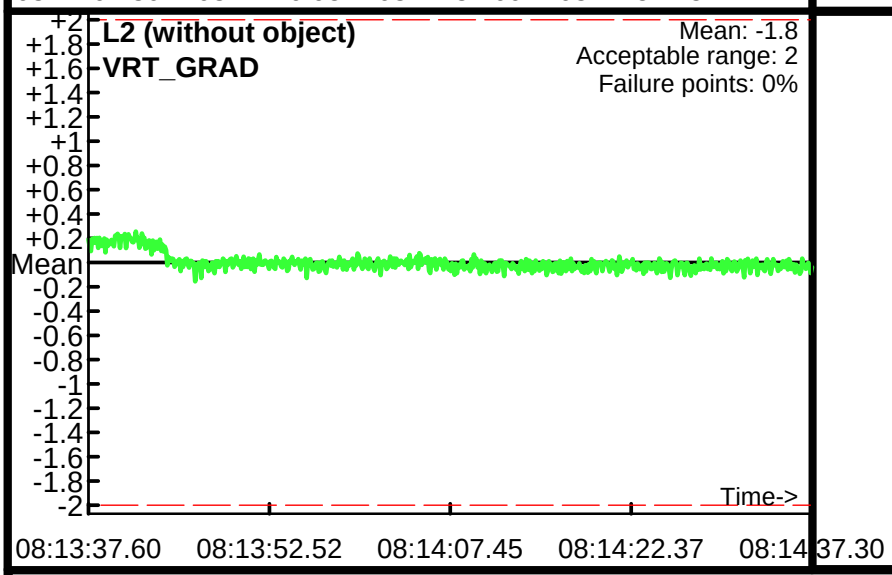
Project: Site 69 and UXO-02
Equipment: Magnetometers
Grid/Location: Localized QC Area

Outside range
Acceptable limits

QC1 test
Operator: GeoB
Date: 2/12/2010







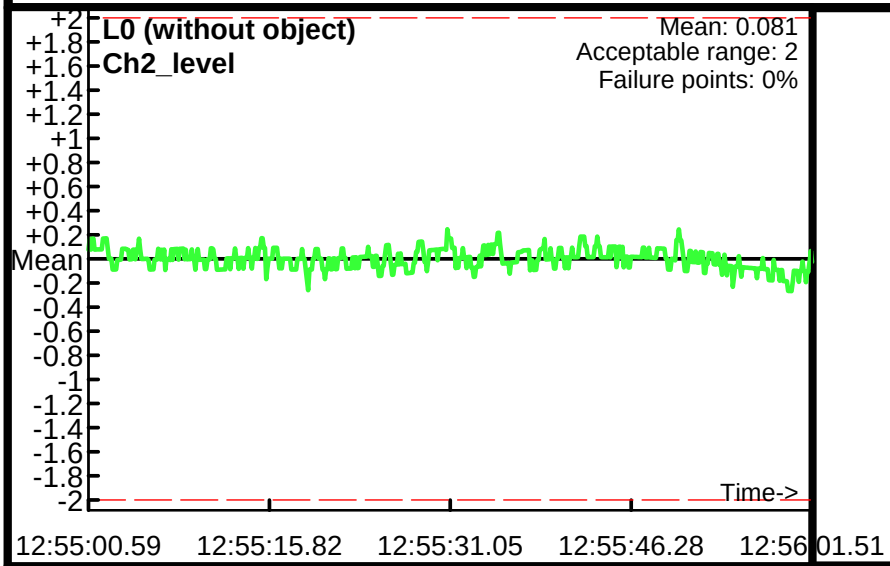
Database: Q:\Virginia Office\CH2M HILL\Camp Lejeune\Site 69\Data\Geosoft\QC\021210\0212BQC1.gdb
Line Name: L0 L1 L2

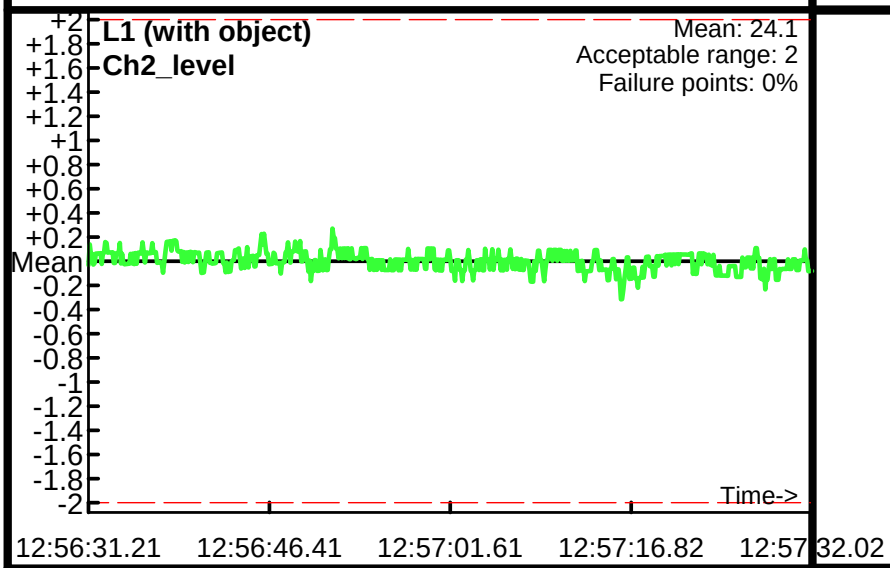
Static Calibration Test

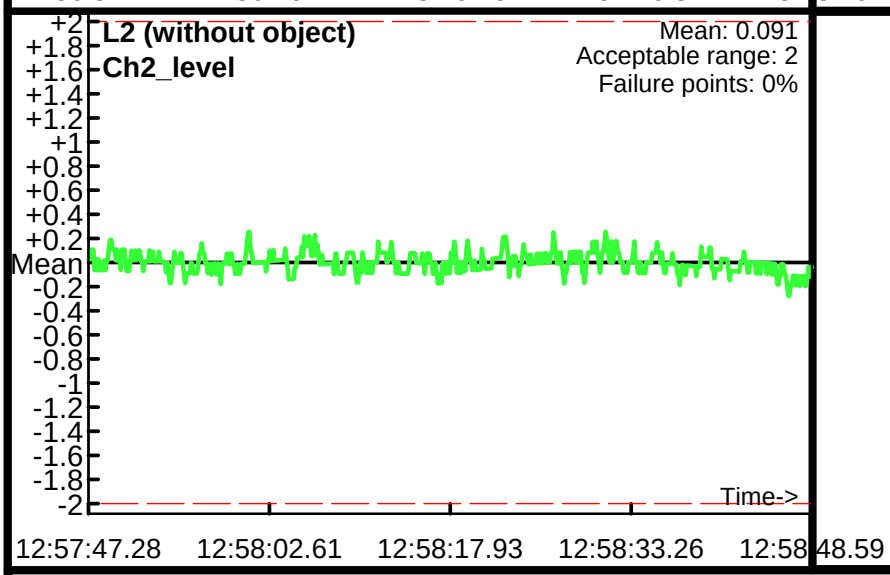
Project: Site 69 and UXO-02
Equipment: EM-61 Mark II
Grid/Location: Localized QC Area

Outside range
Acceptable limits

QC1 test
Operator: GeoC
Date: 2/16/2010







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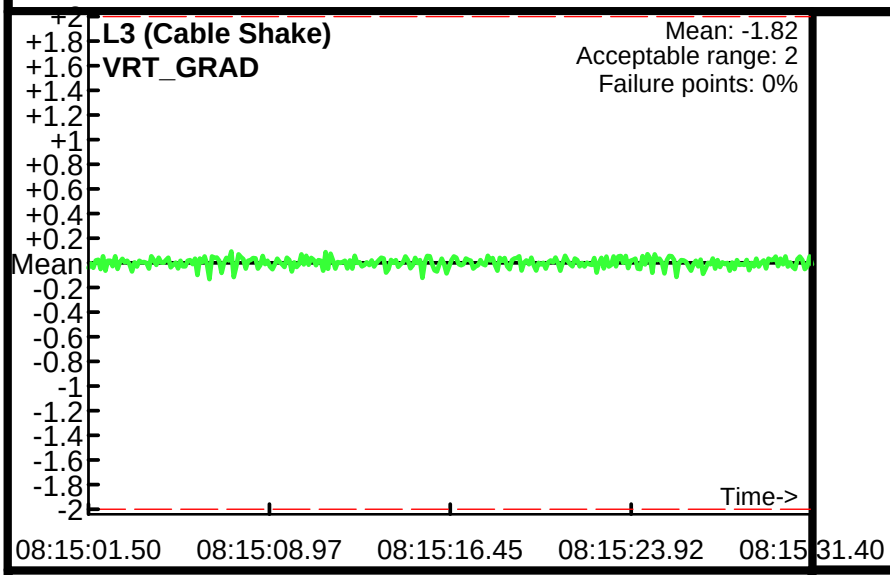
Line Name: L0 L1 L2

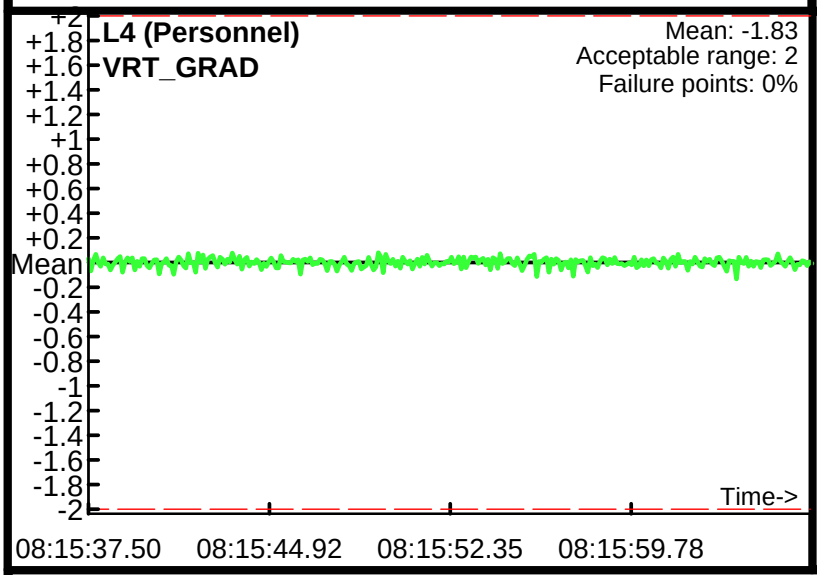
Cable Shake and Personnel Test

Project: Site 69 and UXO-02
Equipment: Magnetometers
Grid/Location: Localized QC Area

Outside range
Acceptable limits

QC1 test
Operator: GeoB
Date: 2/12/2010





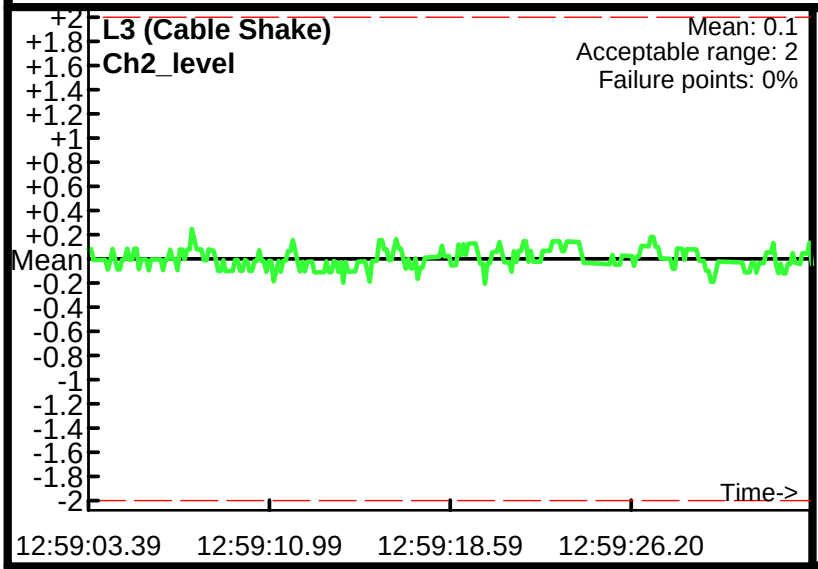
Database: Q:\Virginia Office\CH2M HILL\Camp Lejeune\Site 69\Data\Geosoft\QC\021210\0212BQC1.gdb
Line Name: L3 L4 L4

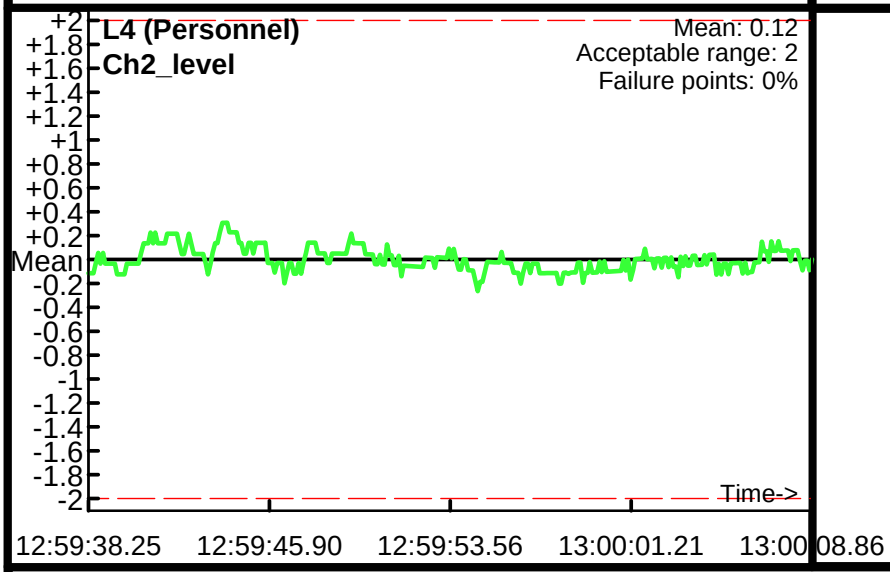
Cable Shake and Personnel Test

Project: Site 69 and UXO-02
Equipment: EM-61 Mark II
Grid/Location: Localized QC Area

Outside range
Acceptable limits

QC1 test
Operator: GeoC
Date: 2/16/2010





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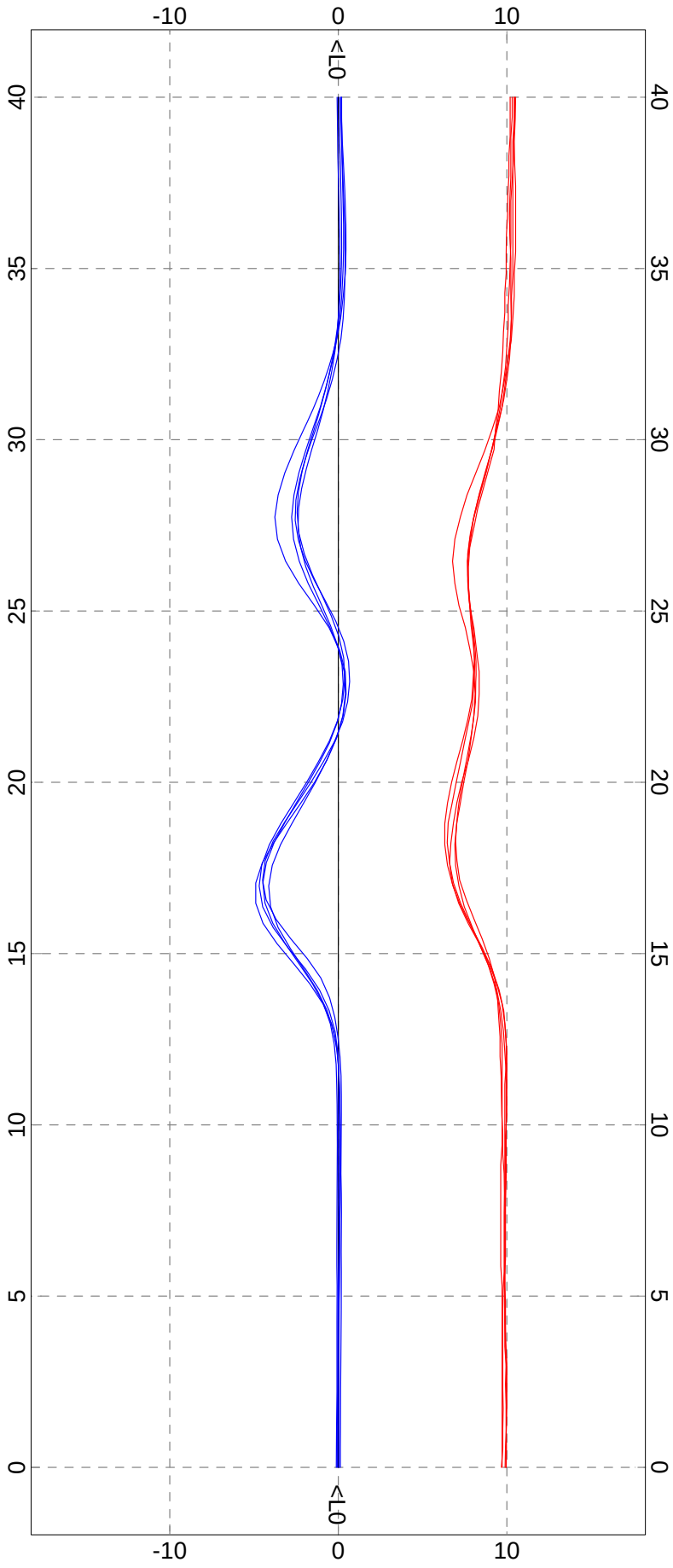
Line Name: L3 L4 L4

NAeVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys



Legend

Line Path

Conductivity (mS/m)

Inphase (ppt)

Profile scale is 0.5 units/mm

Scale 1:60

2.5 0 2.5 5

(feet)

Client: CH2M HILL

EM31 Dynamic Resposne Test
Site 69 and UXO-02
Marine Corps Base, Camp Lejeune, North Carolina

Dates of Survey: 02/10/2010 - 02/12/2010
Date of Map Creation: 02/16/2010

Map Approver: J. Guillard

Appendix C
Groundwater and Surface Water Sampling Sheets

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW01
Event:	Supplemental Investigation	Sample ID:	IR69-GW01-10A
Date:	3-8-10	Sampling Team:	N. Monroe
Weather:	Sunny, 55°F		

Total Depth: 21.0 FT.(BTOC) 15' screen

Depth to water: (-) 2.62 FT.(BTOC) PID = 0.0 at well & B.Z.

Water Column: 17.38 FT.

(x) 0.163 GAL/FT.

Well Volume: 2.83 GAL. X3 = 8.5 gal

Total Purge Vol.: GAL.

Purge Device: QED Bladder Pump

Pump Inlet Depth: 13.5 FT.(BTOC)

Water Quality Equipment Info: YSI: 556 MPS

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 2

SAMPLE DATA

Date: 3-8-10	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Time:								
Method: Low Flow								

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1005	0.0	14.71	0.326	6.20	5.08	225.9	96	4.01	Rust color
1010	0.3	14.67	0.233	2.80	4.36	254.1	57.0	4.19	" , No odor
1015	0.75	14.30	0.217	2.11	4.42	275.3	20.5	5.20	" "
1020	1.25	14.27	0.218	1.84	4.43	264.0	12.7	5.65	Clear, "
1025	2.0	14.21	0.219	1.63	4.55	236.0	10.9	6.05	" "
1030	2.5	14.12	0.220	1.50	4.52	227.0	8.41	6.75	" "
1035	3.5	14.01	0.220	1.51	4.59	214.6	6.27	7.45	" "
1040	4.5	14.01	0.221	1.34	4.62	200.6	4.47	7.75	" "
1045	5.5	14.04	0.221	1.19	4.64	193.2	3.92	7.80	" "
1050	6.5	14.04	0.221	1.17	4.66	183.0	3.45	7.95	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	~~1~~ 2
PCBs Method 8082	None	1-L Amber	~~1~~ 2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	~~None~~	~~1-L Amber~~	~~2~~
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	~~1 each~~
~~Perchlorate***~~	~~None~~	~~1-L Amber~~	~~1~~

Observations/Notes: Purge Start Time: 1005 Purge Rate:

Nitrate 0.0 mg/L

Nitrite 0.099 mg/L

Fe^{2+} 0.6 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: IR69-GW01D-10A @ 1120

Signature(s):

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3-8-10
Weather: pI

Project Number: 374082.FI.FI.69
Well ID: IR69-MW01
Sample ID: IR69-GW01-10A
Sampling Team: N. Monroe

Water Quality Equipment Info: pI

Total Depth: ____ FT.(BTOC)
Depth to water: (-) ____ FT.(BTOC)
Water Column: ____ FT.
(x) ____ GAL/FT.
Well Volume: ____ GAL.
Total Purge Vol.: ____ GAL.

Purge Device: pI

Pump Inlet Depth: 13.5 FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 2

SAMPLE DATA

	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date: 3-8-10 Time: 1115 Method: Low Flow	13.93	0.220	0.99	4.66	172.6	2.59	8.12	Clear, No odor

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1055	7.5	13.98	0.220	0.99	4.66	176.0	2.92	8.05	Clear, No odor
1100	8.5	13.94	0.220	1.00	4.66	174.0	2.81	8.10	" "
1105	9.5	13.93	0.220	0.99	4.66	173.2	2.60	8.12	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	1 ~~2~~ 2
PCBs Method 8082	None	1-L Amber	1 ~~2~~ 2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	None	1-L Amber	2
~~Total Metals/Dissolved Metals Method 6010B***~~	HNO3	~~250 ml poly bottle~~	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: pI Purge Rate:

Nitrate_____ mg/L
Nitrite _____ mg/L
Fe^{2+} _____mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: IR69-GW01D-10A @ 1120
Signature(s): [signature]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW02
Event:	Supplemental Investigation	Sample ID:	IR69-GW02-10A
Date:	3-2-10	Sampling Team:	N. Monroe
Weather:	Cloudy, 43°F		

Water Quality Equipment Info: YSI 556 MPS SN: 04963

Total Depth:	20.4	FT.(BTOC)
Depth to water:	(-) 4.45	FT.(BTOC)
Water Column:	15.95	FT.
	(x) 0.163	GAL/FT.
Well Volume:	2.60	GAL.
Total Purge Vol.:		GAL.
Purge Device:	QED Bladder Pump	
Pump Inlet Depth:	13	FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 2

SAMPLE DATA

Date: 3-2-10	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Time: P2								
Method: Low Flow		P2						

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1005	0.0	12.39	0.162	4.14	4.98	26.4	110	5.45	rust color, No odor
1010	0.25	12.42	0.163	2.10	4.97	17.9	98	5.45	" , slight sulfur odor
1013	0.50	12.25	0.163	1.80	4.97	12.5	85	5.45	" "
1016	0.75	12.09	0.163	1.50	4.96	5.9	45.0	5.45	clear, sligh sulfur odor
1019	1.00	12.06	0.163	1.39	4.95	2.0	37.0	5.45	" "
1022	1.25	12.04	0.163	1.28	4.95	0.1	29.0	5.45	" "
1028	1.50	12.02	0.163	1.18	4.95	-2.2	35.0	5.45	" "
1031	1.75	12.07	0.162	1.05	4.96	-8.1	40.0	5.45	" "
1034	2.0	12.13	0.162	0.91	4.95	-13.7	15.0	5.45	" "
1039	2.25	12.05	0.161	0.82	4.96	-17.4	12.0	5.45	" , No odor

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 10:00 Purge Rate: 375 mL/min

Nitrate 0.0 mg/L

Nitrite 0.00 mg/L

Fe^{2+} 1.0 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD IR69-GW02-10A-MS, SD Duplicate ID No.: N/A

Signature(s): Nikki Monroe

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3-2-10
Weather: pl

Project Number: 374082.FI.FI.69
Well ID: IR69-MW02
Sample ID: IR69-GW02-10A
Sampling Team: N. Moore

Water Quality Equipment Info: P 2

Total Depth: FT.(BTOC)
Depth to water: (-) FT.(BTOC)
Water Column: FT.
(x) GAL/FT.
Well Volume: GAL.
Total Purge Vol.: GAL.

Purge Device: Bladder Pump

Pump Inlet Depth: 13 FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 2

SAMPLE DATA

Date: 3-2-10 Time: ~~10:50~~ 11:00 AM Method: Low Flow	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
	12.17	0.161	0.68	4.96	-26.1	9.99	4.45	Clear, No odor

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1042	2.50	12.08	0.161	0.77	4.96	-19.7	11.0	5.45	Clear, No odor
1047	2.75	12.10	0.161	0.75	4.96	-22.0	10.5	5.45	" "
	3.00	12.16	0.161	0.69	4.96	-24.8	10.0	5.45	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: _____ Purge Rate: _____

Nitrate_____ mg/L
Nitrite _____ mg/L
Fe^{2+}_____mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13.
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD | Duplicate ID No.:

Signature(s):

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3/2/10
Weather: OVERCAST / = 43°F

Project Number: 374082.FI.FI.69
Well ID: IR69-MW02DW
Sample ID: IR69-GW02DW-10A
Sampling Team: R. FIELDS / N. MONROE

Total Depth: 51.02 FT.(BTOC)
Depth to water: (-) 26.77 FT.(BTOC)
Water Column: 24.25 FT.
(x) 0.163 GAL/FT.
Well Volume: = 4 GAL.
Total Purge Vol.: GAL.

Purge Device: QED BLADDER PUMP

Pump Inlet Depth: = 45 FT.(BTOC)

Water Quality Equipment Info: YSI 556 MPS # 13968 / HANNA TURB. METER # 09018

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 1

SAMPLE DATA

Date: 3/2/10 Time: 1230	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: LOW-FLOW	17.07	0.349	0.14	7.49	-189.4	0.59	29.0	CLEAR

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
0955	= 0.25	15.77	0.331	2.27	7.36	-135.5	16.5	27.41	= 315 ml/min
1000	= 0.35	15.57	0.334	1.93	7.40	-141.6	9.25	27.35	WILL NOT SUS THAN DRY
1005	= 0.5	15.64	0.333	1.86	7.41	-138.2	8.48	27.35	FLOW RATE = 130 ml/min
1025	= 1.2	15.83	0.341	0.69	7.45	-149.8	8.48	27.35	FLOW RATE = 150 ml/min
1045	= 2	15.90	0.342	0.49	7.47	-157.6	3.66	27.35	FLOW RATE = 100 ml/min
1100	CONSULT	PROJECT	INSTRUCTIONS	- RAISING	PUMP	TO		~~27.45~~	WITHIN 5' OF TOP OF WATER
	PUMP	@ 33' BTOC							
1110	= 3	17.05	0.286	0.56	7.37	-150.2	6.58	28.4	FLOW RATE = 400 ml/min
1123	= 4.5	17.23	0.345	0.25	7.47	-170.9	3.73	= 29	PUMP @ = 34' BTOC
1130	TALK TO C. LEBLANC			→ HE INFORMED		ME TO	TAKE 3	WELL VOLUMES	
	OUT @ A HIGH FLOWRATE - COLLECT ONE ROUND OF READINGS THEN SAMPLE								

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 0950 Purge Rate:

Nitrate 0 mg/L
Nitrite 0.0825 mg/L
Fe^{2+} 1.45 mg/L

1135 INCREASED FLOW RATE TO 600 ml/min DTW = 29.1' BTOC
1212 = 10.5 GAL REMOVED.
1224 = 12 GAL REMOVED

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13.

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15. For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD Duplicate ID No.

Signature(s): 3/2/10

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-GW02DD
Event:	Supplemental Investigation	Sample ID:	IR69-GW02DD-10A
Date:	3/6/10	Sampling Team:	R. FIELDS
Weather:	SUNNY / ≈46°F		

Total Depth: 125 FT.(BTOC) HISTORICAL

Depth to water: (-) 30.63 FT.(BTOC) PACKER @ ≈114' BTOC

Water Column: NA FT.

(x) 0.163 GAL/FT. 125-114 = 11

Well Volume: 1.8 GAL → 11 X 0.163 = 1.8 GAL PER VOLUME

Total Purge Vol.: GAL.

Purge Device: QED BLADDER PUMP

Pump Inlet Depth: ≈119 FT.(BTOC)

Water Quality Equipment Info: YSI 556 MPS # 13968 TURBIDITY (HANNA) #08987

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 1 R FIELDS

SAMPLE DATA

Date: 3/6/10 Time: 1230	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: LOW-FLOW	17.47	0.393	0.20	7.43	-139.1	4.92	30.52	CLEAR/NO ODOR

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs) ABOVE PACKER	Color / Odor / Comments
Stabilization Criteria		constant	±3%	±10%	±0.1	±10 mv	<10		
1140	0.1	17.80	0.385	0.80	7.54	-133.2	18.6	30.52	≈150 ml/min
1145	≈0.2	17.95	0.388	0.65	7.53	-134.9	16.0	30.52	
1150	≈0.4	18.03	0.389	0.59	7.52	-136.1	15.0	30.52	
1155	≈0.6	18.39	0.391	0.65	7.51	-137.4	14.0	30.52	≈300 ml/min
1200	≈1	18.19	0.392	0.48	7.49	-139.1	14.0	30.52	CLEAR
1205	≈1.3	18.16	0.393	0.43	7.48	-139.2	14.0	30.52	CLEAR
1210	≈1.5	18.22	0.395	0.31	7.45	-138.2	8.75	30.52	CLEAR
1215	≈2	17.86	0.394	0.27	7.45	-138.6	7.25	30.52	CLEAR
1220	≈2.3	17.86	0.393	0.25	7.43	-138.5	7.09	30.52	CLEAR
1225	≈2.5	17.88	0.393	0.22	7.43	-138.9	5.73	30.52	CLEAR

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: * Purge Start Time: 1135 Purge Rate: ≈150 ml/min → 300 ml/min

Nitrate 0 mg/L

Nitrite 0.03 mg/L

Fe^{2+} 1.0 mg/L

* NOTE STARTED PURGING EARLIER @ 1005, HOWEVER PUMP EXHIBITED TROUBLE (SEE FIELDBOOK). HAD TO REMOVE AND REPAIR THEN REINSTALL. R. FIELDS

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13.

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15. For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD | Duplicate ID No.:

Signature(s): [signature] 3/6/10

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69 - GW02BCH
Event:	Supplemental Investigation	Sample ID:	IR69-GW02BCH-10A
Date:	3/8/10	Sampling Team:	R. FIELDS / J. HIGH
Weather:	SUNNY / ≈65°F		

Total Depth: 230 FT.(BTOC) * PACKER @ ≈218 BTOC

Depth to water: (-) 27.71 FT.(BTOC)

Water Column: FT. 230-218 = 12

(x) 0.163 GAL/FT. 12 x 0.163 = 2

Well Volume: ≈2 GAL.

Total Purge Vol.: 6.2 GAL.

Purge Device: QED BLADDER PUMP

Pump Inlet Depth: ≈223 FT.(BTOC)

Water Quality Equipment Info: YSI 556 MPS # 13968 HANNA # 08987

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 2

SAMPLE DATA

Date: 3/8/10 Time: 1510	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: LOW FLOW	SEE PAGE #2							

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1240	≈0.5	18.82	0.275	7.26	9.52	56.4	29.0	≈27.71	
1250	≈0.6	20.25	0.283	2.22	9.62	25.8	29.0	≈27.71	
1253	STOP PUMPING SUSPECT WATER HAS DROPPED BELOW PUMP INTAKE								
1300	≈0.6	19.31	0.282	3.05	9.66	-6.3	25.0	—	
1320	≈1.1	18.31	0.274	1.84	9.58	-17.9	25.0	≈27.81	190 mL/MIN
1330	≈1.6	18.57	0.273	1.95	9.70	6.8	45.0	≈27.76	
1350	≈2.75	18.96	0.286	1.12	9.30	3.9	—	≈27.85	GROUNDWATER OUT OF GAS
1410	≈2.8	19.26	0.290	1.35	9.34	12.5	25.0	≈27.87	RESUME PURGING
1420	≈3.25	18.74	0.285	1.36	9.32	3.2	27.0	≈27.81	FLOW RATE ≈260 mL/MIN
1430	≈4	18.30	0.309	0.69	8.77	6.2	15.0	≈27.81	CLEAR

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1230 Purge Rate: ≈190 - 260 mL/MIN

Nitrate_____ mg/L

Nitrite _____ mg/L

Fe^{2+}_____mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD Duplicate ID No.:

Signature(s): [signature] 3/8/10

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3/8/10
Weather: SUNNY ~ 70°F

Project Number: 374082.FI.FI.69
Well ID: IR69-GW02BCH
Sample ID: FR69-GW02BCH-10A
Sampling Team: R. FIELDS / J. HALL

Water Quality Equipment Info: SEE PAGE #1

Total Depth: SEE PAGE #1 FT.(BTOC)
Depth to water: (-) FT.(BTOC)
Water Column: FT.
(x) GAL/FT.
Well Volume: GAL.
Total Purge Vol.: GAL.

Purge Device:

Pump Inlet Depth: FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 2

SAMPLE DATA

Date: 3/8/10 Time: 1510	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: Low-Flow	18.06	0.346	0.57	8.10	11.0	24.0	29.31	@ 1505

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1440	~4.7	18.09	0.321	0.56	8.57	3.8	6.30	27.76	~ 260 ml/min
1445	~5	18.13	0.335	0.47	8.25	6.4	14.0	27.82	~~RECHARGE PACKER 110 PSI~~
1450	~5.3	18.12	0.331	0.68	8.43	0.0	23.0	27.82	RECHARGE PACKER 110 PSI
1455	~5.6	18.09	0.323	0.97	8.56	-1.3	31.0	29.29	
1500	~5.9	18.09	0.310	1.34	8.86	-4.1	45.0	29.31	
1505	~6.2	18.06	0.346	0.57	8.10	11.0	24.0	29.31	
	SWELL VALVES REMOVED FROM 218'-230' INTERVAL								

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1230 Purge Rate: ~ 150 ml/min - 260 ml/min

Nitrate Ø mg/L
Nitrite 0.099 mg/L
Fe^{2+} Ø mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD Duplicate ID No.:
Signature(s): 3/8/10

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3-7-10
Weather: Sunny, 53°F

Project Number: 374082.FI.FI.69
Well ID: IR69-MW03
Sample ID: IR69-GW03-10A
Sampling Team: N. Monroe, R. Fields

Water Quality Equipment Info: YSI 556 MPS S/N:

Total Depth: 21.0 FT.(BTOC)
Depth to water: (-) 5.13 FT.(BTOC)
Water Column: 15.87 FT.
(x) 0.163 GAL/FT.
Well Volume: 2.6 GAL. x 3 = 7.8 gal
Total Purge Vol.: GAL.
Purge Device: QED Bladder Pump
Pump Inlet Depth: 13.5 FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 2

SAMPLE DATA

	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date: 3-7-10								
Time: 12								
Method: Low Flow								

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1600	0.25	13.67	0.145	0.80	4.53	183.4	>900	6.57	rust color, no odor
1603	0.5	13.62	0.145	0.56	4.51	186.5	900	6.80	" "
1606	0.75	13.60	0.145	0.48	4.50	191.7	650	7.04	" "
1609	1.00	13.60	0.146	0.40	4.49	195.7	400	7.10	" "
1612	1.25	13.60	0.146	0.36	4.49	196.4	380	7.10	
1615	1.5	13.60	0.146	0.35	4.49	197.9	380	7.10	
1618	1.25	No Reading - Cleaned out YSI							"
1621	2.0	13.55	0.147	0.90	4.50	198.4	150	6.72	" "
1624	2.25	13.56	0.147	0.60	4.51	191.1	130	6.72	" "
1627	2.5	13.55	0.147	0.53	4.51	189.2	110	6.72	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	~~2~~ 72
PCBs Method 8082	None	1-L Amber	~~2~~
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1545 Purge Rate: 300 mL/min
Screen initially clogged, cleared w/ DI.
Nitrate 0.0 mg/L
Nitrite 0.099 mg/L
Fe^{2+} 1.2 mg/L
*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15; For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: IR69-GW03D-10A
Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3/7/10
Weather: SUNNY = 65°F

Project Number: 374082.FI.FI.69
Well ID: IR69-GW03DW
Sample ID: IR69-GW03DW-10A
Sampling Team: R. FIELDS

Total Depth: 60 ~~60~~ RE FT.(BTOC) HISTORICAL
Depth to water: (-) 28.8 FT.(BTOC)
Water Column: 31.2 FT.
(x) 0.163 GAL/FT.
Well Volume: = 5.1 GAL.
Total Purge Vol.: GAL.

Purge Device: QED SAMPLE PRO BLADDER PUMP
Pump Inlet Depth: = 55 FT.(BTOC)

Water Quality Equipment Info: YSI 556 MPS # 13968
HANNA # 09018

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 1

PID @ WELL MOUTH = 0.0 PPM

SAMPLE DATA

Date: 3/7/10 Time: 1650 Method: LOW FLOW	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
	17.30	0.197	0.33	7.66	-172.9	3.32	28.7	CLEAR

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1545	= 0.1	17.41	0.198	2.24	7.78	-107.8	129	28.7	CLOUDY
1550	= 0.8	17.43	0.198	1.10	7.67	-152.0	39.7	28.7	FLOW RATE = 400 mL/MIN
1555	= 0.6	17.40	0.198	0.94	7.67	-152.9	18.1	28.7	CLEAR
1600	= 1.1	17.37	0.198	0.81	7.66	-156.6	10.5	28.7	
1610	= 2	17.34	0.198	0.58	7.53	-144.6	19.8	28.7	400 mL/MIN
1620	= 3	17.29	0.197	0.43	7.67	-168.6	5.33	28.7	
1630	= 4	17.24	0.197	0.38	7.66	-171.0	4.30	28.7	CLEAR
1640	= 5	17.28	0.197	0.33	7.66	-172.3	3.44	28.7	CLEAR
1645	= 5.5	17.28	0.197	0.33	7.66	-172.2	3.12	28.7	CLEAR

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1540 Purge Rate: = 400 mL/MIN

Nitrate 0 mg/L
Nitrite ~~0~~ 0 mg/L
Fe^{2+} 0.4 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD Duplicate ID No.:

Signature(s): 7/7/10

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-GW03BCH ~~-70A~~ RE
Event:	Supplemental Investigation	Sample ID:	IR69-GW03BCH-70A
Date:	3/9/10	Sampling Team:	R. FIELDS
Weather:	Sunny ≈ 70°F		

Total Depth: 230 FT.(BTOC) HISTORICAL

Depth to water: (-) NA FT.(BTOC) INTERVAL (217-230) ≈ 13'

Water Column: 13' FT.

(x) 0.168 GAL/FT.

Well Volume: ≈ 2.2 GAL.

Total Purge Vol.: GAL.

Purge Device: QED BLADDER PUMP #420

Pump Inlet Depth: ≈ 224 FT.(BTOC)

Water Quality Equipment Info: YSI 556 MPS #13968 HANNA # 09018

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 3

SAMPLE DATA

Date: 3/9/10	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Time:								
Method: LOW-FLOW		SEE SHEET #2						

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1315	≈ 0.1	18.02	0.500	8.40	7.77	180.9	13.4	≈ 29.7	
1325	≈ 0.3	17.87	0.501	3.04	7.72	106.5	22.2	≈ 29.7	300 mL/MIN
1330	≈ 0.75	17.91	0.498	2.29	7.70	57.5	47.8	≈ 29.7	
1340	≈ 1.5	17.94	0.486	1.30	7.64	4.6	21.2	≈ 29.7	
1345	≈ 1.9	17.96	0.481	1.04	7.61	-20.0	16.6	≈ 29.7	
1350	≈ 2.5	17.95	0.464	6.29	7.61	-27.2	45.6	≈ 29.7	SLOW FLOW WATER BELOW OUTLET
1355	SHUT PUMP OFF TEMPORARILY - WATER HAS DROPPED BELOW PUMP INTAKE								
1400	RESUME PUMPING ≈ 2.75 GALLONS REMOVED								
1405	≈ 3	17.67	0.447	6.87	7.58	-0.4	32.2	≈ 29.7	FLOW RATE ≈ 150 mL/MIN
1410	≈ 3.5	17.69	0.451	4.62	7.55	-9.7	11.7		

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1310 Purge Rate: ≈ 150 mL/MIN - 300 mL/MIN

Nitrate _____ mg/L

Nitrite _____ mg/L

Fe^{2+} _____ mg/L

NOTE: PACKER PRESSURE @ 105 PSI

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD Duplicate ID No.:

Signature(s): 3/9/10

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-GW03 BCH
Event:	Supplemental Investigation	Sample ID:	IR69-GW03 BCH-1CA
Date:	3/9/10	Sampling Team:	R. FIELDS
Weather:	SUNNY ≈ 70°F		

Total Depth:	230	FT.(BTOC)	Water Quality Equipment Info:	SEE PAGE #1
Depth to water:	(-)	FT.(BTOC)		
Water Column:		FT.		
	(x)	GAL/FT.		
Well Volume:		GAL.		
Total Purge Vol.:		GAL.		
Purge Device:	SEE PAGE #1			
Pump Inlet Depth:	≈ 224	FT.(BTOC)		

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 3

SAMPLE DATA

Date: 3/9/10	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Time:								
Method:								

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1415	≈ 3.4	17.67	0.450	2.63	7.54	-26.3	9.02	≈ 29.7	≈ 150 ml/min
1420	≈ 3.6	17.67	0.432	1.67	7.54	-34.3	7.92	≈ 29.7	
1425	≈ 3.8	17.64	0.435	1.31	7.54	-42.4	7.58	≈ 29.7	
1430	≈ 4.	17.74	0.440	1.00	7.54	-51.2	7.21	≈ 29.7	
1435	≈ 4.2	17.84	0.436	0.88	7.54	-54.2	6.15	≈ 29.7	
1440	≈ 4.4	17.86	0.438	0.85	7.54	-61.1	6.40	≈ 29.7	
1445	≈ 4.6	17.85	0.436	0.84	7.54	-61.5	5.24	≈ 29.7	
1450	≈ 4.8	17.76	0.432	0.81	7.54	-64.1	4.74	≈ 29.7	
1455	≈ 5	17.63	0.429	0.77	7.53	-66.1	4.39	≈ 29.7	
1500	≈ 5.2	17.60	0.431	0.72	7.52	-68.8	4.32	≈ 29.7	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1310 Purge Rate: 150 ml/min - 300 ml/min

Nitrate_____ mg/L

Nitrite _____ mg/L

Fe^{2+}_____mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13.

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD	Duplicate ID No.:
Signature(s): [illegible] 3/9/10	

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3/9/10
Weather: SUNNY = 70°F

Project Number: 374082.FI.FI.69
Well ID: IR69-GW03BCH
Sample ID: IR69-GW03BCH-1CA
Sampling Team: R FIERRS

Total Depth: SEE PAGE #1 FT.(BTOC)
Depth to water: (-) FT.(BTOC)
Water Column: FT.
(x) GAL/FT.
Well Volume: GAL.
Total Purge Vol.: GAL.

Purge Device: SEE PAGE #1

Pump Inlet Depth: FT.(BTOC)

Water Quality Equipment Info: SEE PAGE #1

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 3 of 3

SAMPLE DATA

	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date: 3/9/10 Time: 1540 Method: Low-Flow	17.65	0.471	0.52	7.52	-81.8	3.20	=29.7	

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1510	=5.6	17.59	0.469	0.66	7.52	-72.1	3.50	=29.7	CLEAR
1520	=6	17.65	0.471	0.61	7.52	-74.9	3.41	=29.7	
1530	=6.4	17.63	0.471	0.55	7.51	-80.1	3.28	=29.7	
1535	=6.6	17.64	0.471	0.53	7.51	-80.7	3.52	=29.7	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1310 Purge Rate: ~ 150 ml/min / 300 ml/min

Nitrate_____ mg/L
Nitrite _____ mg/L
Fe^{2+}_____mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD Duplicate ID No.:
Signature(s): 3/9/10

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW04-
Event:	Supplemental Investigation	Sample ID:	IR69-GW04-10A
Date:	3-14-10	Sampling Team:	N. Monroe
Weather:	Partly Cloudy, 65°F		

0.75

6.7

Total Depth:	21.0 FT.(BTOC)	Water Quality Equipment Info:	YSI: 556 MPS
Depth to water:	(-) 5.95 FT.(BTOC)		
Water Column:	15.05 FT.		
	(x) 0.163 GAL/FT.		
Well Volume:	2.45 GAL. x3 = 7.36 gal		
Total Purge Vol.:	5.25 GAL.		
Purge Device:	QED Bladder Pump		
Pump Inlet Depth:	13.5 FT.(BTOC)		

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 2

SAMPLE DATA

Date: 3-14-10	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Time:								
Method:								

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1530	6.0	15.17	0.108	4.70	6.43	73.1	500	6.22	Rust color, No odor
1535	0.5	14.12	0.103	0.88	5.31	143.9	210	6.45	slight rust color
1540	1.0	13.69	0.105	0.90	5.12	146.0	100	6.47	" "
1545	1.3	13.50	0.105	0.61	5.00	132.7	55.0	6.47	" "
1550	1.8	13.36	0.105	0.52	4.93	123.7	34.0	6.48	Clear, No odor
1555	2.25	13.25	0.105	0.44	4.92	116.8	25.0	6.48	" "
1600	2.75	13.21	0.105	0.40	4.99	109.6	22.0	6.48	" "
1605	3.25	13.18	0.105	0.36	4.91	110.0	19.0	6.48	" "
1610	3.75	13.18	0.105	0.34	4.96	105.5	16.0	6.48	" "
1615	4.25	13.15	0.105	0.30	4.93	105.8	14.0	6.48	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	None	1-L Amber	2
~~Total Metals/Dissolved Metals Method 6010B***~~	HNO3	~~250 ml poly bottle~~	~~1 each~~
~~Perchlorate***~~	None	~~1-L Amber~~	1

Observations/Notes: Purge Start Time: 1530 Purge Rate:

Nitrate 0 mg/L

Nitrite 0 mg/L

Fe^{2+} 2.2 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD IR69-GW04-10A-MS, SD Duplicate ID No.: N/A

Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3-14-10
Weather: P1

Project Number: 374082.FI.FI.69
Well ID: IR69-MW04
Sample ID: IR69-GW04-10A
Sampling Team: N. Monroe

Total Depth: FT.(BTOC)
Depth to water: (-) P1 FT.(BTOC)
Water Column: FT.
(x) GAL/FT.
Well Volume: GAL.
Total Purge Vol.: GAL.

Purge Device: P1

Pump Inlet Depth: FT.(BTOC)

Water Quality Equipment Info: P1

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 2

SAMPLE DATA

Date: 3-14-10 Time: 1635 Method: Low Flow	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
	13.09	0.104	0.26	4.99	98.7	9.99	6.48	Clear, No odor

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		**constant**	**± 3%**	**± 10%**	**± 0.1**	**± 10 mv**	**<10**		
1620	4.75	13.14	0.105	0.29	5.03	99.9		6.48	Clear, No odor
1625	5.25	13.08	0.104	0.28	4.96	100.6	10.0	6.50	" "
~~1630~~								~~6.48~~	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: Purge Rate:

Nitrate_____ mg/L

Nitrite _____ mg/L

Fe^{2+}_____mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD IR69-GW04-10A-MS, SD Duplicate ID No.: NA

Signature(s):

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3/15/10
Weather: Cool

Project Number: 374082.FI.FI.69
Well ID: IR69 GW04IW
Sample ID: IR69-GW04IW-10A
Sampling Team: Dana Miller

Water Quality Equipment Info: 45I #39468

Total Depth: 50.20 FT.(BTOC)
Depth to water: (-)33.55 FT.(BTOC)
Water Column: 16.65 FT.
(x)0.163 GAL/FT.
Well Volume: 2.71 GAL.
Total Purge Vol.: ~~37 1/2~~ 35 ~~GAL.~~ Lt
Purge Device: QED Bladder Pump
Pump Inlet Depth: 37 1/2 FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 2

SAMPLE DATA

	Temp. °C	Cond mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date:								
Time:								
Method:								

FIELD PARAMETERS

Time	Purge Vol. ~~L (gals)~~	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
10:41	2	18.04	0.440	2.29	7.10	93.4	27.2	38.00	Clear NO Odor
10:46	4.2	18.30	0.335	1.97	7.21	39.0	27.9	38.41	" "
10:51	6.4	18.26	0.333	2.01	7.28	-12.0	25.7	38.84	" "
10:56	8.6	17.61	0.325	1.90	7.31	-41.3	25.6	38.96	" "
11:01	10.8	17.96	0.331	1.72	7.27	-88.7	23.9	39.40	" "
11:06	13.0	17.98	0.337	1.57	7.31	-118.3	19.2	39.40	" "
11:11	15.2	17.81	0.316	1.34	7.34	-130.0	11.5	39.50	" "
11:16	17.4	17.72	0.303	1.28	7.35	-143.5	6.5	39.80	" "
11:21	19.6	17.75	0.279	1.26	7.37	-146.7	5.1	39.91	" "
11:26	21.8	17.76	0.278	1.22	7.37	-148.6	4.0	40.08	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	~~None~~	~~1-L Amber~~	~~2~~
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	~~1 each~~
~~Perchlorate***~~	~~None~~	~~1-L Amber~~	~~1~~

Observations/Notes: Purge Start Time 10:41 Purge Rate: .45 L/M

Nitrate 0 mg/L
Nitrite 0 mg/L
Fe^{2+} 0 mg/L

ECBC - 140 mL amber vial

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13.
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD NA Duplicate ID No.: NA

Signature(s): DMiller

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3/15/10
Weather:

Project Number: 374082.FI.FI.69
Well ID: IR69-GW04IW
Sample ID: IR69-GW04IW-10A
Sampling Team:

Total Depth: FT.(BTOC)
Depth to water: (-) FT.(BTOC)
Water Column: FT.
GAL/FT.
Well Volume: GAL.
Total Purge Vol.: GAL.

Water Quality Equipment Info:

Purge Device:

Pump Inlet Depth: FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 2

SAMPLE DATA

	Temp °C	Cond mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date:								
Time:								
Method:								

FIELD PARAMETERS

Time	Purge Vol. ~~L (gals)~~	Temp. °C	Cond mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		**constant**	**± 3%**	**± 10%**	**± 0.1**	**± 10 mv**	**<10**		
11:31	24.0	17.77	0.264	1.16	7.37	-151.7	3.2	40.17	Clear No odor
11:36	26.2	17.82	0.266	1.22	7.37	-152.8	2.3	40.23	" "
11:41	28.4	17.87	0.267	1.21	7.39	-154.5	1.5	40.51	" "
11:46	30.6	17.88	0.270	1.12	7.39	-155.8	1.0	40.68	" "
11:51	32.8	17.89	0.270	1.13	7.39	-157.2	.7	40.81	Clear No Odor
11:56	35.0	17.90	0.267	1.08	7.40	-158.2	.3	40.94	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330**~~	~~None~~	~~1-L Amber~~	~~2~~
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	~~1 each~~
~~Perchlorate***~~	~~None~~	~~1-L Amber~~	~~1~~

Observations/Notes:
Purge Start Time: PG-1
Purge Rate: PG-1

Nitrate _____ mg/L
Nitrite _____ mg/L
Fe^{2+} _____ mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13.
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD NA
Duplicate ID No.: NA
Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3/14/10
Weather: Sunny

Project Number: 374082.FI.FI.69
Well ID: IR69MW04DW
Sample ID: IR69-GW04DW-10A
Sampling Team: Dana Miller

Total Depth: 94.41 FT.(BTOC)
Depth to water: (-)35.8 FT.(BTOC)
Water Column: 58.61 FT.
(x) 0.1163 GAL/FT.
Well Volume: 9.55 GAL.
Total Purge Vol.: GAL.

Water Quality Equipment Info: YSI #13968 2.93

Purge Device: OEI Bladder Pump

Pump Inlet Depth: 92 FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 2

SAMPLE DATA

Date: 3/14/10 Time: 17:35 Method: Low Flow	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments

FIELD PARAMETERS

Time	Purge Vol. L ~~(gals)~~	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		**constant**	**± 3%**	**± 10%**	**± 0.1**	**± 10 mv**	**<10**		
15:50	3	18.95	0.535	7.46	8.74	16.0	550	32.10	Cloudy, no odor
15:55	5.3	18.87	0.550	8.49	8.70	18.5	500	32.10	" "
16:00	7.6	18.81	0.551	9.18	8.65	20.0	350	32.11	" "
16:05	9.9	18.75	0.531	9.17	8.58	26.1	310	32.11	" "
16:10	12.2	18.74	0.528	9.75	8.56	26.8	250	32.11	" "
16:15	14.5	18.74	0.515	10.22	8.52	35.2	200	32.11	" "
16:20	16.8	18.64	0.493	9.45	8.48	41.2	210	32.11	" "
16:25	19.1	18.62	0.453	11.96	8.44	48.5	140	32.14	" "
16:30	21.4	18.61	0.459	11.04	8.43	45.6	130	32.14	
16:35	23.7	18.52	0.436	9.26	8.42	45.6	100	32.14	" "
16:40	26.0	18.48	0.441	10.37	8.38	51.5	90	32.14	Clear, no odor

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	~~None~~	~~1-L Amber~~	~~2~~
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	~~1 each~~
~~Perchlorate***~~	None	~~1-L Amber~~	~~1~~

Observations/Notes: Purge Start Time: 15:50 Purge Rate: .45 L/M

Nitrate 0 mg/L
Nitrite 0.06 mg/L
Fe^{2+} 0.2 mg/L

ECBC - 140mL vial

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD NA Duplicate ID No.: NA

Signature(s): D. Miller

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date:
Weather:

Project Number: 374082.FI.FI.69
Well ID: IR69 MW04DW
Sample ID:
Sampling Team:

Total Depth: FT.(BTOC)
Depth to water: (-) FT.(BTOC)
Water Column: FT.
GAL/FT.
Well Volume: GAL.
Total Purge Vol.: GAL.
Purge Device:
Pump Inlet Depth: FT.(BTOC)

Water Quality Equipment Info:

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 2

SAMPLE DATA

	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date:								
Time:								
Method:								

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		**constant**	**± 3%**	**± 10%**	**± 0.1**	**± 10 mv**	**<10**		
16:45	28.3	18.39	0.423	9.66	8.36	55.4	80	32.16	
16:50	30.6	18.37	0.408	11.74	8.39	56.8	70	32.16	
16:55	32.9	18.33	0.409	9.98	8.39	57.6	60	32.16	
17:00	35.2	18.30	0.410	10.01	8.37	58.2	45	32.16	
17:05	37.5	18.26	0.408	10.04	8.37	58.4	30	32.17	
17:10	39.8	18.24	0.406	11.60	8.39	59.4	20	32.17	
17:15	42.1	18.21	0.406	11.13	8.37	60.0	15	32.18	
17:20	44.4	18.21	0.401	10.91	8.37	59.9	10	32.18	
17:25	46.7	18.20	0.398	10.35	8.37	60.1	6	32.18	
17:30	49.0	18.20	0.397	10.31	8.37	60.3	4.1	32.18	Clear No Odor

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: Purge Rate:

Nitrate_____ mg/L

Nitrite _____ mg/L

Fe^{2+}_____mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD Duplicate ID No.:

Signature(s)

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3-8-10
Weather: Sunny, 65°F

Project Number: 374082.FI.FI.69
Well ID: IR69-MW05
Sample ID: IR69-GW05-10A, MR02-IR69-GW05-10A
Sampling Team: N. Moore

Water Quality Equipment Info: YSI: 556 MPS

Total Depth: 21.0 FT.(BTOC)
Depth to water: (-) 9.72 FT.(BTOC)
Water Column: 11.28 FT.
(x) 0.163 GAL/FT.
Well Volume: 1.84 GAL. x3 = 5.52 gal
Total Purge Vol.: GAL.

Purge Device: QED Bladder Pump

Pump Inlet Depth: 13.5 FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 2

SAMPLE DATA

	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date: 3-8-10 Time: ~~1520~~ pm								
Method:								

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1445	0.25	14.95	0.033	3.13	4.99	195.2	45.5	10.42	Clear, No odor
1450	1.25	14.19	0.032	2.02	4.72	219.1	45.0	12.21	" "
1455	2.00	14.82	0.034	2.01	4.68	235.8	25.9	13.69	" " Slowed Flow
1500	~~3.25~~ 2.25	14.89	0.034	2.13	4.69	239.8	18.1	13.50 Pump	Clear, No odor
1505	~~4.25~~ 2.25	14.74	0.035	1.94	4.67	245.4	12.8	12.05	" "
1510	~~5.25~~ 2.75	14.58	0.034	1.92	4.68	252.6	8.99	12.05	" "
1515	~~6.25~~ 3.25	14.48	0.034	1.90	4.68	257.4	7.46	12.06	" "
1520	3.25	14.38	0.035	1.87	4.68	262.1	5.89	12.08	" "
1525	3.625	14.30	0.035	1.83	4.65	270.1	5.47	12.08	" "
1530	4.0	14.42	0.036	1.81	4.64	274.6	5.05	12.08	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3 x2
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2 x2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2 x2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1 x2
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1 x2
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1 x2
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2 x2
OP Pesticides Method 8141A	None	1-L Amber	2 x2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2 x2
PCBs Method 8082	None	1-L Amber	2 x2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2 x2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each x2
Perchlorate***	None	1-L Amber	1 x2

Observations/Notes: Purge Start Time: 1440 Purge Rate:
Nitrate 0.0 mg/L
Nitrite 0.0 mg/L
Fe^{2+} 0.2 mg/L
*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: IR69-GW05D-10A, MR02-IR69-GW05D-10A
Signature(s): Nikki Moore

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3-8-10
Weather: Sunny

Project Number: 374082.FI.FI.69
Well ID: IR69-MW05
Sample ID: IR69-GW05-10A, MR02-IR69-GW05-10A
Sampling Team: N Monroe

Total Depth: FT.(BTOC)
Depth to water: (-) FT.(BTOC)
Water Column: FT.
(x) GAL/FT.
Well Volume: GAL.
Total Purge Vol.: GAL.

Water Quality Equipment Info: P1

Purge Device: P1
Pump Inlet Depth: FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 2

SAMPLE DATA

Date: 3-8-10 Time: 1600	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: Low Flow	14.45	0.040	1.63	4.57	285.0	4.16	12.09	Clear, No odor

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1535	4.375	14.53	0.037	1.79	4.64	279.3	4.70	12.09	Clear, No odor
1540	4.75	14.51	0.038	1.75	4.62	280.1	4.63	12.09	" "
1545	5.125	14.49	0.038	1.71	4.60	281.2	4.59	12.09	" "
1550	5.5	14.47	0.039	1.67	4.58	283.5	4.51	12.09	" "
3/9/10 0930	0.25	13.68	0.048	5.74	5.37	230.8	11.0	10.10	" "
0935	0.5	13.52	0.044	5.33	5.08	271.6	12.0	10.12	" "
0940	0.75	13.54	0.043	4.92	5.04	280.6	9.90	10.12	" "
0945	1.0	13.55	0.043	4.66	4.99	293.1	9.10	10.12	" "
0950	1.25	13.56	0.043	4.60	4.99	295.0	8.30	10.11	" "
★ 0955	1.5	13.60	0.043	4.48	4.98	301.0	8.12	10.11	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3 x2
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2 x2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2 x2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1 x2
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1 x2
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1 x2
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2 x2
OP Pesticides Method 8141A	None	1-L Amber	2 x2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2 x2
PCBs Method 8082	None	1-L Amber	2 x2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2 x2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each x2
Perchlorate***	None	1-L Amber	1 x2

Observations/Notes: Purge Start Time: 1440 Purge Rate:

Nitrate _____ mg/L
Nitrite _____ mg/L
Fe^{2+} _____ mg/L

Incomplete Sample @ 1715, will finish in AM.
0930 (3-9-10) - Completing Sample ★

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A
Duplicate ID No.: IR69-GW05D-10A, MR02-IR69-GW05D-10A @ 1605
Signature(s): Michele Monroe

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW05IW
Event:	Supplemental Investigation	Sample ID:	IR69-GW05IW-10A
Date:	3-14-10	Sampling Team:	N. Monroe
Weather:	Cloudy, 50°F		

Water Quality Equipment Info: YSI: 556 MPS S/N: 04963

Total Depth:	62.1	FT.(BTOC)
Depth to water:	(-) 29.39	FT.(BTOC)
Water Column:	32.71	FT.
	(x) 0.163	GAL/FT.
Well Volume:	5.33	GAL. x3 = 16 gal
Total Purge Vol.:	15.75	GAL.
Purge Device:	QED Bladder Pump	
Pump Inlet Depth:	59.5	FT.(BTOC)

1.64

31.03

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 3

SAMPLE DATA

Date: 3-14-10 / Time: / Method: Low Flow	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments

3 WV then

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1010	0.25	17.54	0.929	5.62	7.52	191.7	120.0	30.5	Cloudy, No odor
1015	0.5	17.91	0.750	1.24	7.71	177.4	80.0	31.04	" "
1020	0.75	17.93	0.687	1.02	7.80	165.8	80.0	31.65	" "
1025	1.25	17.92	0.880	1.07	7.82	165.4	80.0	32.05	" "
1030	1.50	18.06	0.182	0.75	7.87	164.8	39.0	33.05	" " Pump ↑
1035	1.75	18.24	1.120	0.54	7.96	158.6	65.0	34.55	" "
1040	2.25	18.20	0.750	0.64	7.99	148.8	80.0	35.65	" "
1045	2.75	18.40	0.703	0.66	7.95	140.1	70.0	37.80	" "
1050	3.25	18.35	0.716	0.61	7.91	131.0	63.0	38.75	" "
1055	3.5	18.30	0.729	0.57	7.87	111.1	55.0	39.90	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	~~2~~ 2
PCBs Method 8082	None	1-L Amber	~~2~~ 2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	~~None~~	~~1-L Amber~~	~~2~~
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	~~1 each~~
~~Perchlorate***~~	~~None~~	~~1-L Amber~~	~~1~~

Observations/Notes: Purge Start Time: 1005 Purge Rate: 300 mL/min initially - Drawdown too great, purging 3 WV

Nitrate 0 mg/L

Nitrite 0 mg/L

Fe^{2+} 0 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: N/A

Signature(s):

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW05IW-
Event:	Supplemental Investigation	Sample ID:	IR69-GW05IW-10A
Date:	3-14-10	Sampling Team:	N. Monroe
Weather:	P1		

Total Depth: _____ FT.(BTOC)
Depth to water: (-) _____ FT.(BTOC)
Water Column: _____ FT.
(x) P1 _____ GAL/FT.
Well Volume: _____ GAL.
Total Purge Vol.: _____ GAL.

Purge Device: P1

Pump Inlet Depth: _____ FT.(BTOC)

Water Quality Equipment Info: P1

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 3

SAMPLE DATA

Date: 3-14-10 / Time:	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
3 WV thru Method: Low Flow								

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1100	4.25	18.10	0.682	0.47	7.92	82.5	39.0	41.30	Cloudy, No odor
1105	5.0	18.07	0.627	0.41	7.95	61.8	36.0	42.00	" "
1110	5.5	18.04	0.575	0.35	7.97	44.0	31.0	42.10	" "
1115	6.0	17.97	0.538	0.38	7.98	29.2	30.0	42.60	" "
1120	6.75	17.96	0.488	0.43	7.97	-8.2	29.0	43.40	" "
1125	7.5	18.00	0.459	0.43	7.96	-27.3	28.0	44.00	Clear, No odor
1130	8.25	18.02	0.437	0.45	7.98	-43.4	26.0	44.80	" "
1135	9.0	17.97	0.416	0.31	7.90	-59.7	19.0	45.10	" "
1140	9.75	17.90	0.404	0.27	7.98	-80.6	16.0	45.30	" "
1145	10.5	17.92	0.401	0.24	7.93	-83.0	14.0	45.40	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: P1 Purge Rate: P1

Nitrate_____ mg/L
Nitrite _____ mg/L
Fe^{2+}_____mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: N/A

Signature(s):

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW05IW
Event:	Supplemental Investigation	Sample ID:	IR69-MW05IW-10A
Date:	3-14-10	Sampling Team:	N. Manoe
Weather:	P1		

Total Depth: _____ FT.(BTOC)
Depth to water: (-) _____ FT.(BTOC)
Water Column: _____ FT.
(x) P1 GAL/FT.
Well Volume: _____ GAL.
Total Purge Vol.: _____ GAL.

Purge Device: P1

Pump Inlet Depth: _____ FT.(BTOC)

Water Quality Equipment Info: P1

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 3 of 3

SAMPLE DATA

Date: 3-14-10 Time: 1230 Method: Low Flow	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
3 WV then	17.98	0.348	0.13	7.99	-126.0	6.50	45.85	Clear, No odor

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1150	11.25	17.94	0.390	0.22	7.94	-92.1	11.90	45.52	Clear No odor
1155	12.0	17.95	0.378	0.20	7.95	-102.6	9.70	45.65	" "
1200	12.75	17.93	0.373	0.16	7.95	-107.1	9.10	45.69	" "
1205	13.5	17.94	0.365	0.16	7.96	-111.2	8.50	45.73	" "
1210	14.25	17.94	0.362	0.16	7.97	-116.5	7.90	45.77	" "
1215	15.0	17.92	0.357	0.15	7.92	-119.9	7.40	45.85	" "
1220	15.75	17.93	0.349	0.14	7.95	-125.1	6.60	45.85	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	~~2~~ 2
PCBs Method 8082	None	1-L Amber	~~2~~ 2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	~~None~~	~~1-L Amber~~	~~2~~
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	~~1 each~~
~~Perchlorate***~~	~~None~~	~~1-L Amber~~	~~1~~

Observations/Notes: Purge Start Time: _____ Purge Rate: _____

Nitrate_____ mg/L
Nitrite _____ mg/L
Fe^{2+}_____mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: N/A

Signature(s): [signature]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3-14-10
Weather: Cool

Project Number: 374082.FI.FI.69
Well ID: IR69-MW05DW ~~IDA~~
Sample ID: IR69-GW05DW-10A
Sampling Team: Dana Miller

Water Quality Equipment Info: YSI #13968

Total Depth: 90.67 FT.(BTOC) 3.01
Depth to water: (-) 30.72 FT.(BTOC) 35.41
Water Column: 60.28 FT.
(x) 0.163 GAL/FT.
Well Volume: 9.82 GAL.
Total Purge Vol.: GAL.

Purge Device: QED Bladder Pump

Pump Inlet Depth: 88 FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 3

SAMPLE DATA

	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date: 3/14/10								
Time: 12:20								
Method: Low Flow								

FIELD PARAMETERS

Time	Purge Vol. L ~~(gals)~~	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	±3%	±10%	±0.1	±10 mv	<10		
10:16	3	17.91	0.361	1.98	7.85	-166.7	61.8	32.40	Clear, No odor
10:22	~~3~~ 4.5	17.90	0.428	1.84	7.78	-190.3	47.6	32.57	" "
10:26	6.0	17.91	0.441	1.78	7.77	-196.3	39.0	32.60	" "
10:31	7.5	17.97	0.418	1.15	7.74	-228.3	60.0	32.60	
10:36	9.0	17.95	0.390	0.99	7.74	-234.8	45.0	32.61	
10:41	10.5	17.94	0.372	0.93	7.75	-240.6	33.0	32.61	
10:46	12.0	17.94	0.349	0.78	7.74	-240.8	23.0	32.61	
10:51	13.5	17.94	0.345	0.62	7.74	-242.3	22.0	32.61	" "
10:56	15.0	17.94	0.339	0.48	7.75	-239.8	19.0	32.62	
11:01	16.5	17.98	0.332	0.34	7.74	-225.2	18.0	32.63	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	None	1-L Amber	2
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	1 each
~~Perchlorate***~~	None	~~1-L Amber~~	~~1~~

Purge Start Time: 10:16 Purge Rate: .3 L/M

Observations/Notes:
Nitrate 0 mg/L
Nitrite 0 mg/L
Fe^{2+} 0 mg/L

Purge Rate = .3 L/M

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD NA
Duplicate ID No.: NA
Signature(s): DMiller

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3/14/10
Weather:

Project Number: 374082.FI.FI.69
Well ID: IR69 - MW05DW
Sample ID:
Sampling Team: D Miller

Total Depth: FT.(BTOC)
Depth to water: (-) FT.(BTOC)
Water Column: FT.
(x) GAL/FT.
Well Volume: GAL.
Total Purge Vol.: GAL.

Water Quality Equipment Info:

Purge Device:

Pump Inlet Depth: FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 3

SAMPLE DATA

	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date:								
Time: 12:20								
Method:								

FIELD PARAMETERS

Time	Purge Vol. L ~~(gals)~~	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	±3%	±10%	±0.1	±10 mv	<10		
11:06	18.0	17.98	0.329	0.36	7.75	-221.4	18.0	32.63	Clear No Odor
11:11	19.5	17.96	0.330	0.29	7.73	-230.7	16.0	32.64	
11:16	21.0	17.98	0.323	0.30	7.74	-233.9	14.0	32.64	
11:21	22.5	18.05	0.320	0.29	7.74	-234.4	15.0	32.64	
11:26	24.0	18.02	0.316	0.27	7.73	-232.6	16.0	32.64	
11:31	25.5	18.06	0.315	0.22	7.73	-233.4	15.0	32.64	
11:36	27.0	18.08	0.315	0.22	7.73	-232.9	14.0	32.65	
11:41	28.5	18.09	0.311	0.24	7.73	-230.0	14.0	32.65	
11:46	30.0	18.01	0.208	0.23	7.73	-227.0	12.0	32.65	
11:51	31.5	18.03	0.207	0.21	7.72	-228.3	11.0	32.65	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	~~None~~	~~1-L Amber~~	~~2~~
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	~~1 each~~
~~Perchlorate***~~	~~None~~	~~1-L Amber~~	~~1~~

Observations/Notes: Purge Start Time: Purge Rate:

Nitrate _____ mg/L
Nitrite _____ mg/L
Fe^{2+} _____ mg/L

ECBC - 140ml vial

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD NA
Duplicate ID No.: NA
Signature(s): DMiller

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3/14/10
Weather:

Project Number: 374082.FI.FI.69
Well ID: IR69-MW05DW
Sample ID:
Sampling Team: DMiller

Water Quality Equipment Info:

Total Depth: FT.(BTOC)
Depth to water: (-) FT.(BTOC)
Water Column: FT.
(x) GAL/FT.
Well Volume: GAL.
Total Purge Vol.: GAL.

See pg

Purge Device:

Pump Inlet Depth: FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 3 of 3

SAMPLE DATA

	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date:								
Time:								
Method:								

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	≤10		
11:56	33.0	18.05	0.202	0.17	7.71	-225.2	11.0	32.65	Clear No Odor
12:01	34.5	18.11	0.202	0.16	7.70	-224.0	10	32.66	
12:06	36.0	18.11	0.204	0.20	7.70	-220.6	9	32.66	
12:11	37.5	18.10	0.208	0.17	7.69	-215.5	8	32.66	
12:16	39.0	18.10	0.209	0.17	7.69	-215.4	7	32.66	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	~~None~~	~~1-L Amber~~	~~2~~
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	250 ml poly bottle	1 each
~~Perchlorate***~~	~~None~~	~~1-L Amber~~	~~1~~

Observations/Notes: Purge Start Time: Purge Rate:

Nitrate _____ mg/L
Nitrite _____ mg/L
Fe^{2+} _____ mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD | Duplicate ID No.:

Signature(s):

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3-9-10
Weather: Sunny 45°F

Project Number: 374082.FI.FI.69
Well ID: MW-06
Sample ID: IR69-GW06-10A
Sampling Team: Matt W., Cliff W.

Water Quality Equipment Info: YSI 556

Total Depth: 33.18 FT.(BTOC)
Depth to water: (-) 18.18 FT.(BTOC)
Water Column: 15.00 FT.
(x) .163 GAL/FT.
Well Volume: 2.445 GAL. x3
Total Purge Vol.: 7.335 GAL.

Purge Device: Bladder Pump

Pump Inlet Depth: 30' FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

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SAMPLE DATA

Date: 3-9-10 Time: 1115 Method: Low Flow	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
	16.42	0.055	1.53	4.83	278.4	7.7	18.45	

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		±3%	±3%	±10%	±0.1	±10 mv	<10		
0945	.75	15.99	0.054	1.74	5.05	203.0	11.0	18.45	
0955	1.50	16.03	0.054	1.73	4.88	219.0	11.0	18.45	
1005	2.25	16.18	0.054	1.67	4.77	233.4	9.0	18.45	
1015	3.00	16.54	0.055	1.54	4.79	241.9	8.4	18.45	
1025	3.75	16.60	0.055	1.58	4.84	252.6	8.0	18.45	
1035	4.50	16.60	0.055	1.57	4.84	260.1	8.0	18.45	
1045	5.50	16.61	0.055	1.57	4.83	266.1	7.7	18.45	
1055	6.50	16.55	0.055	1.52	4.83	271.5	7.8	18.45	
1105	7.50	16.42	0.055	1.53	4.83	278.4	7.7	18.45	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 0935 Purge Rate: .3 L/min

Nitrate 0 mg/L
Nitrite 0 mg/L
Fe^{2+} 0.2 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13.
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD Yes Duplicate ID No.:
Signature(s): Matt W., [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3-9-10
Weather: Sunny 70°F

Project Number: 374082.FI.FI.69
Well ID: MW-07
Sample ID: IR86-GW07-10A
Sampling Team: Matt W.

Water Quality Equipment Info: YSI 556

Total Depth: 22.81 FT.(BTOC)
Depth to water: (-) 10.40 FT.(BTOC)
Water Column: 12.41 FT.
(x) .163 GAL/FT.
Well Volume: 2.022 GAL.X3
Total Purge Vol.: 6.068 GAL.
Purge Device: Bladder Pump
Pump Inlet Depth: ~~18~~ 20 FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 1

SAMPLE DATA

Date: 3-9-10 Time: 1600 Method: Low Flow	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
	15.36	0.067	0.14	5.11	150.0	8.40	11.13	

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1500	1.0	16.28	0.071	0.78	5.11	65.0	67.0	11.00	
1510	2.0	15.77	0.069	0.38	5.11	116.1	13.0	11.10	
1520	3.0	15.52	0.069	0.18	5.11	121.7	12.0	11.11	
1530	4.0	15.48	0.068	0.20	5.12	129.1	10.0	11.11	
1540	5.0	15.40	0.067	0.15	5.11	137.6	8.40	11.13	
1550	6.0	15.37	0.067	0.14	5.11	145.4	8.50	11.13	
1555	6.5	15.36	0.067	0.14	5.11	150.0	8.40	11.13	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1440 Purge Rate: .378 L/min

Pump issues @ 1450

Nitrate 0 mg/L
Nitrite 0 mg/L
Fe^{2+} 0 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD Duplicate ID No.: IR69-GW07D-10A @ 1605

Signature(s): Matt W., [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3-8-10
Weather: Sunny 45°F

Project Number: 374082.FI.FI.69
Well ID: MW-08
Sample ID: IR69-GW08-10A
Sampling Team: Matt W.

Water Quality Equipment Info: YSI 556

Total Depth: 20.40 FT.(BTOC)
Depth to water: (-) 7.75 FT.(BTOC)
Water Column: 12.65 FT.
(x) .163 GAL/FT.
Well Volume: 2.061 GAL. X 3
Total Purge Vol.: 6.185 GAL.

Purge Device: Bladder Pump

Pump Inlet Depth: 18' FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

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SAMPLE DATA

Date: 3-8-10 Time: 1130 Method: Low Flow	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
	12.81	0.018	2.70	4.86	256.2	8.20	8.45	

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	±3%	±10%	±0.1	±10 mv	<10		
1005	.75	13.70	0.021	3.45	5.03	214.5	37.0	8.45	
1015	1.50	12.86	0.019	3.26	4.91	235.3	29.0	8.45	
1025	2.25	12.51	0.019	3.06	4.87	246.7	10.00	8.45	
1035	3.00	12.42	0.018	2.94	4.83	254.1	9.90	8.45	
1045	3.75	12.51	0.018	2.80	4.85	256.9	10.00	8.45	
1055	4.50	12.61	0.017	2.74	4.85	257.0	8.40	8.45	
1105	5.25	12.74	0.017	2.71	4.86	257.4	7.70	8.45	
1120	6.35	12.81	0.018	2.70	4.86	256.2	8.20	8.45	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 0953 Purge Rate: .3L/min

Nitrate 0 mg/L
Nitrite 0 mg/L
Fe^{2+} 0 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD Duplicate ID No.: IR69-GW08D-10A 1135

Signature(s): Matt Wooten

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3-1-10
Weather: Sunny, 45°F

Project Number: 374082.FI.FI.69
Well ID: IR69-MW09
Sample ID: IR69-GW09-10A, MR02-IR69-GW09-10A
Sampling Team: N. Manore

Water Quality Equipment Info: YSI 556 MPS S/N 04963

Total Depth: 21.0 FT.(BTOC)
Depth to water: (-) 7.32 FT.(BTOC)
Water Column: 13.68 FT.
(x) 0.163 GAL/FT.
Well Volume: 2.23 GAL.
Total Purge Vol.: GAL.

PID 0.0 at B.Z.

Purge Device: QED Bladder Pump

Pump Inlet Depth: 15 FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 2

SAMPLE DATA

	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date:								
Time:								
Method:	See page 2							

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
0937	0.0	14.75					100	7.75	Cloudy, No odor
0940	0.5	14.90	0.108	3.48	5.19	211.3	140	7.75	" "
0943	0.75	15.08	0.107	3.76	5.23	221.8	102	7.70	" "
0946	1.0	15.21	0.107	3.78	5.24	226.9	95	7.60	" "
0949	1.25	15.28	0.107	3.88	5.23	239.5	87	7.50	" "
0952	1.5	15.28	0.107	3.84	5.30	233.2	86	7.51	" "
0955	1.75	15.31	0.107	3.94	5.31	234.6	73	7.52	" "
0958	2.0	15.31	0.106	3.80	5.30	237.1	62	7.	" "
1001	2.25	15.32	0.106	3.68	5.30	240.5	51	7.	" "
1004	2.50	15.33	0.106	3.56	5.29	242.4	45.1	7.67	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 0935 Purge Rate:

Nitrate Ø mg/L
Nitrite Ø mg/L
Fe^{2+} Ø mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD MR02-IR69-GW09-10A-MS, SD Duplicate ID No.: ~~MR02-IR69-GW09-10A~~

Signature(s):

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3-1-10
Weather:

Project Number: 374082.FI.FI.69
Well ID: IR69-MW09
Sample ID: IR69-GW09-10A, MR02-IR69-GW09-10A
Sampling Team: N. Moore

Total Depth: ____ FT.(BTOC)
Depth to water: (-) ____ FT.(BTOC)
Water Column: ____ FT.
(x) ____ GAL/FT.
Well Volume: ____ GAL.
Total Purge Vol.: ____ GAL.

Water Quality Equipment Info: p1 [illegible]

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 2

Purge Device: QED Bladder Pump

Pump Inlet Depth: 15 FT.(BTOC)

SAMPLE DATA

Date: 3-1-10 Time: 1035	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: Low Flow	15.37	0.106	3.29	5.26	260.9	28.3	7.62	Clear No Odor

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1007	3.0	15.32	0.106	3.51	5.28	246.5	41.0	7.67	Cloudy, No odor
1010	3.25	15.44	0.106	3.52	5.29	248.2	36.6	7.65	" "
1013	3.5	15.44	0.106	3.49	5.29	250.1	33.4	7.64	" "
1016	3.75	15.45	0.106	3.37	5.28	251.2	30.1	7.63	" "
1019	4.0	15.45	0.106	3.35	5.28	252.1	28.9	7.63	Clear, No odor
1022	4.25	15.36	0.106	3.53	5.29	253.9	30.7	7.65	" "
1025	4.5	15.39	0.106	3.53	5.30	254.9	30.1	7.67	" "
1028	4.75	15.42	0.106	3.45	5.27	257.4	29.2	7.65	" "
1031	5.0	15.42	0.106	3.35	5.27	258.6	28.6	7.63	" "
1034	5.25	15.39	0.106	3.31	5.26	260.0	28.3	7.63	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 0935 Purge Rate:

Nitrate ____ mg/L
Nitrite ____ mg/L
Fe^{2+} ____ mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD MR02-IR69-GW09-10A-MS,SD Duplicate ID No.:

Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3/6/10
Weather: SUNNY ≈ 48°F

Project Number: 374082.FI.FI.69
Well ID: IR69-GW09IW
Sample ID: IR69-GW09IW-10A
Sampling Team: R. FIELDS

Total Depth: 37.75 ~~40~~ RF FT.(~~BTOC~~) BGS MEASURED
Depth to water: (-) 7.15 FT.(~~BTOC~~) BGS
Water Column: 30.6 ~~32.5~~ RF FT.
(x) 0.163 GAL/FT.
Well Volume: ≈5 ~~5.3~~ RF GAL.
Total Purge Vol.: GAL.

Water Quality Equipment Info: YSI 556 MPS # BL98

Purge Device: QED BLADDER PUMP

Pump Inlet Depth: ≈ 35 FT.(BTOC) 5' SCREEN

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 2

SAMPLE DATA

	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date: 3/6/10								
Time: 1740								
Method: LOW-FLOW	(SEE SHEET 2/2)							

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1555	0.1	16.96	0.284	2.44	7.75	-157.4	110	7.15	300 mL/MIN
1600	≈0.5	16.68	0.294	2.09	7.72	-168.6	110	7.25	CLOUDY
1605	≈0.9	16.77	0.304	2.18	7.75	-143.2	110	7.25	
1610	≈1.3	16.77	0.306	2.27	7.73	-152.1	110	7.25	EMPTY CELL
1615	≈1.5	16.76	0.306	2.05	7.73	-156.5	75.0	7.26	
1620	≈1.9	16.70	0.307	1.67	7.74	-172.4	65.0	7.32	
1625	≈2.3	16.72	0.308	1.60	7.75	-176.1	55.0	7.32	CLEARING
1635	≈3.1	16.75	0.310	1.33	7.76	-183.5	45.0	7.32	
1645	≈3.9	16.80	0.308	0.54	7.78	-190.6	45.0	7.32	300 mL/MIN
1655	≈4.7	16.82	0.308	0.43	7.78	-191.1	24.0	7.32	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1555 Purge Rate: ≈ 300 mL/MIN

** Nitrate 0.8 mg/L
** Nitrite 0.066 mg/L
** Fe^{2+} 1.5 mg/L

* ACTUAL DEPTH WAS MEASURED AFTER SAMPLING. DIFFERENCE OF ASSUMED VS. MEASURED WAS 2.25' BGS. RECORDS ADJUSTED. NOTE WELL PAD NOT INSTALLED @ TIME OF DEVELOPMENT & SAMPLING. R. FIELDS 3/6/10

** PER J. HIGH

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD Duplicate ID No.:

Signature(s): 3/6/10

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-GW09IW-4
Event:	Supplemental Investigation	Sample ID:	IR69-GW09IW-10A
Date:	3/6/10	Sampling Team:	R. FIELDS
Weather:	SUNNY / ≈48°F		

Total Depth:	37.75	FT.(BTOC)
Depth to water:	(-) 7.15	FT.(BTOC)
Water Column:	30.6	FT.
	(x) 0.163	GAL/FT.
Well Volume:	≈5	GAL.
Total Purge Vol.:	7.5	GAL.
Purge Device:	QED BLADDER PUMP	
Pump Inlet Depth:	≈35	FT.(BTOC)

Water Quality Equipment Info: YSI 556 MPS #13968
HANNA # 08987

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

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SAMPLE DATA

Date: 3/6/10 Time: 1740	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: LOW FLOW	16.81	0.297	0.27	7.80	-190.6	15.0	7.32	

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1705	5.1	16.83	0.308	0.36	7.79	-191.1	20.0	7.32	300 mL/min
1710	5.5	16.83	0.307	0.32	7.79	-191.2	17.0	7.32	
1715	5.9	16.83	0.305	0.32	7.80	-191.3	15.0	7.32	
1720	6.3	16.83	0.303	0.26	7.80	-191.1	15.0	7.32	
1725	6.7	16.83	0.301	0.27	7.80	-191.1	15.0	7.32	
1730	7.1	16.83	0.299	0.29	7.79	-190.1	15.0	7.32	
1735	7.5	16.83	0.298	0.27	7.79	-190.2	15.0	7.32	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1515 Purge Rate: ≈300 mL/MIN

Nitrate 8.8 mg/L

Nitrite 0.066 mg/L

Fe^{2+} 1.5 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD	Duplicate ID No.:
Signature(s):	3/6/10

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW09DW
Event:	Supplemental Investigation	Sample ID:	IR69-GW09DW-10A
Date:	3-6-10	Sampling Team:	N. Monroe
Weather:	Sunny, 50°F		

Water Quality Equipment Info: YSI 556 MPS S/N: 04963

Total Depth:	73.40	FT.(BTOC)
Depth to water:	(-) 8.80	FT.(BTOC)
Water Column:	64.60	FT.
	(x) 0.163	GAL/FT.
Well Volume:	10.5	GAL.
Total Purge Vol.:		GAL.
Purge Device:	QED Bladder Pump	
Pump Inlet Depth:	71.0	FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

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SAMPLE DATA

	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date: 3-6-10								
Time: 1900								
Method: Low Flow								

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1600	0.0	16.83	0.280	2.54	7.52	-88.4	113	9.27	Cloudy, No odor
1605	0.5	16.77	0.370	0.62	7.54	-153.2	72.4	9.35	" "
1610	0.75	16.87	0.372	0.54	7.51	-157.9	45.3	9.41	" "
1615	1.25	17.00	0.372	0.43	7.53	-167.5	22.3	9.41	Clear, No odor
1620	1.75	17.01	0.368	0.37	7.57	-178.2	18.0	9.42	" "
1625	2.25	17.03	0.361	0.28	7.61	-190.9	17.2	9.42	" "
1630	2.75	17.08	0.357	0.26	7.63	-197.3	16.8	9.42	" "
1635	3.25	17.14	0.356	0.23	7.64	-204.1	18.8	9.42	" "
1640	3.75	17.13	0.355	0.20	7.70	-208.3	17.4	9.43	" "
1645	4.25	17.15	0.355	0.19	7.70	-212.1	20.1	9.43	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	~~2~~ 2
PCBs Method 8082	None	1-L Amber	~~2~~ 2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	None	1-L Amber	2
~~Total Metals/Dissolved Metals Method 6010B***~~	HNO3	250 ml poly bottle	1 each
~~Perchlorate***~~	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1555 Purge Rate: 500 ml/min

Nitrate 0.10 mg/L

Nitrite _____ mg/L

Fe^{2+} 1.6 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: N/A

Signature(s): [signature]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3/2/10
Weather:

Project Number: 374082.FI.FI.69
Well ID: ~~IR69-MW~~, ~~IR69-MW02DW~~ IR69-MW09DW
Sample ID: R. FIELDS / N. MCNRIE
Sampling Team:

Water Quality Equipment Info: P1

Total Depth: FT.(BTOC)
Depth to water: (-) FT.(BTOC)
Water Column: FT.
(x) GAL/FT.
Well Volume: GAL.
Total Purge Vol.: 10.75 GAL.

Purge Device: P1

Pump Inlet Depth: FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

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SAMPLE DATA

Date: 3-6-10	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Time: P3								
Method:								

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1650	4.75	17.16	0.356	0.20	7.70	-212.3	20.2	9.42	Clear, No odor
1655	5.25	17.17	0.357	0.20	7.70	-213.6	20.4	9.42	Clear, No Odor
1700	5.75	17.15	0.359	0.18	7.69	-215.7	19.5	9.43	" "
1705	6.25	17.15	0.360	0.16	7.69	-216.9	20.6	9.43	" "
1710	6.75	17.13	0.362	0.14	7.68	-218.4	21.5	9.43	" "
1715	7.25	17.11	0.363	0.15	7.71	-219.2	20.7	9.43	" "
1720	7.75	17.12	0.363	0.14	7.69	-218.6	20.1	9.43	" "
1725	8.25	17.14	0.364	0.13	7.68	-218.7	19.6	9.43	" "
1730	8.75	17.13	0.365	0.13	7.68	-218.0	19.4	9.43	" "
1735	9.25	17.13	0.365	0.12	7.68	-217.3	19.4	9.43	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	~~2~~ 2
PCBs Method 8082	None	1-L Amber	~~2~~ 2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	~~None~~	~~1-L Amber~~	~~2~~
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	~~1 each~~
~~Perchlorate***~~	~~None~~	~~1-L Amber~~	~~1~~

Observations/Notes: Purge Start Time: 1555 Purge Rate: 500 ml/min

Nitrate_____ mg/L
Nitrite _____ mg/L
Fe^{2+}_____mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: N/A

Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3-6-10
Weather: P1

Project Number: 374082.FI.FI.69
Well ID: IR69-MW09DW-
Sample ID: IR69-GW09DW-10A
Sampling Team: N. Monroe

Total Depth: ____ FT.(BTOC)
Depth to water: (-) ____ FT.(BTOC)
Water Column: P1 FT.
(x) P1 GAL/FT.
Well Volume: ____ GAL.
Total Purge Vol.: ____ GAL.

Purge Device: P1

Pump Inlet Depth: 71 FT.(BTOC)

Water Quality Equipment Info: P1

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

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SAMPLE DATA

Date: 3-6-10 Time: 1800	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: Low Flow	17.13	0.362	0.12	7.64	-214.9	21.2	9.43	Clear, No Odor

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1740	9.25	17.16	0.366	0.12	7.68	-216.1	19.5	9.43	Clear, No Odor
1745	10.25	17.14	0.367	0.12	7.64	-215.6	19.4	9.43	" "
1750	10.25	17.13	0.362	0.12	7.64	-215.2	21.7	9.43	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	None	~~1-L Amber~~	~~2~~
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	~~1 each~~
~~Perchlorate***~~	None	~~1-L Amber~~	~~1~~

Observations/Notes: Purge Start Time: ____ Purge Rate: 500 ml/min

Nitrate____ mg/L
Nitrite ____ mg/L
Fe^{2+}____mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: N/A
Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3-8-10
Weather: Sunny 69°F

Project Number: 374082.FI.FI.69
Well ID: MW-10
Sample ID: IR69-GW10-10A
Sampling Team: Matt

Water Quality Equipment Info: YSI 556

Total Depth: 18.61 FT.(BTOC)
Depth to water: (-) 6.30 FT.(BTOC)
Water Column: 12.31 FT.
(x) 0.163 GAL/FT.
Well Volume: 2.006 GAL. X3
Total Purge Vol.: 6.019 GAL.

Purge Device: Bladder Pump

Pump Inlet Depth: 16' FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

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SAMPLE DATA

	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date: 3-8-10 Time: 1625 Method: Low Flow	14.40	0.044	4.61	4.76	168.7	10.0	12.40	

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	±3%	±10%	±0.1	±10 mv	<10		
1510	.90	14.10	0.038	0.86	5.00	173.6	60.0	9.90	
1520	1.80	14.20	0.038	0.69	4.91	194.7	22.0	10.35	
1530	2.70	14.06	0.042	2.18	4.85	188.2	20.0	10.90	
1540	3.60	14.17	0.045	1.63	4.77	181.1	16.0	11.32	
1550	4.50	14.20	0.047	3.53	4.86	186.5	9.80	11.65	
1600	5.40	14.37	0.051	2.17	4.75	174.8	11.0	12.07	
1610	6.30	14.40	0.044	4.61	4.76	168.7	10.0	12.40	

Analysis	Preservative	Container requirements	No. of containers
✓ TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
✓ Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
✓ Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
✓ Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
✓ TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
✓ Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1500 Purge Rate: .340 L/min

Nitrate 0 mg/L
Nitrite 0 mg/L
Fe^{2+} 1.8 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD Duplicate ID No.:
Signature(s): Matt J. Whitehead

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW11
Event:	Supplemental Investigation	Sample ID:	IR69-GW11-10A/MR02-IR69-GW-10A
Date:	3/1/10	Sampling Team:	R. FIELDS
Weather:	CLEAR SUNNY / ≈ 45F		

Total Depth: 19.0 FT.(BTOC) HISTORICAL

Depth to water: (-) 5.42 FT.(BTOC)

Water Column: 13.58 FT.

(x) 0.163 GAL/FT.

Well Volume: ≈ 2.2 GAL.

Total Purge Vol.: GAL.

Purge Device: QED BLADDER PUMP

Pump Inlet Depth: ≈ 14 FT.(BTOC)

Water Quality Equipment Info: YSI 556

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

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SAMPLE DATA

Date: 3/1/10 Time: 1035	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: LOW-FLOW	13.80	0.44	0.94	4.21	354.1	4.72	5.65	CLEAR

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
0948	0.10	13.45	0.061	~~8~~3.23	4.14	331.0	6.50	≈300 mL/MIN
1000	≈1.0	13.43	0.062	2.48	4.18	334.2	6.30	5.65
1005	≈1.4	13.41	0.062	1.69	4.18	341.7	5.70	5.65
1010	≈1.8	13.52	0.049	1.36	4.19	347.9	5.10	5.65
1015	≈2.2	13.67	0.047	1.22	4.21	348.8	4.70	5.65
1020	≈2.6	13.71	0.043	1.22	4.15	352.2	4.90	5.65
1025	≈3.0	13.79	0.044	0.95	4.20	353.0	4.75	5.65
1030	≈3.4	13.80	0.044	0.95	4.21	353.1	4.72	5.65

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 0948 Purge Rate:

Nitrate Ø mg/L

Nitrite Ø mg/L

Fe^{2+} 0.25 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD Duplicate ID No.:

Signature(s): 3/1/10

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3-13-10
Weather: Cloudy, 65°F

Project Number: 374082.FI.FI.69
Well ID: IR69-MW11IW
Sample ID: IR69-GW11IW-10A
Sampling Team: N. Moore

PID = 0.0 ppm

Water Quality Equipment Info: YSI 556 MPS S/N: 04963

Total Depth: 49.7 FT.(BTOC)
Depth to water: (-) 23.20 FT.(BTOC) (24.53')
Water Column: 26.5 FT. 54 - 1.325
(x) 0.163 GAL/FT.
Well Volume: 4.32 GAL. x3 = 13.0 gal
Total Purge Vol.: GAL.

Purge Device: QED Bladder Pump

Pump Inlet Depth: 47.0 FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 2

SAMPLE DATA

Date: 3-13-10	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Time:								
Method: Low Flow								

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	±3%	±10%	±0.1	±10 mv	<10		
1105	0.00	17.90	0.475	1.48	7.07	-98.5	20.0	25.35	Clear, no odor
1110	0.5	17.82	0.478	0.98	7.12	-108.2	34.0	26.80	" "
1115	1.0	17.77	0.479	0.80	7.17	-120.8	27.0	29.20	Cloudy, no odor
1120	1.5	17.76	0.478	0.71	7.20	-128.7	23.0	30.40	" "
1125	2.25	17.77	0.477	0.59	7.21	-133.2	22.0	32.33	" "
1130	3.00	17.75	0.476	0.55	7.22	-136.9	21.0	34.31	" "
1135	3.75	17.72	0.476	0.47	7.23	-141.3	18.0	36.65	Clear, No odor
1140	4.50	17.72	0.476	0.47	7.24	-143.4	16.0	36.86	" "
1145	5.00	17.73	0.477	0.41	7.25	-147.8	14.0	37.01	" "
1150	5.75	17.68	0.478	0.36	7.27	-152.0	14.0	37.82	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	None	1-L Amber	2
~~Total Metals/Dissolved Metals Method 6010B***~~	HNO3	250 ml poly bottle	1 each
~~Perchlorate***~~	None	1-L Amber	1

SITE 69 UXO-2

Observations/Notes: Purge Start Time: 1105 Purge Rate:

Nitrate 0 mg/L
Nitrite 0 mg/L
Fe^{2+} 3.0 mg/L + 1-40ml VOC (un-preserv.)

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: N/A

Signature(s): [signature]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3-13-10
Weather: P1

Project Number: 374082.FI.FI.69
Well ID: IR69-MW11 IW
Sample ID: IR69-GW11 IW-10A
Sampling Team: N. Monroe

Water Quality Equipment Info: P1

Total Depth: ____ FT.(BTOC)
Depth to water: (-) ____ FT.(BTOC)
Water Column: P1 ____ FT.
(x) ____ GAL/FT.
Well Volume: ____ GAL.
Total Purge Vol.: ____ GAL.

Purge Device: P1

Pump Inlet Depth: ____ FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 2

SAMPLE DATA

Date: 3-13-10	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Time: 1235								
Method: Low Flow	17.72	0.477	0.25	7.29	-159.5	6.50	40.92	Clear, No odor

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	±3%	±10%	±0.1	±10 mv	<10		
1155	6.5	17.68	0.477	0.35	7.27	-151.7	15.0	38.31	Clear, no odor
1200	7.25	17.67	0.477	0.34	7.27	-151.6	14.0	38.75	" "
1205	8.25	17.69	0.477	0.30	7.28	-154.4	14.0	39.53	" "
1210	9.25	17.70	0.477	0.26	7.28	-156.8	14.0	40.25	" "
1215	10.25	17.72	0.477	0.25	7.29	-157.1	12.0	40.40	" "
1220	11.25	17.74	0.477	0.25	7.29	-158.9	10.0	40.55	" "
1225	12.25	17.74	0.477	0.24	7.29	-159.6	6.80	40.85	" "
1230	13.25	17.72	0.477	0.25	7.30	-159.5	6.70	40.89	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1105 Purge Rate: 0.15 gal/min

Nitrate_____ mg/L
Nitrite _____ mg/L pWS 1-40ml (w. pres.) ECBC
Fe^{2+}_____mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: N/A

Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW11IW
Event:	Supplemental Investigation	Sample ID:	IR69-GW11IW-10A
Date:	3/18/10	Sampling Team:	JHIGH/CLT
Weather:	mid 50s, H rain		

Total Depth:	50	FT.(BTOC)
Depth to water:	(-) 22.59	FT.(BTOC)
Water Column:		FT.
	(x)	GAL/FT.
Well Volume:		GAL.
Total Purge Vol.:	1.1	GAL.
Purge Device:	Bladder QED	
Pump Inlet Depth:	47	FT.(BTOC)

Water Quality Equipment Info: YSI 556MPS Pine H
HANNA Turbidimeter, Pine H

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 1

SAMPLE DATA

Date: 3/18/10 Time: 1130	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: low grab	14.08	0.462	8.08	7.62	-21.7	90	25.0	cloudy/lt gray

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1040	0.25	16.77	0.471	9.40	7.18	-23.3	50.0	24.55	slowed flow ↓
1045	0.50	16.14	0.469	8.83	7.22	-35.7	75.0	24.70	
1050	0.70	16.01	0.468	8.33	7.26	-38.4	90.0	25.10	
1055	0.80	15.94	0.467	8.06	7.30	-38.1	95.0	24.65	
1100	0.9	15.08	0.466	7.85	7.43	-37.0	100	25.20	
1105	1.0	14.96	0.466	7.84	7.45	-35.8	100	25.10	
~~1110~~ 1130	1.1	14.08	0.462	8.08	7.62	-21.7	90	25.0	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides/PCBs Method 3550B/8081A/8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1035 Purge Rate: ~150 mL/min

Nitrate NS mg/L
Nitrite NS mg/L Not Sampled
Fe^{2+} NS mg/L

MICROBIAL SAMPLE ONLY: DHC, DSM, PHB, DSB, TOD, and mOB

1105: Stopped purging to swap vehicles
1125 Restarted purging
25psi/CPM 1/30 30

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD NA Duplicate ID No.: NA

Signature(s): [signature]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3/13/10
Weather: Cloudy

Project Number: 374082.FI.FI.6
Well ID: IR69-MW11DW
Sample ID: IR69-GW11DW-10A
Sampling Team: D. Miller

Water Quality Equipment info: YSI

2.77
28.3

Total Depth: 80.8 FT.(BTOC)
Depth to water: (-) 25.4 FT.(BTOC)
Water Column: 55.4 FT.
(x) 0.163 GAL/FT.
Well Volume: 9.03 GAL.
Total Purge Vol.: ~~98~~ GAL.

Purge Device: DED Bladder Pump

Pump Inlet Depth: 78 FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 3

SAMPLE DATA

	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date: 3/13/10								
Time: 13:30								
Method: Low Flow								

FIELD PARAMETERS

Time	Purge Vol. L ~~(gals)~~	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
10:50	~~4~~ 2.00	17.93	0.844	1.37	7.50	-85.3	<900	25.95	
10:55	2.975	17.94	0.923	13.0	7.56	-108.9	<900	25.95	
11:00	3.950	18.01	0.995	12.5	7.60	-121.5	<900	25.96	
11:05	4.925	17.99	1.020	11.9	7.63	-133.7	<900	25.96	
11:10	5.950	17.90	0.997	11.2	7.65	-148.5	<900	25.96	
11:15	6.925	17.84	0.924	7.7	7.66	-159.6	<900	25.97	
11:20	7.950	17.79	0.854	6.9	7.66	-170.6	<900	25.97	
11:25	8.925	17.81	0.850	6.2	7.66	-173.6	800	25.97	
11:30	9.950	17.84	0.924	4.2	7.65	-179.2	650	25.97	
11:35	10.925	17.82	0.964	3.7	7.66	-182.5	650	25.97	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A 5	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	~~None~~	~~1-L Amber~~	~~2~~
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	~~1 each~~
~~Perchlorate***~~	~~None~~	~~1-L Amber~~	~~1~~

Observations/Notes:
Nitrate 0 mg/L
Nitrite 0 mg/L
Fe^{2+} .6 mg/L

Purge Start Time: 10:50
Purge Rate: .325 L/m
+/- 40mV ECBC unpres.
Sample Time: 13:30

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD NA
Duplicate ID No.: NA
Signature(s): D. Miller

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date:
Weather:

Project Number: 374082.FI.FI.69
Well ID: IR69-MW11DW
Sample ID:
Sampling Team: D. Miller

Water Quality Equipment Info:

Total Depth: FT.(BTOC)
Depth to water: (-) FT.(BTOC)
Water Column: FT.
(x) GAL/FT.
Well Volume: GAL.
Total Purge Vol.: GAL.

Purge Device:

Pump Inlet Depth: FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 3

SAMPLE DATA

	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date:								
Time:								
Method:								

FIELD PARAMETERS

Time	Purge Vol. L. ~~(gals)~~	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	±3%	±10%	±0.1	±10 mv	≤10		
11:40	11.950	17.80	1.016	0.32	7.67	-185.2	650	25.97	
11:45	12.925	17.80	1.017	2.9	7.67	-188.6	650	25.97	
11:50	13.950	17.83	1.018	2.9	7.67	-189.4	650	25.97	
11:55	14.925	17.83	0.993	3.0	7.68	-190.9	600	25.97	
12:00	15.950	17.80	0.942	2.6	7.68	-192.3	500	25.97	
12:05	19.4	17.91	0.798	2.6	7.64	-191.4	500	26.24	purging 3 well volumes
12:10	21	17.94	0.707	4.0	7.62	-182.5	300	26.24	purge rate
12:15	23	17.94	0.701	3.6	7.64	-183.2	300	26.24	2.54m
12:20	25	17.94	0.699	3.2	7.65	-183.7	300	26.24	
12:25	26	17.95	0.696	3.0	7.64	-184.2	300	26.25	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	~~None~~	~~1-L Amber~~	~~2~~
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	~~1 each~~
~~Perchlorate***~~	~~None~~	~~1-L Amber~~	~~1~~

Observations/Notes: Purge Start Time: 10:50 Purge Rate:

Nitrate _____ mg/L
Nitrite _____ mg/L
Fe^{2+} _____ mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD Duplicate ID No.: NA

Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date:
Weather:

Project Number: 374082.FI.FI.69
Well ID: IR69-MW11DW
Sample ID:
Sampling Team: D. Miller

Water Quality Equipment Info:

Total Depth: FT.(BTOC)
Depth to water: (-) FT.(BTOC)
Water Column: FT.
(x) GAL/FT.
Well Volume: GAL.
Total Purge Vol.: GAL.

Purge Device:

Pump Inlet Depth: FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 3 of 3

SAMPLE DATA

	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date:								
Time:								
Method:								

FIELD PARAMETERS

Time	Purge Vol. L ~~(gals)~~	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	≤10		
12:30	28	17.96	0.673	2.8	7.64	-187.6	260	26.30	
12:35	31	18.00	0.641	2.4	7.65	-189.9	260	26.31	
12:40	34	17.99	0.616	2.2	7.64	-192.4	260	26.33	
12:45	38	17.98	0.580	2.3	7.65	-192.0	250	26.33	
12:50	41	17.96	0.565	2.1	7.64	-191.6	250	26.33	
12:55	44	17.94	0.544	2.3	7.64	-191.3	250	26.33	
13:00	47	17.92	0.539	2.4	7.64	-190.7	250	26.33	
13:05	49	17.89	0.518	2.2	7.62	-188.4	250	26.34	
13:10	51	17.94	0.514	2.7	7.59	-185.3	250	26.34	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	~~None~~	~~1-L Amber~~	~~2~~
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	~~1 each~~
~~Perchlorate***~~	~~None~~	~~1-L Amber~~	~~1~~

Observations/Notes: Purge Start Time: 10:50 Purge Rate:

Nitrate_____ mg/L
Nitrite _____ mg/L
Fe^{2+}_____mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD Duplicate ID No.: NA
Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW11DW
Event:	Supplemental Investigation	Sample ID:	~~IR69-GW~~ IR69-GW11DW-10A
Date:	3/18/10	Sampling Team:	JHIGH/CLT
Weather:	mid 50's / rain		

Total Depth:	80	FT.(BTOC)	Water Quality Equipment Info:	YSI 556 MPS Pump #06730
Depth to water:	(-) 25.50	FT.(BTOC)		HANNA Turbidimeter #08987
Water Column:		FT.		
	(x)	GAL/FT.		
Well Volume:		GAL.		
Total Purge Vol.:	1.2	GAL.		
Purge Device:	QED Bladder			
Pump Inlet Depth:	78	FT.(BTOC)		

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 1

SAMPLE DATA

Date: 3/18/10 Time: 1255 Method: Grab	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
	17.21	1.245	0.41	7.76	-104.2	31.0	25.90	

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		**constant**	**± 3%**	**± 10%**	**± 0.1**	**± 10 mv**	**<10**		
1240	0.25	16.73	0.629	2.75	7.75	14.8	45.0	26.03	
1245	0.6	17.20	1.236	0.62	7.68	-61.0	22.0	25.95	
1250	0.9	17.22	1.282	0.50	7.71	-79.0	15.0	25.93	
1255	1.2	17.21	1.245	0.41	7.76	-104.2	31.0	25.90	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides/PCBs Method 3550B/8081A/8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1235 Purge Rate: ~230 mL/min

Nitrate NS mg/L

Nitrite NS mg/L

Fe^{2+} NS mg/L

+ Microbial Sample ONLY: DHC, DSM, DHB, DSB, TOD, MOB

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD NA Duplicate ID No.: NA

Signature(s): Jeff Mills

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GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69 - GW12
Event:	Supplemental Investigation	Sample ID:	MR02-IR69-GW12-10A / IR69-GW12-10A
Date:	2/27/10	Sampling Team:	R. FIELDS / N. MENROE
Weather:	PARTLY CLOUDY ~47°F		

Total Depth:	12.5	FT.(BTOC) HISTORICAL	Water Quality Equipment Info:	YSI 556 MPS
Depth to water:	(-) 3.50	FT.(BTOC)		
Water Column:	9.0	FT.		
	(x) 0.163	GAL/FT.		
Well Volume:	≈1.5	GAL.		
Total Purge Vol.:	~~≈1.5~~ 14	GAL.		
Purge Device:	QED BLADDER PUMP			
Pump Inlet Depth:	≈7	FT.(BTOC)		

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

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SAMPLE DATA

Date: 2/27/10 Time: 1425	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: LOW-FLOW	11.61	0.051	0.63	4.95	22.0	5.51	4.42	CLEAR @ 1420

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1220	0	12.35	0.076	3.72	4.83	201.1	70.2	3.95	FLOW RATE = 75 ml/min
1225	≈0.10	12.15	0.065	2.32	4.84	183.1	51.5	3.95	
1235	≈0.60	11.98	0.062	1.44	4.87	155.1	31.4	4.35	FLOW RATE = 300 ml/min
1240	≈0.75	11.78	0.051	1.56	4.89	87.9	23.0	4.43	
1245	≈1	11.71	0.056	1.18	4.95	50.7	14.4	4.44	
1256	≈1.5	11.70	0.059	0.85	4.98	30.3	7.97	4.47	FLOW RATE = 170 ml/min
1308	≈2.0	11.63	0.063	0.64	5.10	24.0	5.59	4.47	
1328	≈2.75	11.63	0.063	0.62	4.98	25.9	5.53	4.45	
1349	≈3.5	11.61	0.050	0.65	4.95	26.0	5.53	4.43	
1420	≈4.5	11.61	0.051	0.63	4.95	22.0	5.51	4.42	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3 ✓
Methane, Ethane, Ethene RSK-175	HCl ?	40 ml glass vials	2 ✓
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2 ✓
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1 ✓
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1 ✓
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1 ✓
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2 ✓
OP Pesticides Method 8141A	None	1-L Amber	2 ✓
OC Pesticides Method 3550B/8081A	None	1-L Amber	2 ✓
PCBs Method 8082	None	1-L Amber	2 ✓
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2 ✓
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each ✓
Perchlorate***	None	1-L Amber	1 ✓

Observations/Notes: Purge Start Time: 1215 / END 1530 Purge Rate: ≈ 0.038 GPM

Nitrate 0.0 mg/L

Nitrite 0.0 mg/L

Fe^{2+} 2.1 mg/L

NOTE @ 1310 COMPRESSOR SHUT OFF - DUE TO BATTERY ISSUES RUNNING COMPRESSOR OFF OF THE TRUCK. R. FIELDS

SAMPLE COLLECTED @ 1425

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD | Duplicate ID No.:

Signature(s):

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GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW12DW
Event:	Supplemental Investigation	Sample ID:	IR69-MW12DW-10A
Date:	2-27-10	Sampling Team:	N. MONROE / R. FIELDS
Weather:	Cloudy, ≈48°F		

14500 60

Total Depth:	58.0	FT.(BTOC)
Depth to water:	(-) 3.42	FT.(BTOC)
Water Column:	54.57	FT.
	(x) 0.163	GAL/FT.
Well Volume:	8.90	GAL.
Total Purge Vol.:	9.0	GAL.
Purge Device:	QED Bladder Pump	
Pump Inlet Depth:	53	FT.(BTOC)

Initial B.Z. = 0.0ppm

Water Quality Equipment Info: YSI 556MPS S/N: 04968 (PINE)
Hanna HI98703 S/N: 08987 (PINE)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 2

SAMPLE DATA

Date: 2-27-10	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Time: pg. 2								
Method: LowFlow	SEE PAGE 2							

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
11:50	0.0	14.20	0.250	7.29	7.72	160.6	800	3.43	Rust color, no odor
12:00	0.5	15.66	0.261	1.55	7.47	-3.5	100	3.43	" "
12:10	1.125	15.91	0.280	0.84	7.48	-110.2	45.0	3.43	Clear, no odor
12:20	1.75	15.95	0.284	0.68	7.52	-127.4	18.0	3.42	" "
12:30	2.25	16.00	0.287	0.49	7.53	-133.1	33.0	3.42	" "
12:40	3.00	16.07	0.291	0.41	7.54	-140.0	6.10	3.42	" "
12:50	3.5	16.04	0.293	0.36	7.55	-148.3	5.20	3.42	" "
13:00	4.0	16.19	0.294	0.31	7.55	-151.8	6.00	3.42	" "
13:10	4.5	16.30	0.294	0.26	7.55	-150.0	6.00	3.42	" "
13:20	5.5	16.06	0.295	0.25	7.55	-159.8	4.30	3.42	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 11:44 Purge Rate: 300 ml/min

Nitrate 2 mg/L

Nitrite ND mg/L

Fe^{2+} 1 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD	Duplicate ID No.:
Signature(s):	

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GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW12DW
Event:	Supplemental Investigation	Sample ID:	IR69-GW12DW-10A
Date:	2-27-10	Sampling Team:	N. Monroe
Weather:	See pg. 1		R. Fields

Total Depth: _____ FT.(BTOC)
Depth to water: (-) _____ FT.(BTOC)
Water Column: _____ FT.
(x) _____ GAL/FT.
Well Volume: _____ GAL.
Total Purge Vol.: _____ GAL.

See Pg. 1

Purge Device: Pg. 1

Pump Inlet Depth: _____ FT.(BTOC)

Water Quality Equipment Info: See pg. 1

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 2

SAMPLE DATA

Date: 2-27-10 Time: 14:35	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: Low Flow	16.33	0.296	0.18	7.56	-161.9	3.80	3.42	Clear, No Odor

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
13:30	6.0	15.61	0.295	0.28	7.55	-155.8	4.20	3.42	Clear, No Odor
13:40	6.5	15.87	0.295	0.26	7.54	-151.3	3.80	3.42	" "
13:50	7.0	15.85	0.294	0.27	7.54	-155.8	3.80	3.42	" "
14:00	7.5	16.20	0.295	0.24	7.55	-154.7	3.80	3.42	" "
1410	8.0	16.25	0.295	0.21	7.56	-159.6	3.80	3.42	" "
1420	8.5	16.27	0.295	0.21	7.56	-160.3	3.80	3.42	" "
1430	9.0	16.33	0.296	0.17	7.55	-160.8	3.80	3.42	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B* ~~+ DISSOLVED~~	HNO_3	500 ml poly bottle	1 + ~~1 250~~ mm
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: pg 1 Purge Rate: 300 mL/min

Nitrate 0.0 mg/L
Nitrite 0.0 mg/L
Fe^{2+} 2.3 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: N/A

Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW13
Event:	Supplemental Investigation	Sample ID:	IR69-GW13-10A, MRD2-IR69-GW13-10A
Date:	3-1-10	Sampling Team:	N. Monroe, R. Fields
Weather:	Sunny, 53°F		

Water Quality Equipment Info: YSI 556 MPS SN: 04963

Total Depth:	13.0	FT.(BTOC)
Depth to water:	(-) 4.18	FT.(BTOC)
Water Column:	8.82	FT.
	(x) 0.163	GAL/FT.
Well Volume:	1.44	GAL.
Total Purge Vol.:	2.5	GAL.
Purge Device:	QED Bladder Pump	
Pump Inlet Depth:	8	FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

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SAMPLE DATA

Date: 3-1-10 Time: 1445 Method: Low Flow	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
	11.09	0.045	0.50	4.69	65.9	9.0	4.62	Clear, No odor

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1418	0.0	12.62	0.046	1.90	4.70	253	72.8	4.69	Cloudy, rust color No odor
1421	0.5	11.97	0.044	1.27	4.61	279.0	50.2	4.63	" " "
1424	0.75	11.53	0.044	0.98	4.61	160.3	28.8	4.62	Clear, No odor
1427	1.0	11.34	0.044	0.84	4.63	124.1	21.2	4.62	" "
1430	1.25	11.15	0.044	0.69	4.64	91.3	15.1	4.62	" "
1433	1.5	11.21	0.044	0.62	4.65	82.2	14.2	4.62	" "
1436	1.75	11.17	0.045	0.57	4.67	75.6	12.7	4.62	" "
1439	2.0	11.14	0.045	0.54	4.68	72.2	11.4	4.62	" "
1442	2.25	11.10	0.045	0.51	4.69	67.8	9.99	4.62	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1415 Purge Rate: 400 ml/min

Nitrate 0.0 mg/L

Nitrite 0.0 mg/L

Fe^{2+} 1.4 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: N/A

Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3/1/10
Weather: CLEAR SUNNY / ≈53°F

Project Number: 374082.FI.FI.69
Well ID: IR69-MW13IW
Sample ID: IR69-GW13IW-10A
Sampling Team: R. FIELDS / N. MONROE

Total Depth: 62 FT.(BTOC) HISTORICAL
Depth to water: (-) 32.57 FT.(BTOC)
Water Column: 29.43 FT.
(x) 0.163 GAL/FT.
Well Volume: ≈4.8 GAL.
Total Purge Vol.: GAL.

Purge Device: QED BLADDER PUMP

Pump Inlet Depth: ≈35 FT.(BTOC)

Water Quality Equipment Info: YSI 556 MPS #06039

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

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SAMPLE DATA

Date: 3/1/10 Time: 1520	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: Low-Flow	17.21	~~0.47~~ 0.285 RF	0.47	7.52	-141.0	2.50	33.02	CLEAR

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1420	≈0.4	17.34	0.281	3.24	7.10	-136.2	24.0	32.97	≈330 mL/min
1425	≈0.8	17.37	0.284	1.22	7.22	-159.7	15.0	32.97	
1430	≈1.2	17.33	0.285	0.63	7.37	-174.7	7.60	33.02	
1440	≈2	17.25	0.285	0.55	7.41	-183.0	6.70	33.02	
1455	≈3.3	17.18	0.284	0.46	7.47	-188.1	4.70	33.02	
1505	≈4.2	17.22	0.285	0.48	7.49	-189.6	3.40	33.02	
1510	≈4.6	17.23	0.285	0.51	7.49	-189.8	3.10	33.02	
1515	≈5	17.19	0.285	0.49	7.51	-190.8	2.70	33.02	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1415 Purge Rate: ≈330 mL/min

Nitrate 4.4 mg/L 1 x 4.4
Nitrite 0.033 mg/L 0.01 x 3.3
Fe^{2+} 2.5 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD | Duplicate ID No.:

Signature(s): [signature] 3/1/10

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	M IR69 · MW13DW
Event:	Supplemental Investigation	Sample ID:	IR69-MW13DW-10A
Date:	3-18-10	Sampling Team:	N. Nemmer
Weather:	Rain, 50°F		

Total Depth:	91.05	FT.(BTOC)
Depth to water:	(-) 31.25	FT.(BTOC)
Water Column:	59.80	FT.
	(x) 0.163	GAL/FT.
Well Volume:	9.75	GAL x 3 =
Total Purge Vol.:	15.0	GAL.
Purge Device:	QED Bladder Pump	
Pump Inlet Depth:	88.5	FT.(BTOC)

Water Quality Equipment Info: YSI: 556 MPS

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 3

SAMPLE DATA

Date: 3-18-10 / Time:	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: Low Flow								

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1005	0.0	22.90	0.121	6.91	8.40	-41.1	>1000	31.78	Cloudy, no odor
1010	0.5	22.81	0.110	5.34	8.36	-62.9	>1000	32.20	" "
1015	1.0	22.72	0.101	4.64	8.33	-83.7	>1000	32.69	" "
1020	1.5	22.50	0.098	2.82	8.32	-127.3	>1000	32.69	" "
1025	2.0	22.38	0.094	2.50	8.33	-149.1	>1000	32.52	" "
1030	2.5	22.18	0.093	1.55	8.32	-168.4	>1000	32.52	" "
1035	3.0	22.54	0.091	1.34	8.36	-172.1	922	32.61	" "
1040	3.5	21.96	0.089	1.16	8.30	-176.7	877	32.69	" "
1045	4.0	21.75	0.089	1.16	8.31	-178.1	908	32.69	" "
1050	4.5	21.51	0.089	1.16	8.33	-180.9	933	32.70	" "
1055	5.0	21.35	0.089	1.16	8.34	-183.4	877	32.70	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	~~2~~ 2
OC Pesticides/PCBs Method 3550B/8081A/8082	None	1-L Amber	~~2~~ 2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	~~None~~	~~1-L Amber~~	~~2~~
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	~~1 each~~
~~Perchlorate***~~	None	~~1-L Amber~~	~~1~~

Observations/Notes: Purge Start Time: 1000 Purge Rate: ≈500 ml/min

Nitrate ____ mg/L
Nitrite 0 mg/L
Fe^{2+} 0 mg/L

This well was developed before the well was grouted and casing pulled. Turbidity is elevated due to grouting removal and grouting activities.

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: N/A

Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3-18-10
Weather:

Project Number: 374082.FI.FI.69
Well ID: IR69-MW13DW
Sample ID: IR69-GW13DW-10A
Sampling Team: N. Manor

Total Depth: FT.(BTOC)
Depth to water: (-) FT.(BTOC)
Water Column: FT.
(x) GAL/FT.
Well Volume: GAL.
Total Purge Vol.: GAL.

Purge Device:

Pump Inlet Depth: FT.(BTOC)

Water Quality Equipment Info: PA

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 3

SAMPLE DATA

	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date: 3-18-10								
Time: 1200								
Method: Low Flow								

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		**constant**	**± 3%**	**± 10%**	**± 0.1**	**± 10 mv**	**<10**		
1100	5.5	21.55	0.090	0.94	8.31	-196.1	~~32.69~~ 632	32.69	Cloudy, No odor
1105	6.0	21.51	0.093	0.74	8.31	-194.8	608	32.69	" "
1110	6.5	21.46	0.095	0.73	8.32	-195.4	478	32.69	" "
1115	7.0	21.41	0.097	0.73	8.32	-196.3	353	32.69	" "
1120	7.5	21.34	0.099	0.78	8.32	-194.5	310	32.69	" "
1125	8.0	21.26	0.100	0.81	8.32	-192.3	275	32.69	" "
1130	8.5	21.23	0.101	0.79	8.33	-189.5	226	32.69	" "
1135	9.0	21.21	0.101	0.77	8.33	-189.0	202	32.69	" "
1140	9.5	21.20	0.101	0.76	8.33	-188.8	175	32.68	" "
1145	10.0	21.20	0.101	0.82	8.33	-185.9	153	32.68	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L-Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	~~2~~ 2
PCBs Method 8082	None	1-L Amber	~~2~~ 2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	~~None~~	~~1-L Amber~~	~~2~~
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	~~1 each~~ N/A
~~Perchlorate***~~	~~None~~	~~1-L Amber~~	~~1~~

Observations/Notes: Purge Start Time: Purge Rate: 500 mL/min

Nitrate_____ mg/L
Nitrite _____ mg/L
Fe^{2+} _____mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: N/A

Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3-18-10
Weather: Rain; 30°F

Project Number: 374082.FI.FI.69
Well ID: IR69-MW13DW
Sample ID: IR69-GW13DW-10A
Sampling Team: N. Manor

Total Depth: FT.(BTOC)
Depth to water: (-) FT.(BTOC)
Water Column: FT.
(x) GAL/FT.
Well Volume: GAL.
Total Purge Vol.: GAL.

Purge Device:

Pump Inlet Depth: FT.(BTOC)

Water Quality Equipment Info:

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 3 of 3

SAMPLE DATA

Date: 3-18-10 Time: 12 40 Method: Low Flow	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
	20.81	0.099	0.57	8.32	-186.7	83.5	32.67	Cloudy, no odor

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1150	10.5	21.11	0.101	0.89	8.33	-183.1	147	32.68	Cloudy, No odor
1155	11.0	21.04	0.101	0.98	8.33	-180.7	141	32.68	" "
1200	11.5	21.00	0.102	0.95	8.33	-179.6	131	32.68	" "
1205	12.0	20.95	0.101	0.84	8.33	-181.5	121	32.68	" "
1210	12.5	20.91	0.101	0.78	8.33	-183.6	111	32.68	" "
1215	13.0	20.87	0.100	0.72	8.33	-184.9	107	32.67	" "
1220	13.5	20.87	0.101	0.69	8.33	-184.6	103	32.67	" "
1225	14.0	20.81	0.100	0.65	8.33	-185.0	96.1	32.67	" "
1230	14.5	20.81	0.099	0.61	8.32	-185.9	89.0	32.67	" "
1235	15.0	20.81	0.099	0.58	8.32	-186.6	83.5	32.67	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	~~2~~ 2
PCBs Method 8082	None	1-L Amber	~~2~~ 2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	~~None~~	~~1-L Amber~~	~~2~~
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	~~1 each~~
~~Perchlorate***~~	~~None~~	~~1-L Amber~~	~~1~~

Observations/Notes: Purge Start Time: Purge Rate: 500 mL/min

Nitrate 0 mg/L
Nitrite 0 mg/L
Fe^{2+} 0 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A
Duplicate ID No.: N/A
Signature(s):

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW14
Event:	Supplemental Investigation	Sample ID:	IR69-GW14-10A, MR02-IR69-GW14-10A
Date:	2-28-10	Sampling Team:	N. Monroe, R. Fields
Weather:	Sunny, 45°F		J. High
Total Depth:	13.0 FT.(BTOC)	Water Quality Equipment Info:	YSI 556 S/N:
Depth to water:	(-) 5.05 FT.(BTOC)		
Water Column:	7.95 FT.		
	(x) 0.163 GAL/FT.		
Well Volume:	1.30 GAL.		
Total Purge Vol.:	2.25 GAL.		
Purge Device:	QED Bladder Pump		
Pump Inlet Depth:	8 FT.(BTOC)		

Initial PID @ B.Z. = 0.0ppm

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
(2)	0.163
4	0.653
6	1.469

page 1 of 1

SAMPLE DATA

Date: 2-28-10 Time: 11:30	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: Low Flow	9.75	0.063	1.93	4.95	248.1	8	5.16	Clear, No odor

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1055	≈0.0	10.20	0.060	8.88	5.21	201.1	40.	5.15	Clear, No odor
1058	≈0.5	10.05	0.061	8.28	5.09	208.4	55	5.15	" "
1101	≈0.875	9.90	0.063	3.73	5.03	224.4	40	5.17	" "
1104	≈1.125	9.84	0.063	2.70	5.00	232.7	42	5.16	" "
1107	≈1.25	9.82	0.063	2.27	4.99	235.4	45	5.16	" "
1110	≈1.50	9.80	0.063	2.00	4.97	242.6	12	5.16	" "
1113	≈1.75	9.77	0.063	2.00	4.98	244.8	10	5.16	" "
1116	≈2.25	9.76	0.063	1.95	4.95	247.7	8	5.17	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 10:45 Purge Rate:

Nitrate 5.0 mg/L

Nitrite 0.091 mg/L

Fe^{2+} 0.2 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: N/A

Signature(s): Nicole Monroe

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW14IW
Event:	Supplemental Investigation	Sample ID:	~~IR69-MW1~~ IR69-GW14IW-10A
Date:	2/28/10	Sampling Team:	JHGH/CLT
Weather:	mid40s sunny		

Water Quality Equipment Info: YSI 556 #05 D2720 PM #06339
HANNA Turbidimeter H198703 PM #06987

Total Depth:	60	FT.(BTOC)
Depth to water:	(-) 24.94	FT.(BTOC)
Water Column:	35.06	FT.
	(x) 0.163	GAL/FT.
Well Volume:	5.71	GAL. ×3=17.14gal
Total Purge Vol.:		GAL.
Purge Device:	QED Bladder	
Pump Inlet Depth:	52	FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 3

SAMPLE DATA

Date: / Time:	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method:	See page 3							

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1040	0.1	16.73	0.211	3.14	7.02	-115.1	71000	25.04	
1045	0.3	16.75	0.208	2.89	7.14	-127.3	160	25.45	
1050	0.6	16.65	0.207	3.69	7.20	-135.8	140	25.35	
1055	0.8	16.54	0.194	2.42	7.26	-150.5	120	25.30	
1100	1.1	16.61	0.191	1.60	7.30	-158.3	110	25.25	
1105	1.4	16.70	0.290	1.42	7.35	-167.4	80	25.28	
1110	1.8	17.02	0.290	1.06	7.39	-175.4	55.0	25.40	
1115	2.2	17.09	0.290	1.62	7.41	-176.6	40.0	25.40	
1120	2.5	17.16	0.289	1.58	7.43	-175.6	39.0	25.50	
1125	2.8	17.22	0.288	1.05	7.44	-176.8	36.0	25.40	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1035 Purge Rate: ~~0.3 mL~~ 0.3L/min

Nitrate Ø mg/L * Intake @ 52 A BTOC * 1105

Nitrite 0.099 mg/L 0.03

Fe^{2+} 1.75 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD NA Duplicate ID No.: NA

Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW14IW
Event:	Supplemental Investigation	Sample ID:	IR69-GW14IW-10A
Date:	2/28/10	Sampling Team:	JHIGH/KLT
Weather:	mid40s, cloudy		

Total Depth: _____ FT.(BTOC)
Depth to water: (-) _____ FT.(BTOC)
Water Column: _____ FT.
(x) _____ GAL/FT.
Well Volume: _____ GAL.
Total Purge Vol.: _____ GAL. see page 1

Purge Device: _____

Pump Inlet Depth: _____ FT.(BTOC)

Water Quality Equipment Info: See page 1

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 3

SAMPLE DATA

	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date:								
Time:								
Method:		See page 3						

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1135	3.3	17.17	0.191	0.80	7.44	-181.3	27.0	25.45	
1140	3.6	17.17	0.193	0.94	7.48	-182.2	24.0	25.45	
1145	4.0	17.32	0.201	0.94	7.32	-180.5	21.0	25.40	
1150	4.3	17.37	0.177	0.87	7.48	-184.2	21.0	25.45	
1155	4.7	17.27	0.186	0.82	7.50	-184.8	19.0	25.40	
1200	~~5.0~~ 4.9	17.07	0.175	0.81	7.50	-184.6	17.0	25.42	
1205	5.2	16.98	0.173	0.83	7.50	-184.2	16.0	25.40	
1210	5.5	16.90	0.183	0.81	7.50	-182.9	15.0	~~25~~.43 brnt	
1215	5.8	16.90	0.172	0.77	7.50	-182.9	16.0	~~25~~.42 brnt	
1220	6.1	16.89	0.171	0.85	7.50	-181.5	14.0	25.38	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: _____ Purge Rate: _____

Nitrate _____ mg/L
Nitrite _____ mg/L
Fe^{2+} _____ mg/L

See page 1

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD NA | Duplicate ID No.: NA

Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 2/28/10
Weather: mid40's sunny

Project Number: 374082.FI.FI.69
Well ID: IR69-MW14IW
Sample ID: IR69-GW14IW-10A
Sampling Team: JMGH/CLT

Total Depth: FT.(BTOC)
Depth to water: (-) FT.(BTOC)
Water Column: FT.
(x) GAL/FT.
Well Volume: GAL.
Total Purge Vol.: GAL.
Purge Device:
Pump Inlet Depth: FT.(BTOC)

Water Quality Equipment Info: see page 1

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 3 of 3

SAMPLE DATA

Date: 2/28/10 Time: 1245 Method: low flow	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
	16.96	0.186	0.94	7.49	-178.1	10.0	25.4	

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1225	6.4	16.89	0.185	0.92	7.50	-177	13.0	25.43	
1230	6.7	16.89	0.187	0.91	7.50	-176.6	12.0	25.38	
1235	7.0	16.96	0.185	0.93	7.49	-176.7	11.0	25.40	
1240	7.3	16.96	0.186	0.95	7.49	-176.9	11.0	25.40	
1245	7.6	16.96	0.186	0.94	7.49	-178.1	10.0	25.40	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: Purge Rate:

Nitrate _____ mg/L
Nitrite _____ mg/L
Fe^{2+} _____ mg/L

see page 1

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD NA
Duplicate ID No.: NA
Signature(s): Jeffrey M Hyde

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-GW14DW
Event:	Supplemental Investigation	Sample ID:	IR69-GW14DW-10A
Date:	2/28/10	Sampling Team:	R. FIELDS / N. MENREE / T. HIGH
Weather:	SUNNY ≈ 4		

Total Depth: 127 ~~28.68~~ FT.(BTOC)

Depth to water: (-) 28.68 FT.(BTOC) * USING PACKER @ ≈ 108' BTOC

Water Column: FT.

(x) GAL/FT. TD = 127 - 108

Well Volume: GAL. WC = 9'

Total Purge Vol.: GAL. WELL VOLUME = 1.5 GALS

Purge Device: QED BLADDER PUMP

Pump Inlet Depth: ~~≈108~~ 113 FT.(BTOC)
RF 2/28/10

Water Quality Equipment Info: YSI 556 MPS

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 1

SAMPLE DATA

Date: 2/28/10 Time: 1155	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: LOW FLOW	16.43	0.292	0.73	7.29	-139.2	7.26	28.65	CLEAR

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1054	0.2	14.98	0.232	4.91	7.46	45.9	7.35	28.70	DO ≈ ~~300~~ ml/MIN
1105	0.43	16.57	0.259	1.37	7.34	-135.9	4.28	28.85	≈ 300 ml/MIN
1116	≈1	16.46	0.319	1.12	7.35	-143.7	4.06	28.65	PRESSURE PACKER * STOP PURGING
1125	≈1.5	16.48	0.281	0.98	7.31	-140.2	2.15	28.65	≈ 250 ml/MIN
1140	≈1.75	16.12	0.287	0.84	7.29	-138.8	4.39	28.65	
1145	≈1.85	16.17	0.289	0.79	7.28	-139.1	6.25	28.65	
1150	≈2	16.26	0.290	0.76	7.28	-138.9	7.25	28.65	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1040 Purge Rate:

Nitrate 0 mg/L

Nitrite 0.06 mg/L

Fe^{2+} 2.4 mg/L

* PACKER PRESSURE @ 45 PSI. 1110 RECHARGE PACKER TO 60 PSI.

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD Duplicate ID No.:

Signature(s):

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW15
Event:	Supplemental Investigation	Sample ID:	IR69-GW15-10A
Date:	3-7-10	Sampling Team:	N. Monroe
Weather:	Sunny, 50°F		R. Fields

Water Quality Equipment Info: YSI: 556 MPS SN: 04963

Total Depth:	13.0	FT.(BTOC)
Depth to water:	(-) 2.13	FT.(BTOC) PID =
Water Column:	10.87	FT.
	(x) 0.163	GAL/FT.
Well Volume:	1.78	GAL. x3 = 5.32 gal
Total Purge Vol.:	4.5	GAL.
Purge Device:	QED Bladder Pump	
Pump Inlet Depth:	8	FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 2

SAMPLE DATA

Date: 3-7-10	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Time: 11:40								
Method: Low Flow		P 2						

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1040	0.25	11.17	0.323	1.22	5.31	54.0	310	2.32	rust color, cloudy, no odor
1043	0.5	11.05	0.326	1.12	5.37	43.0	200	2.32	" " "
1046	0.75	11.17	0.333	0.83	5.43	33.3	140	2.32	" " "
1049	1.0	11.16	0.335	0.80	5.38	32.2	140	2.32	" " "
1052	1.25	11.20	0.338	0.75	5.37	30.1	125	2.32	" " "
1055	1.5	11.23	0.341	0.69	5.37	27.9	110	2.33	" " "
1058	1.75	11.08	0.344	0.60	5.33	26.3	95.0	2.33	" " "
1101	2.0	10.91	0.354	0.52	5.38	23.2	65.0	2.33	" " "
1104	2.25	10.87	0.363	0.50	5.34	22.6	59.6	2.33	rust tint, clear, no odor
1107	2.5	10.91	0.372	0.47	5.34	21.4	53.6	2.33	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	~~None~~	~~1-L Amber~~	~~2~~ N/A
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	~~1 each~~ N/A
~~Perchlorate***~~	~~None~~	~~1-L Amber~~	~~1~~ N/A

Observations/Notes: Purge Start Time: 1035 Purge Rate: 300 ml/min

Nitrate 0.0 mg/L

Nitrite 0.198 mg/L 0.06 x 3.3

Fe^{2+} 4.4 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: N/A

Signature(s):

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW15-
Event:	Supplemental Investigation	Sample ID:	IR69-GW15-10A
Date:	3-7-10	Sampling Team:	N. Moore
Weather:	Sunny, 55°F		R. Fields

Water Quality Equipment Info: YSI: 556 MPS

Total Depth:		FT.(BTOC)
Depth to water:	(-)	FT.(BTOC)
Water Column:		FT.
	(x)	GAL/FT.
Well Volume:		GAL.
Total Purge Vol.:	4.5	GAL.
Purge Device:	QED Bladder Pump	
Pump Inlet Depth:	8	FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 2

SAMPLE DATA

	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date: 3-7-10								
Time: 1140								
Method: Low flow								

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1110	2.75	10.95	0.381	0.44	5.33	20.5	46.5	2.33	Rust Tint
1113	3.0	10.00	0.390	0.41	5.33	19.4	40.0	2.33	Clear, No odor
1116	3.25	11.15	0.401	0.39	5.33	18.1	35.0	2.33	" "
1119	3.5	11.29	0.413	0.35	5.32	17.0	31.0	2.33	" "
1122	3.75	11.34	0.421	0.33	5.33	16.9	25.0	2.33	" "
1125	4.00	11.29	0.427	0.31	5.30	16.0	23.0	2.33	" "
1128	4.25	11.05	0.433	0.29	5.34	15.0	22.0	2.33	" "
1131	4.5	10.89	0.438	0.28	5.33	13.5	23.0	2.33	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	~~2~~ 2
PCBs Method 8082	None	1-L Amber	~~2~~
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	~~20~~ 2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: P1 Purge Rate: 300 mL/min

Nitrate_____ mg/L

Nitrite _____ mg/L

Fe^{2+}_____mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: N/A

Signature(s):

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW15IDW
Event:	Supplemental Investigation	Sample ID:	IR69-GW15IDW-10A
Date:	3-6-10	Sampling Team:	N. Monroe
Weather:	Sunny, 50°F		

Total Depth:	60.0	FT.(BTOC)
Depth to water:	(-) 27.79	FT.(BTOC)
Water Column:	32.21	FT.
	(x) 0.163	GAL/FT.
Well Volume:	5.25	GAL.
Total Purge Vol.:		GAL.
Purge Device:	Bladder Pump (QED)	
Pump Inlet Depth:	52	FT.(BTOC)

Water Quality Equipment Info: YSI 556 MPS S/N: 04963

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 2

SAMPLE DATA

Date: 3-6-10 Time: P2 Method: Low Flow	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1042	0.5	17.13	0.727	0.82	7.09	-158.4	40.5	28.67	Cloudy, slight sulfur
1047	1.0	17.16	0.727	0.63	7.14	-165.7	26.7	28.64	" , No odor
1052	1.37	17.10	0.717	0.47	7.18	-169.1	13.3	28.70	" "
1057	1.75	17.15	0.704	0.38	7.21	-171.3	9.80	28.70	Clear, No odor
1102	2.25	17.17	0.703	0.33	7.21	-172.0	6.77	28.70	" "
1107	2.75	17.21	0.698	0.29	7.23	-173.0	6.40	28.70	" "
1112	3.25	17.20	0.692	0.26	7.24	-174.0	4.67	28.70	" "
1117	3.75	17.12	0.695	0.24	7.25	-174.6	4.41	28.70	" "
1122	4.25	17.17	0.694	0.22	7.26	-174.9	4.15	28.70	" "
1127	4.75	17.21	0.697	0.22	7.25	-175.5	3.30	28.70	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1035 Purge Rate: 400 ml/min

Nitrate 0.0 mg/L

Nitrite _____ mg/L 0.05 x 3.3

Fe^{2+} 4.2 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: N/A

Signature(s): Nikki Monroe

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3-6-10
Weather: P1

Project Number: 374082.FI.FI.69
Well ID: IR69-MW15IW
Sample ID: IR69-GW15IW-10A
Sampling Team: N. Monroe

Total Depth: ____ FT.(BTOC)
Depth to water: (-) ____ FT.(BTOC)
Water Column: ____ FT.
(x) P1 ____ GAL/FT.
Well Volume: ____ GAL.
Total Purge Vol.: ____ GAL.

Purge Device: P1

Pump Inlet Depth: 52 FT.(BTOC)

Water Quality Equipment Info: P1

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 2

SAMPLE DATA

Date: 3-6-10 Time: 1145 Method: Low Flow	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
	17.22	0.701	0.20	7.25	-175.9	2.48	28.70	Clear, No odor

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1132	5.25	17.22	0.701	0.20	7.26	-176.0	3.00	28.70	Clear, No odor

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	~~2~~ 2
PCBs Method 8082	None	1-L Amber	~~2~~ 2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	~~None~~	~~1-L Amber~~	~~2~~ NM
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	~~1 each~~ NM
~~Perchlorate***~~	~~None~~	~~1-L Amber~~	~~1~~ NM

Observations/Notes: Purge Start Time: 1035 Purge Rate: ~~300~~ mL/min

Nitrate_____ mg/L
Nitrite _____ mg/L
Fe^{2+} _____mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: N/A

Signature(s): [signature]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW15IW
Event:	Supplemental Investigation	Sample ID:	IR69-GW15IW-10H
Date:	3/18/10	Sampling Team:	JHIGHI CLT, REFIELD/KNL
Weather:	mid 50's, lt. rain		

Total Depth:	60	FT.(BTOC)	Water Quality Equipment Info:	YSI # 010730
Depth to water:	(-) 28.22	FT.(BTOC)		HANNA # 08987
Water Column:		FT.		
	(x)	GAL/FT.		
Well Volume:		GAL.		
Total Purge Vol.:	1.0	GAL.		
Purge Device:	QED Bladder Pump			
Pump Inlet Depth:	52	FT.(BTOC)		

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 1

SAMPLE DATA

Date: 3/18/10 Time: 1605	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: grab	17.41	0.838	0.37	7.33	-122.7	42	29.25	odor to water

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1555	0.25	17.13	0.851	1.40	7.47	-78.3	165	29.15	Stinky
1600	0.75	17.36	0.853	0.57	7.37	104.7	74.8	29.14	
1605	1.0	17.41	0.838	0.37	7.33	-122.7	42	29.25	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides/PCBs Method 3550B/8081A/8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1550 Purge Rate: ~250 mL/min

Nitrate NS mg/L
Nitrite NS mg/L
Fe^{2+} NS mg/L

+MICROBIAL SAMPLES ONLY: DHC, DSM, DHB, DSB, TOD, MOB
* filtered 1000 mL through filter, before adding RNA preservative

*Microbial Samples for 11IW, 11DW, ~~13IW~~, 13DW, ~~26IW~~ 15IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD NA Duplicate ID No.: NA

Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-GW15DW
Event:	Supplemental Investigation	Sample ID:	IR69-GW15DW-10A
Date:	3/7/10	Sampling Team:	R. FIELDS
Weather:	SUNNY / 53°F		

* PACKER @ ≈ 108' BTOC

Total Depth:	120	FT.(BTOC) HISTORICAL	Water Quality Equipment Info: YSI 556 MPS # 13968
Depth to water:	(-) 108	FT.(BTOC) PACKER	DTW = 31.38' BTOC HANNA # 09018
Water Column:	12	FT.	
	(x) 0.163	GAL/FT.	
Well Volume:	≈ 2	GAL.	
Total Purge Vol.:	6.2	GAL.	
Purge Device:	QED BLADDER PUMP SAMPLE PRO W/PACKER		
Pump Inlet Depth:	≈ 114	FT.(BTOC)	

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 2

SAMPLE DATA

Date: / Time:	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method:	(SEE PAGE 2)							

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1140	0.75	17.17	0.334	0.99	7.20	-138.6	680	31.30	cloudy
1145	≈ 1	17.22	0.333	0.75	7.40	-170.6	999	31.30	≈ 300 ml/min
1150	≈ 1.4	17.17	0.327	0.62	7.35	-161.8	999	31.30	cloudy
1155	≈ 1.8	17.14	0.326	0.56	7.40	-167.6	>999	31.30	
1200	≈ 2.2	17.10	0.338	0.61	7.40	-170.7	>999	31.30	
1205	≈ 2.6	17.34	0.329	0.67	7.38	-172.7	>999	31.30	
1210	≈ 3	17.27	0.334	0.46	7.38	-168.0	>999	31.30	cloudy
1215	≈ 3.4	17.31	0.331	0.47	7.39	-170.1	>999	31.30	FLOW RATE ≈ 300 ml/min
1225	≈ 4.2	17.28	0.318	0.46	7.38	-172.8	900	31.30	
1235	≈ 5	17.25	0.323	0.36	7.38	-174.3	1000	31.30	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1110 Purge Rate:

Nitrate ___ mg/L
Nitrite 0 mg/L
Fe^{2+} 3.4 mg/L

NOTE: TOOK ≈ 20 MINUTES TO GET THE FLOW ADJUSTED DUE TO WEAK BATTERY, HAD TO RUN COMPRESSOR OFF THE MULE.
PACKER PRESSURE @ 60 PSI.

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD | Duplicate ID No.:

Signature(s):

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3/7/10
Weather: SUNNY

Project Number: 374082.FI.FI.69
Well ID: IR69-GW15DW
Sample ID: IR69-GW15DW-10A
Sampling Team: R. FIELDS

Total Depth: SEE PAGE 1 FT.(BTOC)
Depth to water: (-) FT.(BTOC)
Water Column: FT.
(x) GAL/FT.
Well Volume: GAL.
Total Purge Vol.: 6.2 GAL.

Purge Device:

Pump Inlet Depth: FT.(BTOC)

Water Quality Equipment Info:

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 2

SAMPLE DATA

	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date: 3/7/10 Time: 1255 Method: Low-Flow	17.26	0.336	0.31	7.37	-173.2	1000	31.30	cloudy

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	±3%	±10%	±0.1	±10 mv	<10		
1240	5.4	17.25	0.332	0.36	7.36	-173.8	1000	31.30	cloudy
1245	5.8	17.21	0.335	0.31	7.37	-174.3	1000	31.30	
1250	6.2	17.21	0.337	0.33	7.37	-173.8	1000	31.30	cloudy

1250 TALKED TO C. LEBLANC REGARDING TURBIDITY READINGS
STABILIZED - SAMPLE. R. FIELDS 3 X 2 = 6 GALLONS
3-WELL VOLUMES PURGED.

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1110 Purge Rate:

Nitrate ____ mg/L
Nitrite 0 mg/L
Fe^{2+} 3.4 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD Duplicate ID No.:

Signature(s): [illegible] 3/7/10

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW15DW
Event:	Supplemental Investigation	Sample ID:	IR69-GW15DW-10A
Date:	3-15-10	Sampling Team:	N. Monroe
Weather:	Sunny, 60°F		

Water Quality Equipment Info: YSI 556 MPS

Total Depth:	120	FT.(BTOC)
Depth to water:	(-) 31.28	FT.(BTOC)
Water Column:	88.72	FT.
	(x) 0.163	GAL/FT.
Well Volume:	14.46	GAL.
Total Purge Vol.:	15	GAL.
Purge Device:	QED Bladder Pump	
Pump Inlet Depth:	115	FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 4

SAMPLE DATA

Date: 3-15-10 / Time:	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: Low Flow								

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1150	0.5	17.41	0.554	1.26	7.53	-105.0	188	31.80	Clear, No odor
1155	1.0	17.41	0.568	0.52	7.41	-124.7	230	31.65	" "
1200	1.5	17.45	0.566	0.54	7.42	-131.4	268	31.72	Cloudy, "
1205	1.75	17.40	0.565	0.51	7.43	-133.2	247	31.66	" "
1210	2.0	17.32	0.564	0.48	7.43	-135.3	224	31.60	" "
1215	2.25	17.49	0.562	0.36	7.43	-137.0	220	31.75	" "
1220	2.5	17.57	0.561	0.31	7.44	-138.2	188	31.78	" "
1225	3.0	17.51	0.561	0.32	7.44	-138.6	172	31.75	" "
1230	3.25	17.56	0.560	0.27	7.44	-139.0	172	31.75	" "
1235	3.75	17.55	0.559	0.25	7.43	-126.1	172	31.74	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	~~2~~ 2
PCBs Method 8082	None	1-L Amber	~~2~~ 2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	~~None~~	~~1-L Amber~~	~~2~~
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	~~1 each~~
~~Perchlorate***~~	~~None~~	~~1-L Amber~~	~~1~~

NM

Observations/Notes: Purge Start Time: 11 Purge Rate: 400 ml/min

Nitrate 0 mg/L
Nitrite 0 mg/L
Fe^{2+} 0 mg/L

Trouble getting pressure ample for depth, plus 1-40 ml vial (unpres.) for ECBC

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: N/A

Signature(s):

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3-15-10
Weather: P1

Project Number: 374082.FI.FI.69
Well ID: IR69-MW15DW
Sample ID: IR69-GW15DW-10A
Sampling Team: N. Monroe

Total Depth: FT.(BTOC)
Depth to water: (-) FT.(BTOC)
Water Column: FT.
(x) GAL/FT.
Well Volume: GAL.
Total Purge Vol.: GAL.

Purge Device:

Pump Inlet Depth: FT.(BTOC)

Water Quality Equipment Info: P1

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 4

SAMPLE DATA

Date: 3-15-10	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Time:								
Method: Low Flow								

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1240	4.25	17.54	0.559	0.24	7.42	-115.4	172	31.74	Cloudy, No odor
1245	4.75	17.53	0.558	0.23	7.40	-102.5	172	31.73	" "
1250	5.25	17.60	0.557	0.22	7.42	-98.9	165	31.69	" "
1255	5.75	17.66	0.556	0.22	7.44	-95.7	159	31.65	" "
1300	6.25	17.63	0.556	0.23	7.40	-93.6	148	31.65	" "
1305	6.75	17.54	0.554	0.23	7.41	-93.3	137	31.65	" "
1310	7.25	17.57	0.552	0.24	7.42	-92.6	128	31.65	" "
1315	7.75	17.59	0.552	0.22	7.44	-92.3	119	31.65	" "
1320	8.25	17.62	0.551	0.21	7.46	-91.7	109	31.65	" "
1325	8.75	17.64	0.551	0.20	7.47	-91.4	98.3	31.65	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: Purge Rate:

Nitrate_____ mg/L

Nitrite _____ mg/L

Fe^{2+}_____mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: N/A

Signature(s):

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW15DW
Event:	Supplemental Investigation	Sample ID:	IR69-GW15DW-10A
Date:	3-15-10	Sampling Team:	N. Manoe
Weather:	P1		D. Miller

Total Depth: _____ FT.(BTOC)
Depth to water: (-) _____ FT.(BTOC)
Water Column: _____ FT.
(x) _____ GAL/FT.
Well Volume: _____ GAL.
Total Purge Vol.: _____ GAL.

Purge Device: _____

Pump Inlet Depth: _____ FT.(BTOC)

Water Quality Equipment Info: P1

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 3 of 4

SAMPLE DATA

Date: 3-15-10 / Time:	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: Low Flow								

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		**constant**	**± 3%**	**± 10%**	**± 0.1**	**± 10 mv**	**<10**		
1330	9.25	17.61	0.552	0.20	7.41	-81.5	109	31.70	Cloudy, Nonodor
1335	9.75	17.67	0.552	0.20	7.40	-80.0	109	31.65	" "
1340	10.25	17.73	0.552	0.19	7.39	-79.5	112	31.65	" "
1345	10.75	17.78	0.552	0.19	7.38	-78.3	114	31.65	" "
1350	11.25	17.75	0.554	0.20	7.38	-79.2	115	31.65	" "
1355	11.75	17.63	0.552	0.20	7.43	-79.3	116	31.65	" "
1400	12.25	17.76	0.551	0.20	7.37	-77.8	123	31.65	" "
1405	12.50	17.75	0.555	3.29*	7.35	-77.9	130	31.65	" "
1410	12.75	17.72	0.552	8.79*	7.38	-78.5	132	31.67	" "
1415	13.00	17.64	0.552	9.01*	7.37	-78.4	129	31.67	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: _____ Purge Rate: _____

Nitrate_____ mg/L
Nitrite _____ mg/L
Fe^{2+}_____mg/L

* Bubbles in water, lowered pressure

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A | Duplicate ID No.: N/A

Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3-15-10
Weather: P1

Project Number: 374082.FI.FI.69
Well ID: IR69-MW15DW-~~10mm~~
Sample ID: IR69-GW15DW-10A
Sampling Team: N. Monroe, D. Miller

Total Depth: ____ FT.(BTOC)
Depth to water: (-) ____ FT.(BTOC)
Water Column: P1 FT.
GAL/FT.
Well Volume: P1 GAL.
Total Purge Vol.: ____ GAL.

Purge Device: P1

Pump Inlet Depth: ____ FT.(BTOC)

Water Quality Equipment Info: P1

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 4 of 4

SAMPLE DATA

Date: 3-15-10 Time: 15:15 Method: Low Flow	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
14:20	13.25	17.59	0.551	NM	7.38	-77.8	138	31.67	cloudy NO odor
14:25	13.50	17.62	0.551	NM	7.33	-75.7	133	31.68	" "
14:30	13.75	17.66	0.549	NM	7.27	-70.5	132	31.68	" "
14:35	14.00	17.70	0.551	NM	7.33	-72.8	134	31.68	" "
14:40	14.25	17.71	0.552	NM	7.34	-75.6	131	31.68	" "
14:45	14.50	17.75	0.551	NM	7.37	-74.5	132	31.69	" "
14:50	14.75	17.68	0.550	NM	7.32	-72.1	133	31.69	" "
14:55	15.00	17.64	0.550	NM	7.37	-72.9	137	31.69	" "

NM = Not Measured

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	~~None~~	~~1-L Amber~~	2
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	1 each
~~Perchlorate***~~	~~None~~	~~1-L Amber~~	1

Observations/Notes: Purge Start Time: ____ Purge Rate: ____

Nitrate ____ mg/L
Nitrite ____ mg/L
Fe^{2+} ____ mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: N/A

Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-GW15BCH
Event:	Supplemental Investigation	Sample ID:	IR69-GW15BCH-10A
Date:	3/14/10	Sampling Team:	R. FIELDS
Weather:	SUNNY - PARTLY CLOUDY / ≈ 60°F		

Total Depth: 230 FT.(BTOC)

Depth to water: (-) 29.20 FT.(BTOC) * PACKER ~~PRES~~ @ = 215' BTOC

Water Column: * 15 FT. WC = 230 - 215 = 15'

(x) 0.163 GAL/FT. 15 * 0.163 = 2.4

Well Volume: ≈ 2.4 GAL.

Total Purge Vol.: ≈ 4.8 GAL.

Purge Device: QED BLADDER PUMP (SAMPLE PRO). #13145

Pump Inlet Depth: ≈ 223 FT.(BTOC)

Water Quality Equipment Info: YSI 556 MPS #7619
HANNA # 09010

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 1

SAMPLE DATA

Date: 3/14/10 Time: 1245	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: LOW-FLOW	17.55	0.520	0.59	7.71	-60.1	2.51	29.20	CLEAR

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1140	0.5	17.44	0.520	2.52	7.59	72.5	12.9	29.20	FLOW RATE = 300 mL/MIN
1155	1.25	17.76	0.521	1.07	7.65	-0.5	5.05	29.20	CLEAR
1205	≈ 2	17.72	0.522	1.03	7.66	-15.8	3.33	29.20	FLOW RATE = 300 mL/MIN
1210	≈ 2.4	17.64	0.522	0.86	7.67	-30.2	3.16	29.20	CLEAR
1215	≈ 2.8	17.54	0.521	0.79	7.68	-36.6	2.58	29.20	CLEAR
1220	≈ 3.2	17.57	0.520	0.75	7.68	-43.7	2.71	29.20	FLOW RATE = 300 mL/MIN
1225	≈ 3.6	17.76	0.520	0.72	7.69	-47.9	2.69	29.20	CLEAR
1230	≈ 4	17.54	0.520	0.62	7.70	-55.2	2.53	29.20	CLEAR
1235	≈ 4.4	17.54	0.520	0.59	7.71	-58.2	2.55	29.20	CLEAR
1240	≈ 4.8	17.54	0.520	0.58	7.71	-59.5	2.41	29.20	FLOW RATE

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1130 Purge Rate: ≈ 300 mL/MIN

Nitrate 0 mg/L

Nitrite 0 mg/L * PACKER PRESSURE @ 100 PSI.

Fe^{2+} 0 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13.

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD Duplicate ID No.:

Signature(s): [signature] 3/14/10

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW19IW
Event:	Supplemental Investigation	Sample ID:	IR69-GW19IW-10A
Date:	3-16-10	Sampling Team:	N. Meagre
Weather:	Cloudy, 50°F		

Total Depth: 73.0 FT.(BTOC) per table
Depth to water: (-) 30.04 FT.(BTOC) PID reads 0.0 ppm at well and B.Z.
Water Column: 42.96 FT.
(x) 0.163 GAL/FT.
Well Volume: 7.00 GAL. x 3 = 21
Total Purge Vol.: 7.0 GAL.
Purge Device: QED Bladder Pump
Pump Inlet Depth: ~~71.5~~ 72.0 FT.(BTOC)

2.15
32.19'

Water Quality Equipment Info: YSI: 556 MPS S/N:

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 2

SAMPLE DATA

Date: 3-16-10	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Time:								
Method: Low Flow	P2							

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
0955	0.0	15.16	0.308	5.85	7.25	151.7	16.6	30.50	Clear, No odor
1000	0.3	17.18	0.287	1.77	7.65	136.9	23.8	31.75	" "
1005	1.0	17.37	0.285	1.28	7.81	131.9	20.2	33.00	" "
1010	1.25	17.32	0.283	0.95	7.87	127.8	22.7	33.15	" "
1015	1.75	17.33	0.279	0.79	7.91	101.1	29.4	33.23	" "
1020	2.0	17.34	0.276	0.64	7.90	61.2	37.2	33.31	" "
1025	2.5	17.35	0.271	0.47	7.90	-79.5	36.3	33.18	" "
1030	2.75	17.33	0.270	0.46	7.91	-110.1	35.7	33.18	" "
1035	3.25	17.31	0.269	0.45	7.91	-128.0	31.8	33.05	" "
1040	3.5	17.32	0.268	0.45	7.92	-137.4	30.1	33.04	" "
1045	3.75	17.33	0.268	0.45	7.93	-141.6	28.6	33.03	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	~~2~~
OC Pesticides/PCBs Method 3550B/8081A/8082	None	1-L Amber	~~2~~ 1
~~Expl.Resid., PETN, Nitroglycerine, Method 8330***~~	~~None~~	~~1-L Amber~~	~~2~~
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	~~1 each~~
~~Perchlorate***~~	~~None~~	~~1-L Amber~~	~~1~~

Observations/Notes: Purge Start Time: 0955 Purge Rate: 300 mL/min
Nitrate 0.0 mg/L
Nitrite 0 mg/L
Fe^{2+} 0 mg/L
Well Tag indicates: TD = 74
Top of Screen = 71.5

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: N/A
Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW19IW
Event:	Supplemental Investigation	Sample ID:	IR69-GW19IW-10A
Date:	3-16-10	Sampling Team:	N. Monroe
Weather:	pt		

Total Depth: _____ FT.(BTOC)

Depth to water: (-) _____ FT.(BTOC)

Water Column: _____ FT.

(x) _____ GAL/FT.

Well Volume: _____ GAL.

Total Purge Vol.: _____ GAL.

Purge Device: pt

Pump Inlet Depth: _____ FT.(BTOC)

Water Quality Equipment Info: pt

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 2

SAMPLE DATA

Date: 3-16-10 Time: 1130	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: Low Flow	17.37	0.266	0.25	7.97	-164.0	27.1	32.96	Clear, no odor

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1050	4.25	17.34	0.267	0.39	7.93	-149.0	29.1	33.04	Clear, No odor
1055	4.75	17.33	0.267	0.32	7.95	-154.2	29.3	33.03	" "
1100	5.25	17.32	0.266	0.29	7.95	-157.2	27.7	33.03	" "
1105	5.75	17.33	0.266	0.27	7.95	-159.4	28.0	33.03	" "
1110	6.25	17.34	0.266	0.26	7.95	-161.4	28.2	33.03	" "
1115	6.50	17.34	0.266	0.26	7.97	-162.6	27.6	32.98	" "
1120	7.00	17.37	0.266	0.25	7.97	-163.3	26.7	32.97	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides/PCBs Method 3550B/8081A/8082	None	1-L Amber	2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	None	1-L Amber	~~2~~
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	250 ml poly bottle	~~1 each~~
~~Perchlorate***~~	~~None~~	~~1-L Amber~~	~~1~~

Observations/Notes: Purge Start Time: 0955 Purge Rate: 300 mL/min

Nitrate_____ mg/L

Nitrite _____ mg/L

Fe^{2+}_____ mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD N/A Duplicate ID No.: N/A

Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-GW19UW
Event:	Supplemental Investigation	Sample ID:	
Date:	3/16/2010	Sampling Team:	D. Miller
Weather:	Cool		

Total Depth: 46.00 FT.(BTOC)
Depth to water: (-) 30.08 FT.(BTOC)
Water Column: 15.92 FT.
(x) 0.163 GAL/FT.
Well Volume: ~~1.16~~ 2.59 L.
Total Purge Vol.: 44.5 ~~GAL.~~ Liters
Purge Device: QED Bladder Pump
Pump Inlet Depth: 41 FT.(BTOC)

Water Quality Equipment Info: YSI #13968

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 2

SAMPLE DATA

Date: 3/16/10 Time: 12:00	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method:								

FIELD PARAMETERS

Time	Purge Vol. L ~~(gals)~~	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
10:08	2	16.97	0.152	2.28	6.39	-32.6	284	31.10	orange color - No odor
10:13	4.5	17.00	0.080	8.54	6.59	-49.9	169	31.20	" "
10:18	7.0	17.24	0.151	3.13	6.54	-61.4	141	31.30	" "
10:23	9.5	17.22	0.151	1.21	6.54	-71.5	132	31.40	Light orange No odor
10:28	12.0	17.29	0.151	0.84	6.60	-99.6	108	31.50	Clear, No odor
10:33	14.5	17.28	0.152	0.73	6.63	-104.5	94.8	31.60	" "
10:38	17.0	17.27	0.151	0.64	6.65	-113.3	76.9	31.65	" "
10:43	19.5	17.28	0.152	0.57	6.65	-115.4	68.4	31.70	" "
10:48	22.0	17.28	0.151	0.50	6.67	-119.1	61.7	31.53	" "
10:53	24.5	17.30	0.151	0.47	6.67	-120.6	61.0	31.54	" "
10:58	27.0	17.29	0.152	0.40	6.68	-122.9	52.8	31.56	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides/PCBs Method 3550B/8081A/8082	None	1-L Amber	2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	~~None~~	~~1-L Amber~~	~~2~~
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	~~1 each~~
~~Perchlorate***~~	~~None~~	~~1-L Amber~~	~~1~~

Observations/Notes: Purge Start Time: 10:08 Purge Rate: .5 L/M

Nitrate 0 mg/L
Nitrite 0 mg/L
Fe^{2+} 0 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD NA Duplicate ID No.: NA

Signature(s): D. Miller

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3/16/2010
Weather:

Project Number: 374082.FI.FI.69
Well ID: IR69-GW19UW
Sample ID: IR69-GW19UW-10A
Sampling Team: D. Miller

Total Depth: FT.(BTOC)
Depth to water: (-) 8.01 FT.(BTOC)
Water Column: FT.
(x) GAL/FT.
Well Volume: GAL.
Total Purge Vol.: GAL.

Purge Device: OKD Bladder Pump

Pump Inlet Depth: 41 FT.(BTOC)

Water Quality Equipment Info: YSI # 13968

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 2

SAMPLE DATA

Date: / Time: 12:00	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method:								

FIELD PARAMETERS

Time	Purge Vol. L ~~(gals)~~	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
11:03	29.5	17.28	0.152	0.50	6.69	-123.4	51.8	31.58	clear, no odor
11:08	32.0	17.27	0.154	0.43	6.72	-127.9	39.8	31.55	" "
11:13	34.5	17.27	0.155	0.40	6.73	-128.3	38.7	31.56	" "
11:18	37.0	17.24	0.159	0.41	6.76	-131.6	37.3	31.57	" "
11:23	39.5	17.26	0.160	0.41	6.78	-134.9	29.8	31.57	" "
11:28	42.0	17.26	0.162	0.29	6.79	-137.0	27.0	31.56	" "
11:33	44.5	17.29	0.161	0.46	6.75	-137.3	26.9	31.56	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides/PCBs Method 3550B/8081A/8082	None	1-L Amber	2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	~~None~~	~~1-L Amber~~	~~2~~
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	1 each
~~Perchlorate***~~	~~None~~	~~1-L Amber~~	~~1~~

Observations/Notes: Purge Start Time: Purge Rate:

Nitrate_____ mg/L

Nitrite _____ mg/L

Fe^{2+}_____mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD | Duplicate ID No.:

Signature(s):

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-GW26IW
Event:	Supplemental Investigation	Sample ID:	IR69-GW26IW-10A
Date:	3/16/10	Sampling Team:	R. FIGUS
Weather:	CLOUDY-OVERCAST / ≈50°F		

Total Depth: 50 FT. ~~(BTOC)~~ BGS (49.1' BGS MEASURED)

Depth to water: (-) 30.35 FT. ~~(BTOC)~~ BGS

Water Column: 19.65 19.5 FT.

(x) 0.163 GAL/FT.

Well Volume: ≈3.2 GAL.

Total Purge Vol.: ≈9.7 GAL.

Purge Device: QED SAMPLE PRO BLADDER PUMP #10228

Pump Inlet Depth: ≈46.6 FT. ~~(BTOC)~~ BGS (2.5' FROM BOTTOM)

Water Quality Equipment Info: YSI 556 MPS #7619 HANNA #09915

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 3

SAMPLE DATA

Date: 3/16/10 Time:	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: LOW-FLOW	SEE PAGE #3 OF 3							

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1000	≈0.05	16.97	0.326	1.69	7.25	25.9	75	≈31.10	SLIGHTLY CLOUDY
1005	≈0.35	17.61	0.332	0.98	7.54	19.8	130	≈31.25	FLOW RATE = 200 ml/min
1010	≈0.6	17.78	0.336	0.74	7.69	11.8	130	≈31.35	
1020	≈1.1	17.80	0.338	0.61	7.83	2.6	130	≈31.60	LOWER FLOW RATE
1030	≈1.5	17.65	0.331	0.38	7.95	-20.5	120	≈31.90	FLOW RATE = 150 ml/min
1040	≈1.9	17.56	0.308	0.32	8.05	-68.5	100	≈31.90	FLOW RATE = 150 ml/min
1050	≈2.3	17.66	0.305	0.30	8.09	-76.3	65.0	≈31.85	CLEARING
1100	≈2.7	17.66	0.298	0.26	8.12	-97.6	40.0	≈31.85	
1110	≈3.1	17.60	0.293	0.21	8.15	-109.5	23.0	≈31.85	FLOW RATE = 150 ml/min
1120	≈3.5	17.62	0.290	0.20	8.16	-109.8	17.0	≈31.85	
1130	≈3.9	17.58	0.288	0.20	8.18	-114.9	15.0	≈31.85	FLOW RATE = 150 ml/min

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides/PCBs Method 3550B/8081A/8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1000 Purge Rate: ≈150 ml/min

Nitrate 0 mg/L

Nitrite 0.033 mg/L

Fe^{2+} 0 mg/L

NOTE: WELL WAS TAGGED TOTAL DEPTH - POST SAMPLING

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD Duplicate ID No.:

Signature(s): [signature] 3/16/10

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-GW26IW
Event:	Supplemental Investigation	Sample ID:	IR69-GW26IW-10A
Date:	3/16/10	Sampling Team:	R. FIELDS
Weather:	SEE PAGE #1		

Total Depth:	SEE PAGE #1	FT.(BTOC)	Water Quality Equipment Info:	SEE PAGE #1
Depth to water:	(-)	FT.(BTOC)		
Water Column:		FT.		
	(x)	GAL/FT.		
Well Volume:		GAL.		
Total Purge Vol.:		GAL.		
Purge Device:	SEE PAGE #1			
Pump Inlet Depth:	≈46.6	FT.~~(BTOC)~~ BGS		

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 3

SAMPLE DATA

Date: 3/16/10 Time:	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: LOW-FLOW	SEE PAGE #3 of 3							

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1140	≈4.3	17.58	0.286	0.18	8.19	-117.7	11.0	≈31.85	CLEAR
1150	≈4.7	17.59	0.284	0.15	8.20	-125.2	10.0	≈31.85	FLOW RATE ≈150 mL/min
1200	≈5.1	17.53	0.283	0.14	8.20	-114.6	9.00	≈31.85	CLEAR
1215	≈5.7	17.55	0.281	0.12	8.22	-126.1	8.80	≈31.85	CLEAR
1230	≈6.3	17.71	0.279	0.11	8.22	-125.3	7.60	≈31.85	CLEAR
1245	≈6.9	17.52	0.279	0.09	8.22	-126.0	7.00	≈31.85	CLEAR
1255	≈7.3	17.54	0.279	0.10	8.22	-123.9	6.90	≈31.85	FLOWRATE ≈150 mL/min
1305	≈7.7	17.50	0.279	0.10	8.22	-129.4	6.80	≈31.85	
1315	≈8.1	17.60	0.278	0.10	8.22	-131.4	6.80	≈31.85	
1325	≈8.5	17.55	0.277	0.10	8.22	-133.7	6.50	≈31.85	
1335	≈8.9	17.54	0.277	0.09	8.22	-132.5	6.50	≈31.85	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides/PCBs Method 3550B/8081A/8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1000 Purge Rate: ≈150mL/min

Nitrate SEE PAGE #1 mg/L

Nitrite SEE PAGE #1 mg/L

Fe^{2+} SEE PAGE #1 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD | Duplicate ID No.:

Signature(s): [signature] 3/16/10

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3/16/10
Weather: SEE PAGE #1

Project Number: 374082.FI.FI.69
Well ID: IR69-GW26IW
Sample ID: IR69-GW26IW-10A
Sampling Team: R. FIELDS

Water Quality Equipment Info: SEE PAGE #1

Total Depth: SEE PAGE #1 FT.(BTOC)
Depth to water: (-) FT.(BTOC)
Water Column: FT.
(x) GAL/FT.
Well Volume: GAL.
Total Purge Vol.: GAL.

Purge Device: SEE PAGE #1

Pump Inlet Depth: ≈ 46.6 FT.~~(BTOC)~~ BGS

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 3 of 3

SAMPLE DATA

	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date: 3/16/10 Time: 1400 Method: LOW-FLOW	17.61	0.276	0.08	8.23	-135.5	5.60	≈ 31.85	

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1340	≈ 9.1	17.55	0.276	0.11	8.23	-136.3	6.50	≈ 31.85	150 ml/MIN
1345	≈ 9.3	17.59	0.276	0.09	8.22	-137.7	6.10	≈ 31.85	
1350	≈ 9.5	17.60	0.276	0.09	8.22	-135.6	5.80	≈ 31.85	
1355	≈ 9.7	17.61	0.276	0.09	8.22	-134.4	5.70	≈ 31.85	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1000 Purge Rate: ≈ 150 ml/MIN

Nitrate SEE PAGE #1 mg/L
Nitrite mg/L
Fe^{2+} mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD Duplicate ID No.:

Signature(s): 3/16/10

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-GW26DW
Event:	Supplemental Investigation	Sample ID:	IR69-GW26DW-10A
Date:	3-16-10	Sampling Team:	G. Little / CLT
Weather:	50°F overcast		

Total Depth:	91	FT.(BTOC)	
Depth to water:	(-) 34.22	FT.(BTOC)	59%
Water Column:	56.78	FT.	2.84
	(x) .163	GAL/FT.	34.22
Well Volume:	9.3	GAL.	37.06
Total Purge Vol.:	9.75	GAL.	
Purge Device:	Bladder Pump		
Pump Inlet Depth:	89	FT.(BTOC)	

Water Quality Equipment Info: YSI 556, Hanna

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 2

SAMPLE DATA

	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date: / Time:								
Method:	See page 2							

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1010	0.25	17.77	0.587	6.40	8.40	82.8	240	34.03	
1020	0.75	18.85	.602	8.28	8.10	78.6	180	34.07	
1030	1.0	18.94	.589	8.48	8.06	76.2	95	34.05	
1040	2.25	19.01	.572	8.69	8.01	71.9	50	33.89	
1050	3.25	19.06	.560	8.34	8.00	68.7	35	33.91	
1100	4.25	18.86	.561	7.88	8.04	63.3	30	34.15	
1110	5.00	18.74	.559	8.11	8.06	58.6	24	34.10	
1120	5.75	18.63	.560	8.13	8.08	55.3	19	34.25	
1130	6.50	18.77	.545	6.10	8.07	50.1	16	34.51	
1140	7.00	18.74	.548	4.04	8.02	37.7	15	34.58	
1150	7.75	18.66	.547	3.32	8.01	26.6	13	34.45	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides/PCBs Method 3550B/8081A/8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

stop

Observations/Notes: Purge Start Time: 0957 Purge Rate: 0.35 L/min

Nitrate_____ mg/L

Nitrite _____ mg/L

Fe^{2+}_____mg/L

Notes: Small air bubbles coming into flow cell causing high DO.

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD | Duplicate ID No.:

Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR-OW26DW
Event:	Supplemental Investigation	Sample ID:	IR-GW76DW-10A
Date:		Sampling Team:	
Weather:			

Total Depth:		FT.(BTOC)	Water Quality Equipment Info:
Depth to water:	(-)	FT.(BTOC)	
Water Column:		FT.	
	(x)	GAL/FT.	
Well Volume:		GAL.	
Total Purge Vol.:		GAL.	
Purge Device:			
Pump Inlet Depth:		FT.(BTOC)	

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 2

SAMPLE DATA

Date: 3-16-10 Time: 1230	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: Bladder Pump	18.72	0.549	2.24	7.99	-17.4	15	34.44	

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1200	8.25	18.57	.545	2.64	8.00	14.1	13	34.43	
1210	8.75	18.56	.547	2.43	7.99	0.0	12	34.62	
1220	9.25	18.66	.546	2.51	"	-10.6	14	34.53	
1230	9.75	18.72	.549	2.24	"	-17.4	15	34.44	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides/PCBs Method 3550B/8081A/8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: Purge Rate:

Nitrate 0 mg/L
Nitrite 0 mg/L
Fe^{2+} 0 mg/L

1230 - Collected IR69-GW76DW-10A for 8260, 8270, MEE, TOC, CNNAS, TAL metals, sulfide, OP pesticides, + OC pesticides + PCBs.

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD Duplicate ID No.:

Signature(s): Gordon [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW27IW
Event:	Supplemental Investigation	Sample ID:	IR69-GW27IW-10A
Date:	3/6/10	Sampling Team:	JHGH/KLT
Weather:	mid 50's, sunny		

Water Quality Equipment Info: YSI 556 Pine # 06309; Turbidimeter Pine # 0995; SS Inst water level meter # 57553 (Pine)

Total Depth:	40.0	FT.(BTOC)
Depth to water:	(-) 23.40	FT.(BTOC)
Water Column:	16.6	FT. 5% = 0.83 ft.
	(x) 0.163	GAL/FT.
Well Volume:	2.7	GAL x 3 = 8.114 gallons
Total Purge Vol.:	8.3	GAL.
Purge Device:	QED Bladder Pump	
Pump Inlet Depth:	37	FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 2

SAMPLE DATA

Date: 3/6/10 Time: 1415	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: low flow	17.55	0.247	0.68	7.35	-93.4	1.90	28.43	Clear

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1305	0.25	17.12	0.407	2.36	7.25	110.5	65.0	25.55	flow ~ 0.3 L/min
1310	0.50	17.16	0.206	2.12	7.25	81.2	80.0	25.65	flow ~ 0.5 L/min
1315	1.1	17.41	0.220	2.00	7.25	45.4	55.0	26.80	
1320	2.0	17.41	0.195	1.53	7.26	-15.1	45.0	27.36	
1325	2.6	17.46	0.193	1.56	7.31	-46.0	32.0	27.89	
1330	3.2	17.51	0.405	1.31	7.23	-56.9	21.0	28.17	
1335	3.8	17.50	0.403	1.25	7.28	-68.2	15.0	28.25	
1340	4.4	17.54	0.399	1.01	7.31	-80.0	7.00	28.35	
1345	4.9	17.54	0.398	1.00	7.31	-83.7	5.00	28.40	
1350	5.5	17.57	0.395	0.78	7.32	-87.4	3.60	28.31	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1300 Purge Rate: ~500 ml/min

Nitrate 0 mg/L

Nitrite 0 mg/L

Fe^{2+} 0.5 mg/L

1310: Water level has dropped > 5% initial water column, increased flow rate to purge 3 well volumes. Intake increased to 30 ft btoc.

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD NA Duplicate ID No.: NA

Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3/6/10
Weather: mid 50's Sunny

Project Number: 374082 FI.FI.69
Well ID: IR69-MW27IW
Sample ID: IR69-GW27IW-10A1
Sampling Team: JHart/ICT

Total Depth: ____ FT.(BTOC)
Depth to water: (-) ____ FT.(BTOC)
Water Column: ____ FT.
(x) ____ GAL/FT.
Well Volume: ____ GAL.
Total Purge Vol.: ____ GAL.
Purge Device: see page 1
Pump Inlet Depth: ____ FT.(BTOC)

Water Quality Equipment Info: see 1

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 2

SAMPLE DATA

Date: / Time: / Method:	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
	see page 1							

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	~10		
1355	6.2	17.57	0.393	0.76	7.33	-87.7	2.90	28.35	
1400	6.7	17.61	0.392	0.75	7.34	-91.2	2.80	28.47	~0.5ppm
1405	7.3	17.58	0.299	0.71	7.30	-89.9	2.4	28.41	
1410	7.8	17.59	0.274	0.69	7.35	-92.3	2.60	28.54	
1415	8.3	17.55	0.247	0.68	7.35	-93.4	1.90	28.43	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: ____ Purge Rate: ____

Nitrate ____ mg/L
Nitrite ____ mg/L
Fe^{2+} ____ mg/L
see page 1

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW
**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,
***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD NA
Duplicate ID No.: NA
Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW27DW-10A
Event:	Supplemental Investigation	Sample ID:	IR69-GW27DW-10A
Date:	3/6/10	Sampling Team:	JH/GH/CLT
Weather:	mid 50's sunny		

Water Quality Equipment Info: YSI 556 Pice #
HANNA Turbidimeter Pice #
Solinst Water Level Meter Pice #5755

Total Depth:	75	FT.(BTOC)
Depth to water:	(-) 27.28	FT.(BTOC)
Water Column:	47.72	FT. 5% = 2.39ft
	(x) 0.163	GAL/FT.
Well Volume:	7.78	GAL. x3 = 23.34 gal
Total Purge Vol.:		GAL.
Purge Device:	QED Bladder Pump =	
Pump Inlet Depth:	72	FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 1

SAMPLE DATA

Date: 3/6/10 Time: 1650	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: low flow	17.38	0.200	0.43	7.69	-179.4	4.20	27.55	

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1530	~~0.25~~ 0.5	16.94	0.308	3.33	8.27	-37.9	55.0	27.40	
1540	~~0.75~~ 0.75	17.29	0.175	1.60	7.97	-102.9	33.0	27.45	
1550	~~1.00~~ 1.4	17.18	0.187	1.02	7.73	-152.2	15.0	27.43	Flow rate not quite 300 mL/min
1600	2.20	17.21	0.189	0.69	7.71	-163.2	10.00	27.45	Flow rate 500 mL/min
1610	3.50	17.41	0.203	0.53	7.69	-171.2	5.90	27.50	
1620	4.25	17.45	0.204	0.50	7.69	-173.3	4.70	27.50	
1630	5.5	17.43	0.197	0.50	7.69	-175.3	3.80	27.50	
1640	6.8	17.37	0.200	0.45	7.69	-177.9	4.10	27.52	
1645	7.3	17.38	0.201	0.43	7.69	-178.9	4.30	27.55	
1650	7.8	17.38	0.200	0.43	7.69	-179.4	4.20	27.55	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
~~Expl. Resid., PETN~~, Nitroglycerine, Method 8330***	None	~~1-L Amber~~	2
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	250 ml poly bottle	1 each
~~Perchlorate***~~	None	~~1-L Amber~~	1

Observations/Notes: Purge Start Time: ~~1530~~ 1525 Purge Rate: ~300mL/min

Nitrate 0 mg/L
Nitrite 0.099 mg/L
Fe^{2+} 1.20 mg/L

1550: Increased flow rate to 300mL/min, didn't have it dialed in yet at start up
1600: Purge rate & water level is stable, increased flow rate to ~500mL/min.

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD NA Duplicate ID No.: NA

Signature(s): [illegible]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3/18/10
Weather: RAIN / OVERCAST = 48°F

Project Number: 374082.FI.FI.69
Well ID: IR69-GW28IW
Sample ID: IR69-GW28IW-10A
Sampling Team: R. FLEMS

Water Quality Equipment Info: YSI 556 MPS # 13968
HANNA # 099150

Total Depth: 51.85 FT.(BTOC)
Depth to water: (-) 27.65 FT.~~(BTOC)~~ BGS
Water Column: 24.2 FT.
(x) 0.163 GAL/FT.
Well Volume: ≈ 3.9 GAL.
Total Purge Vol.: GAL.

Purge Device: QED BLADDER PUMP

Pump Inlet Depth: ≈ 49.85 FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 2

SAMPLE DATA

	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date: 3/18/10								
Time: SEE PAGE # 2								
Method:	(SEE	PAGE	# 2)					

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		**constant**	**± 3%**	**± 10%**	**± 0.1**	**± 10 mv**	**<10**		
0925	≈ 0.05	16.76	0.999	2.90	7.96	90.6	110	27.82	CLOUDY
0935	≈ 0.45	17.34	0.992	1.21	8.22	-48.6	160	28.41	150 mL/MIN
0945	≈ 0.8	17.47	0.993	1.08	8.24	-55.0	160	≈ 30'	
0955	≈ 1.2	17.81	0.966	0.83	8.25	-67.8	170	≈ 32'	
1000	INCREASE FLOW TO PURGE WELL DRY - THEN SAMPLE - DISCUSSED SITUATION								
	WITH C. LEBLANC - CONCURRED. - FLOW RATE @ 250 mL/MIN								
1008	≈ 1.7	18.06	0.949	0.57	8.29	-85.6	200	≈ 35'	
1015	≈ 2.2	18.13	0.907	0.51	8.32	-97.7	200	≈ 36.8	
1020	≈ 2.5	18.12	0.906	0.50	8.32	-105.4	200	≈ 37.4	
1025	≈ 2.8	18.06	0.922	0.43	8.33	-117.2	200	≈ 38.95	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 0925 Purge Rate: 150 mL/MIN – 350 mL/MIN

Nitrate 0 mg/L PID @ WELL MOUTH = 0.0 ppm
Nitrite 0 mg/L PID IN BREATHING ZONE = 0.0 ppm
Fe^{2+} 0 mg/L *PER DIMILLER

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13.

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD NA Duplicate ID No. NA

Signature(s): 3/19/10

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3/18/10
Weather: RAINY - OVERCAST = 52°F

Project Number: 374082.FI.FI.69
Well ID: IR69 - GW28IW ~~-10A~~ RF
Sample ID: IR69 - GW28IW - 10A
Sampling Team: R. FIELDS

Total Depth: SEE PAGE #1 FT.(BTOC)
Depth to water: (-) FT.(BTOC)
Water Column: FT.
(x) GAL/FT.
Well Volume: GAL.
Total Purge Vol.: GAL.

Purge Device: SEE PAGE #1

Pump Inlet Depth: FT.(BTOC)

Water Quality Equipment Info: SEE PAGE #1

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 2

SAMPLE DATA

	Temp. °C	Cond mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date: 3/18/10 Time: 1145 Method: LOW-FLOW	17.58	0.829	0.32	8.34	-160.2	95	= 45	SLIGHTLY TURBID

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1035	= 3.5	17.86	0.919	0.39	8.33	-139.2	200	= 41.20	FLOW RATE = 250 ml/min
1045	= 4.2	17.88	0.908	0.35	8.32	-150.2	160	= 42.20	
1055	= 4.9	17.84	0.890	0.33	8.33	-154.2	130	= 43.40	
1105	= 5.5	17.74	0.877	0.33	8.32	-158.1	120	= 44.0	
1115	= 6.2	17.67	0.866	0.33	8.32	-161.1	100	= 44.8	FLOW RATE = 350 ml/min
1125	= 6.9	17.57	0.850	0.30	8.32	-162.7	100	= 45.7	
1130	= 7.4	17.58	0.861	0.29	8.33	-161.9	95.0	= 47.5	
1135	= 7.9	17.58	0.830	0.32	8.34	-160.9	100	= 47.8	
	SHUT PUMP OFF LET RECHARGE TO = 45' BGS (2' ABOVE SCREEN)								
1143	DTW = 45' BGS								

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330**	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 0925 Purge Rate: 150 ml/min - 350 ml/min

Nitrate 0 mg/L per Dr. Miller
Nitrite 0 mg/L
Fe^{2+} 0 mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13.

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD Duplicate ID No.

Signature(s): 3/19/10

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client:	NAVFAC Mid-Atlantic	Project Number:	374082.FI.FI.69
Location:	Site 69/UXO-2	Well ID:	IR69-MW27IW
Event:	Supplemental Investigation	Sample ID:	IR69-MW27IW-10A
Date:	3/18/10	Sampling Team:	JAGH/CLT RFed/KAV
Weather:	mid 50's H rain		

Total Depth:	40	FT.(BTOC)
Depth to water:	(-) 25.19	FT.(BTOC)
Water Column:	14.81	FT.
	(x) 0.163	GAL/FT.
Well Volume:	2.4	GAL.
Total Purge Vol.:	1.25	GAL.
Purge Device:	QED Bladder Pump	
Pump Inlet Depth:	37	FT.(BTOC)

Water Quality Equipment Info: YSI # 06730
HANNA # 08987

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 1

SAMPLE DATA

Date: 3/18/10 Time: 1450 Method: grab	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
	17.27	0.489	3.54	7.58	26.4	19.0	29.15	

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
1435	0.25	17.10	0.473	9.00	7.93	-9.7	75.0	26.75	
1445	1.0	17.24	0.481	4.29	7.68	-19.6	31.0	28.80	slowed flow
1450 ~~1450~~	1.25	17.27	0.489	3.54	7.58	26.4	19.0	29.15	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides/PCBs Method 3550B/8081A/8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330***	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: 1430 Purge Rate: ~240 mL/min

Nitrate M mg/L
Nitrite M mg/L
Fe^{2+} M mg/L

* MICROBIAL ANALYSIS ONLY: DHC, DSM, DHB, DSB, TOD, & MOB
* filtered 1000mL (27IW)

*Microbial Samples for 11IW, 11DW, ~~13IW, 13DW,~~ 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15; For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD NA Duplicate ID No.: NA

Signature(s): [signature]

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3/18/10
Weather: RAIN / OVERCAST = 52°F

Project Number: 374082.FI.FI.69
Well ID: IR69 - MW27DW
Sample ID: IR69 - GW27DW - 10A
Sampling Team: R.FIELDS / RNV J.HUGH / CLT

Water Quality Equipment Info: YSI 5500

Total Depth: 75 FT.(BTOC)
Depth to water: (-) 26.66 FT.(BTOC)
Water Column: FT.
(x) GAL/FT.
Well Volume: GAL.
Total Purge Vol.: 1.5 GAL.

Purge Device: GRUNDFOS SUBMERSIBLE

Pump Inlet Depth: 72 FT.(BTOC)

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 1

SAMPLE DATA

	Temp. °C	Cond mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Date: 3/18/10								
Time: 1455								
Method: Grab								

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		**constant**	**± 3%**	**± 10%**	**± 0.1**	**± 10 mv**	**<10**		
1445	= 1	16.64	0.119	1.50	7.79	-114.4	28.0		N Slowed flow
1455	COLLECT SAMPLES								

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
Expl. Resid., PETN, Nitroglycerine, Method 8330**	None	1-L Amber	2
Total Metals/Dissolved Metals Method 6010B***	HNO3	250 ml poly bottle	1 each
Perchlorate***	None	1-L Amber	1

Observations/Notes: Purge Start Time: Purge Rate:

Nitrate NS mg/L * MICROBIAL ANALYSIS ONLY: DHC, DSM, DHB, DSB, TOD, MOB
Nitrite NS mg/L
Fe^{2+} NS mg/L (27DW)

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15. For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD NA Duplicate ID No. NA

Signature(s):

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Project Number: 374082.FI.FI.69
Location: Site 69/UXO-2
Well ID: IR69 - MW28DW
Event: Supplemental Investigation
Sample ID: IR69 - MW28DW
Date: 3/18/10
Sampling Team: Dana Miller
Weather: Rainy

Total Depth: 90.60 FT.(BTOC)
Depth to water: (-) 30.85 FT.(BTOC)
Water Column: 59.75 FT.
(x) 0.163 GAL/FT.
Well Volume: 9.73 GAL.
Total Purge Vol.: 10 GAL.

Purge Device: QED Bladder Pump

Pump Inlet Depth: 86 FT.(BTOC)

Water Quality Equipment Info: YSI #D4968

2.98

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 1 of 2

SAMPLE DATA

Date: 3/19/10 Time: 11:20	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method: Low Flow								

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
9:35	.75	18.45	0.191	0.83	7.06	-40.5	33.1	31.25	Clear No Odor
9:40	1	18.56	0.194	0.68	7.16	-95.4	22.6	31.26	Clear No Odor
9:45	1.5	18.56	0.188	0.60	7.22	-106.9	19.8	31.26	" "
9:50	2	18.58	0.182	0.50	7.27	-114.6	16.9	31.27	" "
9:55	2.5	18.57	0.176	0.41	7.31	-121.0	13.3	31.28	" "
10:00	3	18.52	0.170	0.35	7.34	-125.6	12.5	31.28	" "
10:05	3 1/2	18.55	0.168	0.38	7.35	-128.8	12.1	31.28	" "
10:10	4	18.52	0.171	0.37	7.36	-131.0	11.5	31.28	" "
10:15	4 1/2	18.51	0.177	0.35	7.37	-132.9	9.78	31.28	" "
10:20	5	18.52	0.185	0.37	7.38	-134.1	8.89	31.28	" "
10:25	5 1/2	18.49	0.187	0.34	7.40	-135.2	8.59	31.28	" "

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330***~~	~~None~~	~~1-L Amber~~	~~2~~
~~Total Metals~~/Dissolved Metals Method 6010B***	~~HNO3~~	250 ml poly bottle	~~1 each~~
Perchlorate***	~~None~~	~~1-L Amber~~	~~1~~

Observations/Notes: Purge Start Time: 9:35 Purge Rate:

Nitrate_____ mg/L
Nitrite _____ mg/L PID Reading @ 0.0 ppm (Breathing Zone)
Fe^{2+} _____ mg/L PID Reading @ well 0.0 ppm

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13.

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD NA Duplicate ID No.: NA

Signature(s): DM Miller

CH2MHILL

GROUNDWATER SAMPLING DATA SHEET

Client: NAVFAC Mid-Atlantic
Location: Site 69/UXO-2
Event: Supplemental Investigation
Date: 3/18/10
Weather:

Project Number: 374082.FI.FI.69
Well ID: IR69-MW28DW
Sample ID:
Sampling Team: PG

Total Depth: FT.(BTOC)
Depth to water: (-) 1 FT.(BTOC)
Water Column: FT.
(x) PG GAL/FT.
Well Volume: GAL.
Total Purge Vol.: GAL.

Purge Device:
Pump Inlet Depth: PG FT.(BTOC)

Water Quality Equipment Info:

Well Dia. (inches)	Volume (gallons/foot)
1	0.041
1.25	0.064
2	0.163
4	0.653
6	1.469

page 2 of 2

SAMPLE DATA

Date: / Time:	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Method:								

FIELD PARAMETERS

Time	Purge Vol. (gals)	Temp. °C	Cond. mS/cm	DO mg/L	pH SU	ORP mV	Turbidity NTU	Depth to water (ft bgs)	Color / Odor / Comments
Stabilization Criteria		constant	± 3%	± 10%	± 0.1	± 10 mv	<10		
10:30	6	18.47	0.185	0.32	7.41	-136.5	7.45	31.28	" "
10:35	6½	18.45	0.180	0.28	7.41	-138.4	7.30	31.28	" "
10:40	7	18.43	0.178	0.35	7.41	-138.6	7.21	31.28	" "
10:45	7½	18.45	0.176	0.28	7.42	-139.5	7.04	31.28	" "
10:50	8	18.45	0.176	0.28	7.41	-139.6	6.34	31.28	" "
10:55	8½	18.49	0.176	0.28	7.42	-140.3	5.99	31.29	" "
11:00	9	18.52	0.178	0.26	7.42	-141.6	5.30	31.29	" "
11:05	9½	18.49	0.182	0.21	7.42	-142.9	5.20	31.29	
11:10	10	18.49	0.181	0.20	7.42	-142.9	4.81	31.29	

Analysis	Preservative	Container requirements	No. of containers
TCL VOCs by EPA Method 8260B	HCl	40 ml glass vials	3
Methane, Ethane, Ethene RSK-175	HCl	40 ml glass vials	2
Total Organic Carbon by EPA Method 415.2	H_2SO_4	40 ml glass vials	2
Alkalinity, Chloride, Sulfate, Nitrate, Nitrite	None	250 ml poly bottle	1
TAL Metals Method 6010B*	HNO_3	500 ml poly bottle	1
Sulfide	Zn-Acetate/6 N NaOH	500 ml poly bottle	1
SVOC and PAH Method 8270C/ 8270C_SIM	None	1-L Amber	2
OP Pesticides Method 8141A	None	1-L Amber	2
OC Pesticides Method 3550B/8081A	None	1-L Amber	2
PCBs Method 8082	None	1-L Amber	2
~~Expl. Resid., PETN, Nitroglycerine, Method 8330**~~	~~None~~	~~1-L Amber~~	~~2~~
~~Total Metals/Dissolved Metals Method 6010B***~~	~~HNO3~~	~~250 ml poly bottle~~	~~1 each~~
~~Perchlorate***~~	~~None~~	~~1-L Amber~~	~~1~~

Observations/Notes: Purge Start Time: Purge Rate:

Nitrate_____ mg/L
Nitrite _____ mg/L
Fe^{2+}_____mg/L

*Microbial Samples for 11IW, 11DW, 13IW, 13DW, 26IW

**TAL Metals Filtered in 500-mL poly, HNO3 with 0.45 um filter for 09, 11, 12, 13,

***UXO-2 Wells: 5, 9, 11, 12, 13, 14, 15: For filtered: use 0.45 um filter, label with "-FF" to end of ID

MS/MSD NA Duplicate ID No.: NA

Signature(s): [illegible]

Appendix D
Boring Logs and Well Construction Diagrams

CH2MHILL	PROJECT NUMBER 374082.FI.FI.69	BORING NUMBER IR69-GW04DW	Sheet 1 of 3

SOIL BORING LOG

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** Driller: David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic Geoprobe 8140DT rig - 8" casing to 40' bgs X 6" casing X 4" inner core**

WATER LEVELS : 35.67 ft **START** : 3/08/2010 9:30 hrs. **END** : 3/09/2010 14:30 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.)	COMMENTS (DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.)	PID (ppm) HS	PID (ppm) BZ
0	0/5	5/5	Hand Auger	0 - 2 SW SAND moist, very pale brown (10YR 7/3), loose, well graded		0.00	0.00
				0 - 4 CL sandy CLAY moist, brownish yellow (10YR 6/6), medium to high plasticity, soft to stiff		0.00	0.00
5				4 - 9.5 SP SAND moist, brownish yellow (10YR 6/8), loose			
	5/10	5/10	R1			0.00	0.00
10				9.5 - 12 SC clayey SAND wet, grayish brown (10 YR 5/2), loose, medium grained, well graded		0.00	0.00
				12 - 20 ML sandy SILT wet, bluish gray (gley 2 5/1), loose, medium plasticity		0.00	0.00
15							
						0.00	0.00
20	10/30	20/20	R2	20 - 30 CL silty CLAY moist, dark greenish gray (gley 2 4/1), very stiff, high plasticity, trace mica, 5-10% fine grained sand		0.50	
						1.80	
25						1.20	
						5.00	0.00
						7.20	
						1.20	
30						2.02	

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER 374082.FI.FI.69	BORING NUMBER IR69-GW04DW	Sheet 2 of 3

SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** Driller: David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic Geoprobe 8140DT rig - 8" casing to 40' bgs X 6" casing X 4" inner core**

WATER LEVELS : 35.67 ft **START** : 3/08/2010 9:30 hrs. **END** : 3/09/2010 14:30 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.)	COMMENTS (DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.)	PID (ppm) HS	PID (ppm) BZ
30				30 - 40 CL silty CLAY moist, dark greenish gray (gley 2 4/1), very stiff, high plasticity, trace mica, trace fine grained sand		5	
						4	
						6	0
35	30/40	10/10	R3			12	
						18	
40				40 - 49 SW SAND with shell fragments wet, dark bluish gray (10 YR 4/1), loose to medium dense, well graded, fine to coarse grained	8" overide casing run to 40' bgs	6	
						2	0
						1	
45	40/50	10/10	R4	45 - 50 SM silty SAND wet, dark greenish gray (gley 2 4/1), medium dense, 5-10% shell fragments (<1/4" in size), fine to medium grained		5	
						12	
50				50 - 68 SM silty SAND slightly moist, dark greenish gray (gley 2 4/1), medium dense, trace fossilized shell fragments (<1/4" in size), fine to medium grained		4	0
55	50/70	20/20	R5			2	
						1	
						0	0
60							

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW04DW	Sheet 3 of 3

SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** Driller: David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic Geoprobe 8140DT rig - 8" casing to 40' bgs X 6" casing X 4" inner core**

WATER LEVELS : 35.67 ft **START** : 3/08/2010 9:30 hrs. **END** : 3/09/2010 14:30 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.)	COMMENTS (DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.)	PID (ppm) HS	PID (ppm) BZ
60						0.4	0.0
	50/70	20/20 continued	R5				
65						0.8	0.0
				68 - 70 SP SAND slightly moist to moist, dark greenish gray (gley 2 4/1), very dense, poorly graded, cemented in zones/pockets, trace fossilized shell fragments (<1/2" in size), trace to some silts		0.8	
70				70 - 77.5 SM silty SAND moist to wet, dark greenish gray (gley 2 4/1), medium dense, fine to medium grained, well graded		0.5	0.0
					heavy rig chatter at 72 ft bgs	0.3	
75	70/80	10/10	R6			0.2	
				77.5 - 80 SP Cemented Sand and fossilerous Limestone wet, light bluish gray (gley 2 7/1), hard, coarse grained sand; limestone with abundant fossils, hard partings, moderately cemented		0.0	
80				80 - 81 SW SAND wet, bluish gray (gley 2 4/1), loose, fine to medium grained, well graded, trace mica		0.3	
						0.0	0.0
85	80/90	10/10	R7		Borehole TD = 91 feet bgs Well TD = 90 feet bgs	0	
90							

Well Construction Summary

Screen (10 slot) = 85 - 90 ft bgs
Casing Riser (2", Sch 40 PVC) = +3 - 85 ft bgs
Filter Pack (#2 or 20/30 grade) = 82.5 - 91 ft bgs
Bentonite (3/8" chips) = 80 - 82.5 ft bgs
Grout = 160 gallons

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW04IW	Sheet 1 of 2

SOIL BORING LOG

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic Geoprobe 8140DT rig - 8" casing to 40' bgs X 6" casing X 4" inner core**

WATER LEVELS : 33.63 ft **START** : 3/09/2010 16:00 hrs. **END** : 3/10/2010 12:00 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.	PID (ppm) HS	PID (ppm) BZ
0	0/5	5/5	Hand Auger	0 - 2 SW SAND moist, very pale brown (10YR 7/3), loose, well graded			0
				4-Feb CL sandy CLAY moist, brownish yellow (10YR 6/6), medium to high plasticity,		NA	
				4 - 9.5 SP SAND moist, brownish yellow (10YR 6/8), loose			0
5	5/10	5/5	NA			NA	0
10				9.5 - 12 SC clayey SAND wet, grayish brown (10 YR 5/2), loose, medium grained, well graded			
				12 - 20 ML sandy SILT wet, bluish gray (gley 2 5/1), soft, medium plasticity		NA	0
15						NA	0
20	10/30	20/20	NA	20 - 30 CL silty CLAY moist, dark greenish gray (gley 2 4/1), very stiff, high plasticity, trace mica, 5-10% fine grained sand			
25						NA	0
30							

Legend

PID - Photo-ionization detector

BZ - Breathing Zone

HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER 374082.FI.FI.69	BORING NUMBER IR69-GW04IW	Sheet 2 of 2

SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic Geoprobe 8140DT rig - 8" casing to 40' bgs X 6" casing X 4" inner core**

WATER LEVELS : 33.63 ft **START** : 3/09/2010 16:00 hrs. **END** : 3/10/2010 12:00 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.)	COMMENTS (DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.)	PID (ppm) HS	PID (ppm) BZ
30				30 - 40 CL silty CLAY moist, dark greenish gray (gley 2 4/1), very stiff, high plasticity, trace mica, trace fine grained sand		NA	0
35	30/40	10/10	NA				
40				40 - 49 SW SAND with shell fragments wet, dark bluish gray (10 YR 4/1), loose to medium dense, well graded, fine to coarse grained sand	8" overide casing to 40' bgs	NA	0
45	40/50	10/10	NA	45 - 50 SM silty SAND wet, dark greenish gray (gley 2 4/1), medium dense, 5-10% shell fragments (<1/4" in size), fine to medium grained sand			
50							0
55				Borehole TD = 51 feet bgs Well TD = 50 feet bgs Well Construction Summary Screen (10 slot) = 45 - 50 ft bgs Casing Riser (2", Sch 40 PVC) = 0 - 45 ft bgs Filter Pack (#2 or 20/30 grade) = 43 - 51 ft bgs Bentonite (3/8" chips) = 40 - 43 ft bgs Grout = 120 gallons			
60				Note: soil description from paired well, IR69-MW4DW.			

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW05DW	Sheet 1 of 3

SOIL BORING LOG

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing X 4" inner core barrel**

WATER LEVELS : 30.87 FT **START** : 3/03/2010 13:15 hrs. **END** : 3/04/2010 15:00 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.	PID (ppm) HS	PID (ppm) BZ
0	0/5	5/5	Hand Auger	0 - 1 SP SAND moist, brownish yellow (10YR 6/8), loose, poorly graded, fine to medium grained		0	0
						0	0
5	5/15	10/10	R1	5 - 7 SP SAND moist, brownish yellow (10YR 6/8), loose, poorly graded, fine to medium grained	5 - 15' bgs screen every foot with UXO technician onsite	0	0
				7 - 10 SC clayey SAND wet, brownish yellow (10 YR 6/8), loose to medium dense, medium plasticity, some gray mottling		0	0
10				10 - 15 CL silty CLAY moist, bluish gray (gley 2 5/1), soft, high plasticity		0	0
15	15/30	15/15	R2	15 - 30 CL sandy CLAY moist to wet, greenish gray (gley 2 5/1), soft to medium stiff, moderate to high plasticity, trace mice, fine grained		0	0
20						0	0
25						0	0
30							

Legend

PID - Photo-ionization detector

BZ - Breathing Zone

HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW05DW	Sheet 2 of 3

SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing X 4" inner core barrel**

WATER LEVELS : 30.87 FT **START** : 3/03/2010 13:15 hrs. **END** : 3/04/2010 15:00 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.	PID (ppm) HS	PID (ppm) BZ
30				30 - 35 No Recovery			
				35 - 39 CL sandy CLAY moist to wet, greenish gray (gley 2 5/1), soft to medium stiff, moderate to high plasticity, trace mica, fine grained sand		0	0
						0	0
35	30/50	15/20	R2			0	0
				39 - 41.5 SC clayey SAND wet, dark greenish gray (gley 2 4/1), medium dense, slightly plastic, fine grained		0	0
40				41.5 - 43 SP SAND wet, dark bluish gray (gley 2 3/1), loose, medium to coarse grained		0	0
				43 - 45 SM silty SAND moist, greenish gray (gley 2 6/1), dense, 20% shell fragments (<1/4" in size), fine to medium grained, weakly cemented along run, trace clay			
45				45 - 50 SM silty SAND wet, dark bluish gray (gley 2 3/1), dense, 20% shell fragments (<1/4" in size), fine to medium grained, weakly cemented along run, trace clay		0	0
						0	0
50				50 - 70 SM silty SAND with clay moist to wet, greenish gray (gley 2 5/1), medium dense, 10 - 20% fossilized shell fragments (<1/4" in size), fine to medium grained, well graded		0	0
55	50/70	20/20	R3			0	0
						0	0
60						0	0

Legend

PID - Photo-ionization detector

BZ - Breathing Zone

HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW05DW	Sheet 3 of 3

SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing X 4" inner core barrel**

WATER LEVELS : 30.87 FT **START** : 3/03/2010 13:15 hrs. **END** : 3/04/2010 15:00 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.	PID (ppm) HS	PID (ppm) BZ
60						0	0
	50/70	20/20 continued	R3				
65						0	0
70				70 - 75 SM silty SAND with clay moist to wet, greenish gray (gley 2 5/1), very dense to hard, moderately cemented, 10 - 20% fossilized shell fragments (<1/4" in size), fine to medium grained, well graded		0	0
75				75 - 77 Cemented Sand and fossiliferous Limestone dry to moist, light bluish gray (gley 2 7/1), hard			
	70/90	20/20	R4	77 - 90 SM silty SAND wet, dark greenish gray (gley 2 4/1), loose, fine grained, poorly graded, trace mica			
80						0	0
85					Borehole TD = 90 feet bgs Well TD = 90 feet bgs Well Construction Summary Screen (10 slot) = 85 - 90 ft bgs Casing Riser (2" Sch 40 PVC) = 3-85 ft bgs Filter Pack (#2 or 20/30 grade) = 84-93 ft bgs Bentonite (3/8" chips) = 81 - 84 ft bgs Grout = 125 gallons		
90							

Legend

PID - Photo-ionization detector

BZ - Breathing Zone

HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW05IW	Sheet 1 of 3

SOIL BORING LOG

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing X 4" inner core barrel**

WATER LEVELS : 29.81 ft **START** : 3/06/2010 9:15 hrs. **END** : 3/06/2010 15:30 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.)	COMMENTS (DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.)	PID (ppm) HS	PID (ppm) BZ
0	0/5	5/5	Hand Auger	0 - 1 SP SAND moist, brownish yellow (10YR 6/8), loose, poorly graded, fine to medium grained			0
						NA	0
5	5/15	10/10	R1	5 - 7 SP SAND moist, brownish yellow (10YR 6/8), loose, poorly graded, fine to medium grained	5 - 15' bgs screen every foot with UXO technician onsite		
				7 - 10 SC clayey SAND wet, brownish yellow (10 YR 6/8), loose to medium dense, medium plasticity, some gray mottling			
						NA	0
10				10 - 15 CH silty CLAY moist, bluish gray (gley 2 5/1), soft, high plasticity			
15	15/30	15/15	R2	15 - 30 CL sandy CLAY moist to wet, greenish gray (gley 2 5/1), soft to medium stiff, moderate to high plasticity, trace mica, fine grained sand			
20						NA	0
25							
						NA	0
30							

Legend

PID - Photo-ionization detector

BZ - Breathing Zone

HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW05IW	Sheet 2 of 3

SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing X 4" inner core barrel**

WATER LEVELS : 29.81 ft **START** : 3/06/2010 9:15 hrs. **END** : 3/06/2010 15:30 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (IN)	#/TYPE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.)	COMMENTS (DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.)	PID (ppm) HS	PID (ppm) BZ
30				30 - 35 No Recovery		NA	0
35	30/50	20/20	R2	35 - 39 CL sandy CLAY moist to wet, greenish gray (gley 2 5/1), soft to medium stiff, moderate to high plasticity, trace mica, fine grained sand		NA	0
40				39 - 41.5 SC clay SAND wet, dark greenish gray (gley 2 4/1), medium dense, slightly plastic, fine grained sand			
				41.5 - 43 SW SAND wet, dark bluish gray (gley 2 3/1), loose, medium to coarse grained sand		NA	0
				43 - 45 SM silty SAND moist, greenish gray (gley 2 6/1), dense, 20% shell fragments (<1/4" in size), fine to medium grained sand, weakly cemented along run, trace clay			
45				45 - 50 SM silty SAND wet, dark bluish gray (gley 2 3/1), dense, 20% shell fragments (<1/4" in size), fine to medium grained sand, weakly cemented, trace clay		NA	0
50				50 - 61.5 SM silty SAND with clay moist to wet, greenish gray (gley 2 5/1), medium dense, 10 - 20% fossilized shell fragments (<1/4" in size), fine to medium grained sand, well graded			
55	50/61.5	10/11.5	R3			NA	0
60							

Legend

PID - Photo-ionization detector

BZ - Breathing Zone

HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
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SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing X 4" inner core barrel**

WATER LEVELS : 29.81 ft **START** : 3/06/2010 9:15 hrs. **END** : 3/06/2010 15:30 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION	COMMENTS	PID (ppm) HS	PID (ppm) BZ
				SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.		

60

65

70

75

80

85

90

Borehole TD = 61.5 feet bgs

Well TD = 60 feet bgs

Well Construction Summary

Screen (10 slot) = 55 - 60 ft bgs

Casing Riser (2", Sch 40 PVC) = +3 - 55 ft bgs

Filter Pack (#2 or 20/30 grade) = 52.8 - 61.5 ft bgs

Bentonite (3/8" chips) = 51 - 52.8 ft bgs

Grout = 48 gallons

Legend

PID - Photo-ionization detector

BZ - Breathing Zone

HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW09DW	Sheet 1 of 3

SOIL BORING LOG

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing X 4" inner core barrel**

WATER LEVELS : 8.18 ft **START** : 2/24/2010 1245 hrs. **END** : 2/24/10 1715 hrs LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.)	COMMENTS (DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.)	PID (ppm) HS	PID (ppm) BZ
0	0/5	5/5	Hand Auger	0 - 1 SC clay SAND moist, brown, loose, fine grained, slightly plastic, some leaf litter			
				1 - 2 SM silty SAND moist to wet, grayish brown (10 YR 5/2) to light yellowish brown (10 YR 6/4), fine grained, loose		0	0
				2 - 5 SM silty SAND moist to wet, very pale brown (10YR 5/2), loose, fine grained, poorly graded, slightly plastic		0	0
5				5 - 8 CL sandy CLAY moist to wet, light yellowish brown (10YR 6/4), moderate to high plasticity, stiff, gray mottling; fine grained, poorly graded sand		0	0
	5/10	5/5	R1	8 - 10 SM silty SAND wet, pale brown (10YR 6/3), fine grained, poorly graded, loose to medium grained		0	0
10				10 - 12 ML clayey SILT wet, light brownish gray (10YR 6/2), high plasticity, stiff			
				12 - 14 SM silty SAND wet, bluish gray (gley 2 6/1), stiff, fine grained, poorly graded		0	0
				14 - 15 SP SAND wet, red (2.5YR 4/8), medium grained, poorly graded, loose			
15	10/20	10/10	R2	15 - 20 ML sandy SILT with clay wet, bluish gray (gley 2 6/1), stiff, high plasticity.		0	0
20				20 - 23 SC clayey SAND wet, dark bluish gray (gley 2 4/1), slightly plastic, loose to medium dense, fine grained poorly graded.		0	0
				23 - 24 SW SAND wet, yellowish brown (10YR 5/8), sharp contact, loose, medium grained, well graded			
25	20/30	10/10	R3	24 - 30 SM silty SAND wet, bluish gray (gley 2 5/1), fine grained, poorly graded, medium dense		0	0
30							

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW09DW	Sheet 2 of 3

SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing X 4" inner core barrel**

WATER LEVELS : 8.18 ft **START** : 2/24/2010 1245 hrs. **END** : 2/24/10 1715 hrs LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.)	COMMENTS (DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.)	PID (ppm) HS	PID (ppm) BZ
30				30 - 40 SP SAND			
				wet, dark bluish gray (gley 2 4/1), loose to medium dense, medium grained, poorly graded, some shell fragments (<1" in size, approx.10-15% along run), trace silts.		0	0
						0	0
35	30/40	10/10	R4				
						0	0
						0	0
40				40 - 45 SP SAND			
				wet, dark bluish gray (gley 2 4/1), loose to medium dense, medium grained, poorly graded, some shell fragments (<1" in size, approx.10-15% along run), trace silts.		0	0
45				45 - 52 SW SAND with shell fragments		0	0
				wet, light bluish gray (gley 2 7/1), very dense, fine to coarse grained, well graded, interlayed cemented sand.			
	40/55	15/15	R5			0	0
50							
				52 - 55 SM silty SAND		0	0
				wet, bluish gray (gley 2 5/1), loose, fine grained			
55				55 - 72 SM silty SAND		0	0
				wet, bluish gray (gley 2 5/1), loose, fine grained			
						0	0
	55/72	17/17	R6				
60						0	0

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW09DW	Sheet 3 of 3

SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing X 4" inner core barrel**

WATER LEVELS : 8.18 ft **START** : 2/24/2010 1245 hrs. **END** : 2/24/10 1715 hrs LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (IN)	#/TYPE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.)	COMMENTS (DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.)	PID (ppm) HS	PID (ppm) BZ
60				55 - 72 SM silty SAND			
				wet, bluish gray (gley 2 5/1), loose, fine grained		0	0
65	55/72	17/17 (continued)	R6			0	0
70						0	0

Borehole TD = 72 feet bgs

Well TD = 70 feet bgs

Well Construction Summary

Screen (10 slot) = 65 - 70 ft bgs

Casing Riser (2", Sch 40 PVC) = +3 - 65 ft bgs

Filter Pack (#2 or 20/30 grade) = 62 - 72 ft bgs

Bentonite (3/8" chips) = 59 - 62 ft bgs

Grout = 100 gallons

75 80 85 90

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW09IW	Sheet 1 of 2

SOIL BORING LOG

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing X 4" inner core barrel**

WATER LEVELS : 7.72 ft **START** : 2/25/2010 10:40 hrs. **END** : 2/25/10 13:35 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.)	COMMENTS (DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.)	PID (ppm) HS	PID (ppm) BZ
0	0/5	5/5	Hand Auger	0 - 1 SC clay SAND moist, brown, loose, fine grained, slightly plastic, some leaf litter. 1 - 2 SM silty SAND moist to wet, grayish brown (10 YR 5/2) to light yellowish brown (10 YR 6/4), fine grained, loose 2 - 5 SM silty SAND moist to wet, very pale brown (10YR 5/2), loose, fine grained, poorly graded, slightly plastic		---	---
5	5/10	5/5	NA	5 - 8 CL sandy CLAY moist to wet, light yellowish brown (10YR 6/4), moderate to high plasticity, stiff, gray mottling; fine grained, poorly graded sand 8 - 10 SM silty SAND wet, pale brown (10YR 6/3), fine to medium grained, poorly graded, loose		---	---
10	10/20	10/10	NA	10 - 12 ML clayey SILT wet, light brownish gray (10YR 6/2), high plasticity, stiff 12 - 14 SM silty SAND wet, bluish gray (gley 2 6/1), stiff, fine grained, poorly graded 14 - 15 SP SAND wet, red (2.5YR 4/8), medium grained, poorly graded, loose 15 - 20 ML sandy SILT with clay wet, bluish gray (gley 2 6/1), stiff, high plasticity		---	---
20	20/30	10/10	NA	20 - 23 SC clay SAND wet, dark bluish gray (gley 2 4/1), slightly plastic, loose to medium dense, fine grained, poorly graded 23 - 24 SW SAND wet, yellowish brown (10YR 5/8), sharp contact, loose, medium grained, well graded 24 - 30 SM silty SAND wet, bluish gray (gley 2 5/1), fine grained, poorly graded, medium dense		---	---
30							

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER 374082.FI.FI.69	BORING NUMBER IR69-GW09IW	Sheet 2 of 2

SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing X 4" inner core barrel**

WATER LEVELS : 7.72 ft **START** : 2/25/2010 10:40 hrs. **END** : 2/25/10 13:35 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.	PID (ppm) HS	PID (ppm) BZ
30				30 - 40 SP SAND			
				wet, dark bluish gray (gley 2 4/1), loose to medium dense, medium grained, poorly graded, some shell fragments (<1" in size, approx.10-15% along run), trace silts.			
35	30/40	10/10	NA			---	---
40							
45							
50							
55							
60							

Borehole TD = 41.5 feet bgs

Well TD = 37.50 feet bgs

Well Construction Summary

Screen (10 slot) = 32.50 - 37.50 ft bgs

Casing Riser (2", Sch 40 PVC) = +3 - 32.50 ft bgs

Filter Pack (#2 or 20/30 grade) = 32 - 41.5 ft bgs

Bentonite (3/8" chips) = 29 - 32 ft bgs

Grout = 80 gallons

Note: soil description from paired well, IR69-GW09DW.

Legend

PID - Photo-ionization detector

BZ - Breathing Zone

HS - Head Space

Generated by: R. Gomez/SAN

Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW11DW	Sheet 1 of 3

SOIL BORING LOG

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing X 4" inner core barrel**

WATER LEVELS : 25.53 ft **START** : 3/01/2010 13:45 hrs. **END** : 3/02/2010 10:00 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.	PID (ppm) HS	PID (ppm) BZ
0	0/5	5/5	Hand Auger	0 - 1 CL sandy CLAY dry, dark brown			
				1 - 5 SC clayey SAND dry, dark yellowish brown (10 YR 5/6), loose, medium grained, poorly graded		0	0
						0	0
5				5 - 6 SC clayey SAND dry, dark yellowish brown (10 YR 5/6), loose, medium grained, poorly graded			
	5/20	15/15	R1	6 - 7.5 CL sandy CLAY		0	0
				7.5 - 11 SC clayey SAND moist, yellowish brown (10 YR 5/8), stiff, high plasticity, light gray mottling (20%)			
10				wet, brown (10 YR 5/3), yellowish brown mottling (10%), loose, poorly graded, trace silts		0	0
				11 - 20 CL silty CLAY moist, dark bluish gray (gley 2 4/1), stiff, moderate to high plasticity		0	0
15						0	0
20				20 - 27 CL silty CLAY moist, dark bluish gray (gley 2 4/1), stiff, moderate to high plasticity		0	0
25	20/40	20/20	R2				
				27 - 31 SC clayey SAND wet, dark bluish gray (gley 2 3/1), medium dense, medium grained, poorly graded, slightly plastic		0	0
30							

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER 374082.FI.FI.69	BORING NUMBER IR69-GW11DW	Sheet 2 of 3

SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing X 4" inner core barrel**

WATER LEVELS : 25.53 ft **START** : 3/01/2010 13:45 hrs. **END** : 3/02/2010 10:00 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.	PID (ppm) HS	PID (ppm) BZ
30				31 - 40 SC clayey SAND with shells			
				wet, bluish gray to dark bluish gray (gley 2 4/1), medium dense to dense, fine to medium grained, well graded, approx. 80% broken fossilized shells mainly bivalves (<2" in size)		0	0
						0	0
35	20/40	20/20 continued	R2			1.7	0
						0.3	0
40				40 - 60 SM silty SAND			
				wet, dark greenish gray (gley 2 4/1), loose to medium dense, fine grained, poorly graded, trace shell fragments (<1/2" in size)		0	0
45						0	0
	40/60	20/20	R3			0	0
50						0	0
55						0	0
						0	0
60						0	0

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW11DW	Sheet 3 of 3

SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing X 4" inner core barrel**

WATER LEVELS : 25.53 ft **START** : 3/01/2010 13:45 hrs. **END** : 3/02/2010 10:00 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.	PID (ppm) HS	PID (ppm) BZ
60				60 - 65 SM silty SAND wet, dark greenish gray (gley 2 4/1), loose to medium dense, fine grained, poorly graded, trace shell fragments (<1/2" in size)		0	0
65	60/81	21/21	R4	65 - 73 SW cemented SAND and fossiliferous Limestone wet, bluish gray (gley 2 5/1), hard, 60% limestone partings, well cemented; 50% cemented sand, well graded, fine to coarse grained, broken shells	hard drilling	0	0
70						0	0
				73 - 81 SM silty SAND wet, greenish gray (gley 2 5/1), medium dense, unconsolidated, fine to medium grained, well graded			
75							
80							
85				Borehole TD = 81 feet bgs Well TD = 80 feet bgs Well Construction Summary Screen (10 slot) = 75 - 80 ft bgs Casing Riser (2", Sch 40 PVC) = +3 - 75 ft bgs Filter Pack (#2 or 20/30 grade) = 73 - 81 ft bgs Bentonite (3/8" chips) = 69 - 73 ft bgs			
90				Grout = 105 gallons			

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
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SOIL BORING LOG

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing X 4" inner core barrel**

WATER LEVELS : 23.37 ft **START** : 3/01/2010 13:45 hrs. **END** : 3/02/2010 10:00 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.)	COMMENTS (DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.)	PID (ppm) HS	PID (ppm) BZ
0	0/5	5/5	Hand Auger	0 - 1 CL sandy CLAY dry, dark brown (7.5YR 3/4), loose and soft		0	0
				1 - 5 SC clay SAND dry, dark yellowish brown (10 YR 5/6), loose, medium grained, poorly graded		0	0
5	5/20	15/15	NA	5 - 6 SC clayey SAND dry, dark yellowish brown (10 YR 5/6), loose, medium grained, poorly graded		0	0
				6 - 7.5 CL sandy CLAY moist, yellowish brown (10 YR 5/8), stiff, high plasticity, light gray mottling (20%)		0	0
10				7.5 - 11 SC clayey SAND wet, brown (10 YR 5/3), yellowish brown mottling (10%), loose, poorly graded, trace silts		0	0
15				11 - 20 CL silty CLAY moist, dark bluish gray (gley 2 4/1), stiff, high plasticity		0	0
20	20/40	20/20	NA	20 - 27 CL silty CLAY moist, dark bluish gray (gley 2 4/1), stiff, moderate to high plasticity		0	0
25				27 - 31 SC clayey SAND wet, dark bluish gray (gley 2 3/1), medium dense, medium grained, poorly graded, none to slightly plastic		0	0
30							

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW11IW	Sheet 2 of 2

SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing X 4" inner core barrel**

WATER LEVELS : 23.37 ft **START** : 3/01/2010 13:45 hrs. **END** : 3/02/2010 10:00 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.)	COMMENTS (DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.)	PID (ppm) HS	PID (ppm) BZ
30				31 - 40 SC clayey SAND with shells			
				wet, bluish gray to dark bluish gray (gley 2 4/1), medium dense to dense, fine to medium grained, well graded, approx. 80% broken fossilized shells mainly bivalves (<2" in size)		0	0
						0	0
35	20/40	20/20 continued	NA			1.7	0
						0.3	0
40				40 - 50 SM silty SAND			
				wet, dark greenish gray (gley 2 4/1), loose to medium dense, fine grained, poorly graded, trace shell fragments (<1/2" in size)		0	0
45						0	0
	40/60	20/20	NA			0	0
50							
55							
60							

Borehole TD = 51 feet bgs

Well TD = 50 feet bgs

Well Construction Summary

Screen (10 slot) = 45 - 50 ft bgs

Casing Riser (2", Sch 40 PVC) = +3 - 45 ft bgs

Filter Pack (#2 or 20/30 grade) = 42 - 51 ft bgs

Bentonite (3/8" chips) = 38 - 42 ft bgs

Grout = 44 gallons

Note: soil description from paired well, IR69-GW11DW

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW13DW	Sheet 1 of 3

SOIL BORING LOG

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic Geoprobe 8140DT rig - 6" casing X 4" inner core**

WATER LEVELS : 32.80 ft **START** : 3/16/2010 15:00 hrs. **END** : 3/17/2010 12:00 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.	PID (ppm) HS	PID (ppm) BZ
0	0/5	5/5	R1	0 - 2 SP SAND dry to moist, very pale brown (10YR 7/3), loose, medium grained, poorly graded 2 - 5 SC clayey SAND moist, dark reddish brown (5 YR 3/4), loose, fine grained, poorly graded		0	0
5	5/10	5/5	R2	5 - 6 SC clayey SAND moist, dark reddish brown (5 YR 3/4), loose, fine grained, poorly graded 6 - 10 SM silty SAND wet, gray (10 YR 5/1), loose to medium dense, fine grained, poorly graded, little clay		0	0
10	10/20	10/10	R3	10 - 13 SM silty SAND wet, gray (10 YR 5/1), loose to medium dense, fine grained, poorly graded, little clay 13 - 20 CL sandy CLAY moist, bluish gray (gley 2 5/1), stiff, high plasticity		0 0 0	0 0
20	20/40	20/20	R4	20 - 35 CL sandy CLAY moist, bluish gray (gley 2 5/1), stiff, high plasticity		0 0 0 0	0 0
30							

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER 374082.FI.FI.69	BORING NUMBER IR69-GW13DW	Sheet 2 of 3

SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic Geoprobe 8140DT rig - 6" casing X 4" inner core**

WATER LEVELS : 32.80 ft **START** : 3/16/2010 15:00 hrs. **END** : 3/17/2010 12:00 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.	PID (ppm) HS	PID (ppm) BZ
30						0	
							0
35	20/40	20/20 continue	R4	35 - 37 SW SAND wet, bluish black gray (gley 2 2.5/1), loose to medium dense, well graded, fine to coarse grained sand, 2-5% cemented sand partings, trace shell fragments		0	
				37 - 40 SW SAND moist, greenish gray (gley 2 5/1), medium dense to hard, fine to coarse grained sands, well graded, 10-15% shell fragments, weakly cemented sand along run		0	
40				40 - 46 SW cemented SAND wet, dark bluish gray (gley 2 4/1), hard, fine to very coarse grained sand, well graded, weak cementation, 80-90% shell fragments		0	0
45				46 - 56 SM silty SAND wet, dark greenish gray (gley 2 4/1), poorly graded, fine grained sand, trace shell fragments (<1/4" in size)		0	
50	40/60	20/20	R5			1.8	0
55				56 - 60 SW SAND moist to wet, dark greenish gray (gley 2 4/1), well graded, fine to medium grained, trace shell fragments, 10-20% silts and clay		1.1	
	55/75	20/20	R4				0
60						0.2	

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER 374082.FI.FI.69	BORING NUMBER IR69-GW13DW	Sheet 3 of 3

SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic Geoprobe 8140DT rig - 6" casing X 4" inner core**

WATER LEVELS : 32.80 ft **START** : 3/16/2010 15:00 hrs. **END** : 3/17/2010 12:00 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.	PID (ppm) HS	PID (ppm) BZ
60				60 - 74 SW SAND moist to wet, dark greenish gray (gley 2 4/1), well graded, fine to medium grained, trace shell fragments, 10-20% silts and clay		0	0
65						0	0
						0	
	60/80	20/20	R6				
					heavy rig chatter @ 74 ft		
70						0	0
						0	
				74 - 80 SP Alternating Cemented Sand and Fossiliferous Limestone wet, light bluish gray (gley 2 7/1), hard, well graded, weakly cemented sands; hard, moderate to well limestone cementation			
75						0	0
						0	
80				80 - 90 SM silty SAND Approximately <1 ft of silty sand in bottom of core barrel		0.6	
						NM	0
				Borehole TD = 92 feet bgs Well TD = 90 feet bgs			
85						NM	
	80/90	0/10	R7	Well Construction Summary Screen (10 slot) = 85 - 90 ft bgs Casing Riser (2", Sch 40 PVC) = +3 - 85 ft bgs Filter Pack (#2 or 20/30 grade) = 82 - 91 ft bgs Bentonite (3/8" chips) = 79 - 82 ft bgs Grout = 160 gallons			
						NM	0
90							

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW26DW	Sheet 1 of 3

SOIL BORING LOG

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic Geoprobe 8140DT rig - 8" casing to 40' bgs X 6" casing X 4" inner core**

WATER LEVELS : 34.98 ft **START** : 3/11/2010 9:05 hrs. **END** : 3/14/2010 12:00 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.)	COMMENTS (DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.)	PID (ppm) HS	PID (ppm) BZ
0	0/5	5/5	Hand Auger	0 - 2 CL-SM CLAY and silty SAND wet, light brownish gray (10YR 6/2), loose, well graded		0.1	0
				2 - 5 SC clay SAND moist, brownish yellow (10YR 6/8), poorly graded, fine grained			
5	5/10	5/5	R1	5 - 8 SC clay SAND moist, brownish yellow (10YR 6/8), poorly graded, fine grained		2.0	0
				8 - 10 SC clayey SAND wet, light brownish gray (10 YR 6/2), medium dense, slightly plastic, well graded		0.2	0.2
10	10/20	10/10	R2	10 - 11 SM silty SAND wet, bluish gray (gley 2 5/2), loose, medium grained, poorly graded			
				11 - 20 CL-ML silty CLAY - clayey SILT moist to wet, dark bluish gray (gley 2 4/1), loose, stiff to very stiif, high plasticity, trace sands		0.0	0
15						0	0
20	20/30	10/10	R3	20 - 30 CL-ML silty CLAY - clayey SILT moist to wet, dark bluish gray (gley 2 4/1), loose, stiff to very stiif, high plasticity, trace sands		0	0
25						0	0
30							

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER 374082.FI.FI.69	BORING NUMBER IR69-GW26DW	Sheet 2 of 3

SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic Geoprobe 8140DT rig - 8" casing to 40' bgs X 6" casing X 4" inner core**

WATER LEVELS : 34.98 ft **START** : 3/11/2010 9:05 hrs. **END** : 3/14/2010 12:00 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.)	COMMENTS (DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.)	PID (ppm) HS	PID (ppm) BZ
30				30 - 39 ML-CL silty CLAY - clayey SILT moist to wet, dark bluish gray (gley 2 4/1), loose, stiff to very stiif, high plasticity, 15-20% sands and mica		5.0	
						3.8	
						6.0	0
						11.6	
35	30/40	10/10	R5				
						18.0	
				39 - 40 SW SAND wet, dark bluish gray (gley 2 3/1), dense, well graded, fine to coarse grained, 30-40% cemented sands	8" override casing advanced to 40' bgs	5.5	
40				40 - 49 SC-SM clayey SAND - silty SAND wet, bluish gray (gley 2 6/1), dense, well graded, fine to coarse grained sand, 50% shell fragments (mostly bivalves)		1.7	0
						1.2	
45	40/55	15/15	R6				
						5.0	
						12.0	
				49 - 55 SM silty SAND wet, dark bluish gray (gley 2 4/1), medium dense, poorly graded, trace shell fragments (<1/4" in size), medium grained			
50						3.8	0
55				55 - 65 SM silty SAND wet, dark bluish gray (gley 2 4/1), medium dense, poorly graded, trace shell fragments (<1/4" in size), medium grained		1.6	
						0.9	
	55/65	10/10	R7				0
60						0.3	

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER 374082.FI.FI.69	BORING NUMBER IR69-GW26DW	Sheet 3 of 3

SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic Geoprobe 8140DT rig - 8" casing to 40' bgs X 6" casing X 4" inner core**

WATER LEVELS : 34.98 ft **START** : 3/11/2010 9:05 hrs. **END** : 3/14/2010 12:00 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.)	COMMENTS (DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.)	PID (ppm) HS	PID (ppm) BZ
60				55 - 65 SM silty SAND wet, dark bluish gray (gley 2 4/1), medium dense, poorly graded, trace shell fragments (<1/4" in size), medium grained		0	0
	55/65	10/10 continue	R7			0	
65				65 - 75 SM silty SAND wet, dark bluish gray (gley 2 4/1), medium dense, poorly graded, trace shell fragments (<1/4" in size), medium grained		0.8	0
						0.4	
70	65/80	15/15	R8			0	0
						0	
				75 - 80 Alternating Cemented Sand and Fossilerous Limestone wet, light bluish gray (gley 2 7/1), hard, well graded cemented sands	heavy rig chatter at 74 ft bgs	1.2	0
75							
						0.5	
80						0.5	
				80 - 93 SM silty SAND wet, dark greenish gray (gley 2 4/1), loose, fine grained, poorly graded		0	0
85	80/93	13/13	R9		Borehole TD = 93 feet bgs Well TD = 91 feet bgs Well Construction Summary Screen (10 slot) = 86 - 91 ft bgs Casing Riser (2", Sch 40 PVC) = +3 - 86 ft bgs Filter Pack (#2 or 20/30 grade) = 83 - 91 ft bgs Bentonite (3/8" chips) = 81 - 83 ft bgs Grout = 200 gallons	0	
90						0	0

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW26IW	Sheet 1 of 2

SOIL BORING LOG

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic Geoprobe 8140DT rig - 8" casing to 40' bgs X 6" casing X 4" inner core**

WATER LEVELS : 33.09 ft **START** : 3/14/2010 13:30 hrs. **END** : 3/14/2010 16:00 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.)	COMMENTS (DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.)	PID (ppm) HS	PID (ppm) BZ
0	0/5	5/5	Hand Auger	0 - 2 CL-SM CLAY and silty SAND wet, light brownish gray (10YR 6/2), loose, well graded		NM	0.0
				2 - 5 SC clay SAND moist, brownish yellow (10YR 6/8), poorly graded, fine grained			
5	5/10	5/5	NA	5 - 8 SC clay SAND moist, brownish yellow (10YR 6/8), poorly graded, fine grained			
				8 - 10 SC clayey SAND wet, light brownish gray (10 YR 6/2), medium dense, slightly plastic, well graded		NM	
10	10/20	10/10	NA	10 - 11 SM silty SAND wet, bluish gray (gley 2 5/2), loose, medium grained, poorly graded			0
				11 - 20 CL-ML silty CLAY - clayey SILT moist to wet, dark bluish gray (gley 2 4/1), loose, stiff to very stiif, high plasticity, trace sands			
15						NM	
							0
20	20/30	10/10	NA	20 - 30 CL-ML silty CLAY - clayey SILT moist to wet, dark bluish gray (gley 2 4/1), loose, stiff to very stiif, high plasticity, trace sands			
25						NM	
							0
30							

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space
NM - Not Measured

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW26IW	Sheet 2 of 2

SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic Geoprobe 8140DT rig - 8" casing to 40' bgs X 6" casing X 4" inner core**

WATER LEVELS : 33.09 ft **START** : 3/14/2010 13:30 hrs. **END** : 3/14/2010 16:00 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.	PID (ppm) HS	PID (ppm) BZ
30				30 - 39 ML-CL silty CLAY - clayey SILT moist to wet, dark bluish gray (gley 2 4/1), loose, stiff to very stiff, high plasticity, 15-20% sands and mica		NM	0
35	30/40	10/10	NA				
				39 - 40 SW SAND wet, dark bluish gray (gley 2 3/1), dense, well graded, fine to coarse grained, 30-40% cemented sands			
40				40 - 49 SC-SM clayey SAND - silty SAND wet, bluish gray (gley 2 6/1), dense, well graded, fine to coarse grained sand, 50% shell fragments (mostly bivalves)	8" overide casing advanced to 40' bgs		0
45	40/55	15/15	NA			NM	
				49 - 50 SM silty SAND wet, dark bluish gray (gley 2 4/1), medium dense, poorly graded, trace shell fragments (<1/4" in size), medium grained			
50							0
				Borehole TD = 51 feet bgs Well TD = 50 feet bgs			
55				Well Construction Summary Screen (10 slot) = 45 - 50 ft bgs Casing Riser (2", Sch 40 PVC) = +3 - 45 ft bgs Filter Pack (#2 or 20/30 grade) = 42 - 51 ft bgs Bentonite (3/8" chips) = 40 - 42 ft bgs			
60				Grout = 50 gallons			

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space
NM - Not Measured

Note: soil description from paired well IR69-MW26DW

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW27DW	Sheet 1 of 3

SOIL BORING LOG

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing X 4" inner core barrel**

WATER LEVELS : 26.69 ft **START** : 2/28/2010 9:30 hrs. **END** : 2/28/2010 15:45 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (IN)	#/TYPE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.)	COMMENTS (DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.)	PID (ppm) HS	PID (ppm) BZ
0	0/5	5/5	Hand Auger	0 - 1 SC clayey SAND dry, brown (7.5YR 4/3), loose, poorly graded		0	0
				1 - 5 SP SAND dry to moist, yellowish brown (10 YR 5/8), loose, poorly graded		0	0
5	5/10	5/5	R1	5 - 7 SP SAND dry to moist, yellowish brown (10 YR 5/8), loose, poorly graded		0	0
				7 - 9 CL sandy CLAY moist, yellowish			
				9 - 10 SC clay SAND moist, brown yellow (10 YR 6/8), loose to medium dense, well graded		0	0
10	10/15	5/5	R2	10 - 12 SC clay SAND moist, brown yellow (10 YR 6/8), loose to medium dense, well		0	0
				12 - 13 CL sandy CLAY moist, gray (10YR 6/1), stiff, high plasticity			
				13 - 15 ML clayey SILT moist, light brownish gary (10YR 6/2), stiff, medium plasticity			
15	15/25	10/10	R3	15 - 19 CL sandy CLAY moist, yellowish brown (10 YR 5/8), soft to stiff, high plasticity		0	0
				19 - 25 CL silty CLAY moist to wet, gray (10YR 5/1), high plasticity, soft to stiff		0	0
20							
25	25/40	15/15	R4	25 - 27 CL silty CLAY moist to wet, gray (10YR 5/1), high plasticity, soft to stiff			
				27 - 29 SC clayey SAND with some silt wet, dark red contact (2.5YR 3/6) with reddish brown (2.5YR 4/4) matrix, loose, medium grained, poorly graded, some black organic nodules		0	0
30							

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER 374082.FI.FI.69	BORING NUMBER IR69-GW27DW	Sheet 2 of 3

SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing X 4" inner core barrel**

WATER LEVELS : 26.69 ft **START** : 2/28/2010 9:30 hrs. **END** : 2/28/2010 15:45 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.)	COMMENTS (DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.)	PID (ppm) HS	PID (ppm) BZ
30				29 - 40 SW SAND wet, brown (10YR 5/8), loose to medium dense, well graded, 80% broken shell fragments (<3" in size), little clay and silt		0	0
						0	0
35	25/40	15/15 continued	R4			0	0
						0	0
40				40 - 60 SM silty SAND wet, dark gray (10YR 4/1), medium dense to dense, 5 - 10% shell fragments (<1/4" in size)		0	0
45						0	0
	40/60	20/20	R5			0	0
50						0	0
55						0	0
						0	0
60						0	0

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW27DW	Sheet 3 of 3

SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing X 4" inner core barrel**

WATER LEVELS : 26.69 ft **START** : 2/28/2010 9:30 hrs. **END** : 2/28/2010 15:45 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (IN)	#/TYPE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.	PID (ppm) HS	PID (ppm) BZ
60				60 - 67.5 SM silty SAND wet, dark gray (10YR 4/1), medium dense to dense, 5 - 10% shell fragments (<1/4" in size)		0	0
65	60/75	15/15	R6			0	0
				67.5 - 73 SW cemented SAND and fossiferous Limestone wet, light bluish gray (gley 2 7/1), dense, 50% consolidated and 50% unconsolidated, < 4" in size cemented sand partings			
70						0	0
				73 - 76 SP SAND moist to wet, bluish gray (gley 2 5/1), loose, unconsolidated, poorly graded			
75							
80				Borehole TD = 76 feet bgs Well TD = 75.2 feet bgs Well Construction Summary Screen (10 slot) = 70 - 75 ft bgs Casing Riser (2", Sch 40 PVC) = +3 - 70 ft bgs Filter Pack (#2 or 20/30 grade) = 68 - 76 ft bgs Bentonite (3/8" chips) = 65 - 68 ft bgs Grout = 130 gallons			
85							
90							

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW27IW	Sheet 1 of 2

SOIL BORING LOG

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing X 4" inner core barrel**

WATER LEVELS : 25.57 ft **START** : 3/01/2010 9:00 hrs. **END** : 3/01/2010 10:45 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.)	COMMENTS (DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.)	PID (ppm) HS	PID (ppm) BZ
0	0/5	5/5	Hand Auger	0 - 1 SC clayey SAND dry, brown (7.5YR			
				1 - 5 SP SAND dry to moist, yellowish brown (10 YR 5/8), loose, poorly graded		---	---
						---	0
5	5/10	5/5	NA	5 - 7 SP SAND dry to moist, yellowish brown (10 YR 5/8), loose, poorly graded		---	0
				7 - 9 CL sandy CLAY moist, yellowish			
				9 - 10 SC clayey SAND moist, brown yellow (10 YR 6/8), loose to medium dense, well graded			0
10	10/15	5/5	NA	10 - 12 SC clay SAND moist, brown yellow (10 YR 6/8), loose to medium dense, well			
				12 - 13 CL sandy CLAY moist, gray (10YR 6/1), stiff, high plasticity		---	0
				13 - 15 ML clayey SILT moist, light brownish gary (10YR 6/2), stiff, high plasticity			
15	15/25	10/10	NA	15 - 19 CL sandy CLAY moist, yellowish brown (10 YR 5/8), soft to stiff, high plasticity		---	0
				19 - 25 CL silty CLAY moist to wet, gray (10YR 5/1), high plasticity, soft to stiff			
20						---	0
25	25/40	15/15	NA	25 - 27 CL silty CLAY moist to wet, gray (10YR 5/1), high plasticity, soft to stiff.			
				27 - 29 SC clayey SAND with some silt		---	0
30				wet, dark red contact (2.5YR 3/6) with reddish brown (2.5YR 4/4) matrix, loose, medium grained, poorly graded, some black organic nodules			

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW27IW	Sheet 2 of 2

SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing X 4" inner core barrel**

WATER LEVELS : 25.57 ft **START** : 3/01/2010 9:00 hrs. **END** : 3/01/2010 10:45 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.	PID (ppm) HS	PID (ppm) BZ
30				29 - 40 SW SAND wet, brown (10YR 5/8), loose to medium dense, well graded, 80% broken shell fragments (<3" in size), little clay and silt		---	0
							0
35	25/41.5	16.5/16.5 continued	NA				
							0
40							
				Borehole TD = 41.5 feet bgs Well TD = 40 feet bgs Well Construction Summary			
45				Screen (10 slot) = 35 - 40 ft bgs Casing Riser (2", Sch 40 PVC) = +3 - 35 ft bgs Filter Pack (#2 or 20/30 grade) = 33 - 41.5 ft bgs Bentonite (3/8" chips) = 29 - 33 ft bgs Grout = 80 gallons			
50				Note: soil description from paired well IR69-MW27DW			
55							
60							

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW28DW	Sheet 1 of 3

SOIL BORING LOG

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic Geoprobe 8140DT rig - 8" casing to 40' bgs X 6" casing X 4" inner core**

WATER LEVELS : 30.61 ft **START** : 3/15/2010 11:00 hrs. **END** : 3/15/2010 17:00 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.	PID (ppm) HS	PID (ppm) BZ
0				0 - 15 SW SAND moist, light brownish gray (10YR 6/2), loose, well graded (description from GW28IW)			0
						2.3	
5							
							0
						2.9	0
10	0/20	20/20	R1				
						0.4	
15				15 - 17 SC clayey SAND moist to wet, very pale brown (10YR 7/4), loose to medium dense, fine grained, poorly graded		1.0	
							0
				18.5 - 30 CL silty CLAY moist, bluish gray (gley 2 5/1), stiff, moderate to high plasticity		0.2	
20							
						0.8	
25	20/40	20/20	R2			2.0	
							0
				see next page			
						1.4	
30							

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER 374082.FI.FI.69	BORING NUMBER IR69-GW28DW	Sheet 2 of 3

SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic Geoprobe 8140DT rig - 8" casing to 40' bgs X 6" casing X 4" inner core**

WATER LEVELS : 30.61 ft **START** : 3/15/2010 11:00 hrs. **END** : 3/15/2010 17:00 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.	PID (ppm) HS	PID (ppm) BZ
30				30 - 32 SC clayey SAND wet, dark bluish gray (gley 2 4/1), loose to medium dense, well graded, some silt		1.8	
				32 - 35 SW SAND wet, alternating layers of red (2.5YR 4/6), bluish gray (gley 2 5/1), and yellowish brown (10YR 5/8), loose to medium dense, 20 to 30% shell fragments (< 1/4" in size), well graded			0
35	20/40	20/20 continue	R2	35 - 40 SW SAND wet, brownish yellow (10YR 5/8), medium dense, well graded, 20-30% shell fragments, pockets of cemented sand (not continuous along run)		2.4	
40				40 - 46 SC clayey SAND wet, brownish yellow (10YR 6/6), loose to medium dense, poorly graded, fine grained sand, gray mottling at base	8" override casing advanced to 40' bgs	1.8	0
						1.3	
45	40/55	15/15	R3			0	
				46 - 55 SM silty SAND moist to wet, bluish gray (gley 2 5/1), poorly graded, fine grained sand, 5-10% shell fragments (<1" in size)		11	
50						1.8	0
						0.9	
55				55 - 68 SM silty SAND moist to wet, bluish gray (gley 2 5/1), poorly graded, fine grained sand, 5-10% shell fragments (<1" in size)		2.9	
						0	
	55/75	20/20	R4				0
60						0.7	

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER 374082.FI.FI.69	BORING NUMBER IR69-GW28DW	Sheet 3 of 3

SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic Geoprobe 8140DT rig - 8" casing to 40' bgs X 6" casing X 4" inner core**

WATER LEVELS : 30.61 ft **START** : 3/15/2010 11:00 hrs. **END** : 3/15/2010 17:00 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.	PID (ppm) HS	PID (ppm) BZ
60						6.7	0
65						4.7	0
	55/75	20/20 continue	R4	68 - 75 Alternating Cemented Sand and Fossiliferous Limestone wet, light bluish gray (gley 2 7/1), hard, well graded, cemented sands; hard limestone partings	heavy rig chatter at 68 ft bgs	0	
70						3.3	0
						9.5	
75				75 - 85 SM silty SAND moist to wet, dark greenish gray (gley 2 4/1), loose, fine grained sand, poorly graded		12.4	0
						7.2	
80	75/86	11/11	R5			2.2	
						17	0
85				Borehole TD = 86 feet bgs Well TD = 85.5 feet bgs		2.9	
90							

Well Construction Summary

Screen (10 slot) = 80.5 - 85.5 ft bgs
Casing Riser (2", Sch 40 PVC) = +3 - 80.5 ft bgs
Filter Pack (#2 or 20/30 grade) = 78 - 86 ft bgs
Bentonite (3/8" chips) = 75 - 78 ft bgs
Grout = 120 gallons

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	374082.FI.FI.69	IR69-GW28IW	Sheet 1 of 2

SOIL BORING LOG

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic Geoprobe 8140DT rig - 8" casing to 40' bgs X 6" casing X 4" inner core**

WATER LEVELS : 30.72 ft **START** : 3/16/2010 8:30 hrs. **END** : 3/16/2010 11:30 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.)	COMMENTS (DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.)	PID (ppm) HS	PID (ppm) BZ
0				0 - 15 SW SAND moist, light brownish gray (10YR 6/2), loose, well graded			0
						2.3	
5	0/20	0/15	R1				0
						2.9	0
10							
15				15 - 17 SC clayey SAND moist to wet, very pale brown (10YR 7/4), loose to medium dense, fine grained, poorly graded		NM	0
				18.5 - 30 CL silty CLAY moist, bluish gray (gley 2 5/1), stiff, medium to high plasticity		NM	
20	20/40	20/20	NA				
25						NM	0
30							

Legend

PID - Photo-ionization detector

BZ - Breathing Zone

HS - Head Space

NM - Not Measured

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

CH2MHILL	PROJECT NUMBER 374082.FI.FI.69	BORING NUMBER IR69-GW28IW	Sheet 2 of 2

SOIL BORING LOG (continued)

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU - 14 Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL** **Driller:** David Chamblee

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic Geoprobe 8140DT rig - 8" casing to 40' bgs X 6" casing X 4" inner core**

WATER LEVELS : 30.72 ft **START** : 3/15/2010 11:00 hrs. **END** : 3/16/2010 11:30 hrs. LOGGER : **R. Gomez/SAN**

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (IN)	#/TYPE	SOIL DESCRIPTION (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.)	COMMENTS (DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TIME TESTS, AND INSTRUMENTATION.)	PID (ppm) HS	PID (ppm) BZ
30				30 - 32 SC clayey SAND wet, dark bluish gray (gley 2 4/1), loose to medium dense, well graded, some silt		NM	
				32 - 35 SW SAND wet, alternating layers of red (2.5YR 4/6), bluish gray (gley 2 5/1), and yellowish brown (10YR 5/8), loose to medium dense, 20 to 30% shell fragments (< 1/4" in size), well graded			0
35	20/40	20/20 continue	NA	35 - 40 SW SAND wet, brownish yellow (10YR 5/8), medium dense, well graded, 20-30% shell fragments, pockets of cemented sand (not continuous along run)		NM	
40				40 - 46 SC clayey SAND wet, brownish yellow (10YR 6/6), loose to medium dense, poorly graded, fine grained sand, gray mottling at base	Advanced 8" override casing to 40' bgs	NM	0
45	40/55	15/15	NA	46 - 56.5 SM silty SAND moist to wet, bluish gray (gley 2 5/1), poorly graded, fine grained, 5-10% shell fragments (<1" in size)		NM	
50						NM	0
55				Borehole TD = 56.5 feet bgs Well TD = 55 feet bgs		NM	
60							

Well Construction Summary

Screen (10 slot) = 50 - 55 ft bgs
Casing Riser (2", Sch 40 PVC) = +3 - 50 ft bgs
Filter Pack (#2 or 20/30 grade) = 47 - 56 ft bgs
Bentonite (3/8" chips) = 45 - 47 ft bgs
Grout = 60 gallons

Legend
PID - Photo-ionization detector
BZ - Breathing Zone
HS - Head Space
NM - Not Measured

Generated by: R. Gomez/SAN
Reviewed by: D. Lubell/RDU

PROJECT NUMBER:	BORING NUMBER:
386390.FI.MW	IR69-MW30IW SHEET 1 OF 2

Soil Boring Log

PROJECT : Site 69, Operable Unit No.14 LOCATION : MCB Camp Lejeune, NC

CLIENT : NAVFAC DRILLING CONTRACTOR : Major Drilling

ELEVATION : TBD DRILLING METHOD AND EQUIPMENT : Rotary Sonic

COORDINATES : TBD START: 02/18/2011 END: 02/18/2011 LOGGER : D. Lubell

DEPTH BELOW GROUND SURFACE (ft)	INTERVAL (ft) / Sample Type	RECOVERY (ft)	USCS	GRAPHIC LOG	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR,MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, & INSTRUMENTATION	FID Results (ppm)	WELL DIAGRAM
	0.0				**SAND (SP)**: Tan, fine grained, slightly moist			2" Sched. 40 PVC Riser Bentonite grout seal
	HA-1	60.0	SP				NM	
5	5.0				**CLAYEY SAND (SC)**: Brown, medium to fine grained, moist			
	R-1	24.0	SC				0	
10	10.0							
	R-2	48.0					0	
			CL		**SANDY CLAY (CL)**: Brown, fine grained, poorly graded, stiff, wet			
15	15.0				**CLAYEY SAND (SC)**: Brown, fine grained, poorly graded, stiff			
	R-3	36.0	SC				0	
20	20.0							
	R-4	60.0					0	
			CL		**SANDY CLAY (CL)**: Brown, fine grained, plastic, medium stiff			
25	25.0		CL		**SANDY CLAY (CL)**: Reddish brown, fine grained, plastic, soft			
	R-5	60.0	SM		**SILTY SAND (SM)**: Olive gray, fine grained, poorly graded, medium dense, 10% shell fragments		0.3	
30	30.0							
					Soil Description on next page			

PROJECT NUMBER:	BORING NUMBER:
386390.FI.MW	IR69-MW30IW SHEET 2 OF 2

Soil Boring Log

PROJECT : Site 69, Operable Unit No.14 LOCATION : MCB Camp Lejeune, NC

CLIENT : NAVFAC DRILLING CONTRACTOR : Major Drilling

ELEVATION : TBD DRILLING METHOD AND EQUIPMENT : Rotary Sonic

COORDINATES : TBD START: 02/18/2011 END: 02/18/2011 LOGGER : D. Lubell

DEPTH BELOW GROUND SURFACE (ft)	INTERVAL (ft) / Sample Type	RECOVERY (ft)	USCS	GRAPHIC LOG	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR,MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, & INSTRUMENTATION	FID Results (ppm)	WELL DIAGRAM
	R-6	60.0			**SILTY SAND (SM)**: Olive gray, fine grained, poorly graded, medium dense, trace clay, 5% shell fragments		0.3	Bentonite annular seal
35	35.0							
	R-7	60.0	SM				0.4	No.1A Silica sand filter pack
40	40.0							2" Sched. 40 PVC Well screen (0.010 slotted)
	R-8	60.0					0.2	
45	45.0					Boring terminated at 45 ft bgs		
50								
55								
60								

PROJECT NUMBER:	BORING NUMBER:
386390.FI.MW	IR69-MW29IW SHEET 1 OF 2

Soil Boring Log

PROJECT : Site 69, Operable Unit No.14 | LOCATION : MCB Camp Lejeune, NC

CLIENT : NAVFAC | DRILLING CONTRACTOR : Major Drilling

ELEVATION : TBD | DRILLING METHOD AND EQUIPMENT : Rotary Sonic

COORDINATES : TBD | START: 02/19/2011 | END: 02/19/2011 | LOGGER : D. Lubell

DEPTH BELOW GROUND SURFACE (ft)	INTERVAL (ft) / Sample Type	RECOVERY (ft)	USCS	GRAPHIC LOG	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR,MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, & INSTRUMENTATION	FID Results (ppm)	WELL DIAGRAM
	0.0		SP		**SAND (SP)**: Olive green/brown, fine grained, poorly graded			2" Sched. 40 PVC Riser Bentonite grout seal
	HA-1	60.0	SP		**SAND (SP)**: Brown, fine grained, poorly graded, slighly moist		NM	
5	5.0							
	R-1	12.0					0.1	
			SC		**CLAYEY SAND (SC)**: Brown, fine grained, medium dense to dense, slightly moist			
10	10.0							
	R-2	60.0	CL		**SANDY CLAY (CL)**: Brown, fine grained, slighly moist		0.2	
			CL		**SILTY CLAY (CL)**: Brown, medium stiff, low plasticity, slighly moist, little fine grained sand			
15	15.0							
	R-3	60.0			**SILTY CLAY (CL)**: Olive green, medium stiff, medium plasticity, wet		0.2	
20	20.0							
	R-4	60.0	CL				0.4	
25	25.0							
	R-5	60.0	ML		**CLAYEY SILT (ML)**: Gray/reddish brown, soft, low plasticity, with medium to fine grained black sand increasing with depth		0.1	
30	30.0							
					Soil Description on next page			

PROJECT NUMBER:	BORING NUMBER:
386390.FI.MW	IR69-MW29IW SHEET 2 OF 2

Soil Boring Log

PROJECT : Site 69, Operable Unit No.14 | LOCATION : MCB Camp Lejeune, NC

CLIENT : NAVFAC | DRILLING CONTRACTOR : Major Drilling

ELEVATION : TBD | DRILLING METHOD AND EQUIPMENT : Rotary Sonic

COORDINATES : TBD | START: 02/19/2011 | END: 02/19/2011 | LOGGER : D. Lubell

DEPTH BELOW GROUND SURFACE (ft)	INTERVAL (ft) / Sample Type	RECOVERY (ft)	USCS	GRAPHIC LOG	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR,MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, & INSTRUMENTATION	FID Results (ppm)	WELL DIAGRAM
	R-6	60.0	SM		**SILTY SAND (SM)**: Dark gray, medium to fine grained, partially cemented sand fragmentsmostly 1/4-1/2" and up to <3" diameter, 60% shell fragments		0.1	
35	35.0		SM		**SILTY SAND (SM)**: Dark gray,medium to fine grained, 20% shell fragments			
	R-7	60.0	LM		**SANDY LIMESTONE (LM)**: Gray, partially cemented sand and fossiliferous limestone, mostly bivalves, limestone partings up to 3" diameter, cemented sands < 1/2" diameter		0.4	
40	40.0							
	R-8	60.0	SM		**SILTY SAND (SM)**: Gray, fine grained, medium dense, 10-15% shell fragments		0.4	
45	45.0							
	R-9	12.0	SM		**SILTY SAND (SM)**: Gray, fine grained, medium dense, 10% shell fragments		0.1	
50	50.0							
	R-10	60.0	SM		**SILTY SAND (SM)**: Gray, fine grained, medium dense, trace shell fragments <5%		0.1	Bentonite annular seal No.1A Silica sand filter pack
55	55.0							2" Sched. 40 PVC Well screen (0.010 slotted)
	R-11	60.0					0.1	
60	60.0					Boring terminated at 60 ft bgs		

PROJECT NUMBER:	BORING NUMBER:
386390.FI.MW	IR69-MW11DD SHEET 1 OF 4

Soil Boring Log

PROJECT : Site 69, Operable Unit No.14 | LOCATION : MCB Camp Lejeune, NC

CLIENT : NAVFAC | DRILLING CONTRACTOR : Major Drilling

ELEVATION : TBD | DRILLING METHOD AND EQUIPMENT : Rotary Sonic

COORDINATES : TBD | START: 02/15/2011 | END: 02/16/2011 | LOGGER : D. Lubell

DEPTH BELOW GROUND SURFACE (ft)	INTERVAL (ft) / Sample Type	RECOVERY (ft)	USCS	GRAPHIC LOG	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR,MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, & INSTRUMENTATION	FID Results (ppm)	WELL DIAGRAM
	0.0				:			Monument casing secured in concrete 2" Sched. 40 PVC Riser
	HA-1	60.0					NM	
5	5.0							
			SC		**CLAYEY SAND (SC)**: Dark yellowish brown, mediume grained, poorly graded, loose, dry			
			CL		**SANDY CLAY (CL)**: Yellowish brown, light gray mottling (20%), stiff, high plasticity, moist			
	NA	NA					NM	
			SC		**CLAYEY SAND (SC)**: Brown, yellowish brown mottling (10%), poorly graded, loose, trace silts, wet			
10	10.0							
			CL		**SILTY CLAY (CL)**: Dark bluish gray, stiff, high plasticity, moist			
	NA	NA					NM	
15	15.0							
	NA	NA					NM	
20	20.0							
			CL		**SILTY CLAY (CL)**: Dark bluish gray, stiff, moderate to high plasticity, moist			
	NA	NA					NM	
25	25.0							
	NA	NA					NM	
			SC		**CLAYEY SAND (SC)**: Dark bluish gray, medium grained, medium dense, none to slightly plastic, wet			
30	30.0							

PROJECT NUMBER:	BORING NUMBER:
386390.FI.MW	IR69-MW11DD SHEET 2 OF 4

Soil Boring Log

PROJECT : Site 69, Operable Unit No.14 LOCATION : MCB Camp Lejeune, NC

CLIENT : NAVFAC DRILLING CONTRACTOR : Major Drilling

ELEVATION : TBD DRILLING METHOD AND EQUIPMENT : Rotary Sonic

COORDINATES : TBD START: 02/15/2011 END: 02/16/2011 LOGGER : D. Lubell

DEPTH BELOW GROUND SURFACE (ft)	INTERVAL (ft) / Sample Type	RECOVERY (ft)	USCS	GRAPHIC LOG	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR,MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, & INSTRUMENTATION	FID Results (ppm)	WELL DIAGRAM
	NA	NA	SC		**CLAYEY SAND (SC)**: Bluish gray to dark bluish gray, medium to fine grained, medium dense to dense, well graded, approximately 80% broken fossilized bivalve shells <2"		NM	
35	35.0							
	NA	NA					NM	
40	40.0							
	NA	NA	SM		**SILTY SAND (SM)**: Dark greenish gray, fine grained, poorly graded, loose to medium dense, trace shell fragments <1/2" diameter		NM	
45	45.0							
	NA	NA					NM	
50	50.0							
	NA	NA					0	
55	55.0							
	NA	NA					0	
60	60.0							

PROJECT NUMBER:	BORING NUMBER:
386390.FI.MW	IR69-MW11DD SHEET 3 OF 4

Soil Boring Log

PROJECT : Site 69, Operable Unit No.14 | LOCATION : MCB Camp Lejeune, NC

CLIENT : NAVFAC | DRILLING CONTRACTOR : Major Drilling

ELEVATION : TBD | DRILLING METHOD AND EQUIPMENT : Rotary Sonic

COORDINATES : TBD | START: 02/15/2011 | END: 02/16/2011 | LOGGER : D. Lubell

DEPTH BELOW GROUND SURFACE (ft)	INTERVAL (ft) / Sample Type	RECOVERY (ft)	USCS	GRAPHIC LOG	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR,MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, & INSTRUMENTATION	FID Results (ppm)	WELL DIAGRAM
	NA	NA			**SILTY SAND (SM)**: Dark greenish gray, fine grained, poorly graded, loose to medium dense, trace shell fragments <1/2" diameter		0	
65	65.0							
	NA	NA			**SANDY LIMESTONE**: Bluish gray, 60% limestone partings, 40% cemented sand, well graded, fine to coarse grained, broken shell fragments		0	
70	70.0							
	NA	NA					0	
75	75.0				**SILTY SAND (SM)**: Greenish gray, medium to fine grained, well graded, medium dense			
	NA	NA	SM				0	
80	80.0							
	R-1	60.0			**SILTY SAND (SM)**: Olive green/gray, fine grained, medium dense, trace shell fragments <1/16"		0	
85	85.0							
	R-1	60.0					0	
90	90.0							
	R-1	60.0					0	

PROJECT NUMBER:	BORING NUMBER:
386390.FI.MW	IR69-MW11DD SHEET 4 OF 4

Soil Boring Log

PROJECT : Site 69, Operable Unit No.14 | LOCATION : MCB Camp Lejeune, NC

CLIENT : NAVFAC | DRILLING CONTRACTOR : Major Drilling

ELEVATION : TBD | DRILLING METHOD AND EQUIPMENT : Rotary Sonic

COORDINATES : TBD | START: 02/15/2011 | END: 02/16/2011 | LOGGER : D. Lubell

DEPTH BELOW GROUND SURFACE (ft)	INTERVAL (ft) / Sample Type	RECOVERY (ft)	USCS	GRAPHIC LOG	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR,MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, & INSTRUMENTATION	FID Results (ppm)	WELL DIAGRAM
95	95.0		SM		**SILTY SAND (SM)**: Olive green/gray, fine grained, medium dense, trace shell fragments <1/16"			
	R-1	60.0					0	
100	100.0							
	R-2	60.0					0	
105	105.0							
	R-2	60.0					0	Bentonite annular seal
110	110.0							
	R-2	60.0					0	No.1A Silica sand filter pack
115	115.0							2" Sched. 40 PVC Well screen (0.010 slotted)
	R-2	60.0					0	
120	120.0							
	121.0				:	Borehole overdrilled to 121 ft		
						Boring terminated at 121 ft bgs		

PROJECT NUMBER:	BORING NUMBER:
386390.FI.MW	IR69-MW04DD SHEET 1 OF 4

Soil Boring Log

PROJECT : Site 69, Operable Unit No.14 LOCATION : MCB Camp Lejeune, NC

CLIENT : NAVFAC DRILLING CONTRACTOR : Major Drilling

ELEVATION : TBD DRILLING METHOD AND EQUIPMENT : Rotary Sonic

COORDINATES : TBD START: 02/17/2011 END: 02/18/2011 LOGGER : D. Lubell

DEPTH BELOW GROUND SURFACE (ft)	INTERVAL (ft) / Sample Type	RECOVERY (ft)	USCS	GRAPHIC LOG	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR,MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, & INSTRUMENTATION	FID Results (ppm)	WELL DIAGRAM
	0.0		SP		**SAND (SP)**: Light brown/tan, fine grained, slightly moist, loose			2" Sched. 40 PVC Riser Bentonite grout seal
	HA-1	60.0					NM	
			SP		**SAND (SP)**: Dark brown, trace silt, wet			
5	5.0							
	NA	NA	SP		**SAND (SP)**: Brownish yellow, loose		NM	
10	10.0		SC		**CLAYEY SAND (SC)**: Grayish brown, medium grained, well graded, loose			
	NA	NA	ML		**SANDY SILT (ML)**: Bluish gray, loose, medium plasticity		NM	
15	15.0							
	NA	NA					NM	
20	20.0							
	NA	NA	CL		**SANDY CLAY (CL)**: Gray, high plasticity		NM	
25	25.0							
	NA	NA					NM	
30	30.0							

PROJECT NUMBER:	BORING NUMBER:
386390.FI.MW	IR69-MW04DD SHEET 2 OF 4

Soil Boring Log

PROJECT : Site 69, Operable Unit No.14 LOCATION : MCB Camp Lejeune, NC

CLIENT : NAVFAC DRILLING CONTRACTOR : Major Drilling

ELEVATION : TBD DRILLING METHOD AND EQUIPMENT : Rotary Sonic

COORDINATES : TBD START: 02/17/2011 END: 02/18/2011 LOGGER : D. Lubell

DEPTH BELOW GROUND SURFACE (ft)	INTERVAL (ft) / Sample Type	RECOVERY (ft)	USCS	GRAPHIC LOG	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR,MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, & INSTRUMENTATION	FID Results (ppm)	WELL DIAGRAM
	NA	NA			**SANDY CLAY (CL)**: Gray, high plasticity		NM	
35	35.0							
	NA	NA					NM	
40	40.0							
	NA	NA			**SAND (SP)**: Gray, medium to fine grained, shell fragments		NM	
45	45.0		SP					
	NA	NA					NM	
50	50.0							
	NA	NA			**SILTY SAND (SM)**: Gray, medium to fine grained, 20% shell fragments		0	
55	55.0		SP					
	NA	NA					0	
60	60.0							
					SILTY SAND (SM): Olive gray, medium to fine grained, medium dense			

PROJECT NUMBER:	BORING NUMBER:
386390.FI.MW	IR69-MW04DD SHEET 3 OF 4

Soil Boring Log

PROJECT : Site 69, Operable Unit No.14 LOCATION : MCB Camp Lejeune, NC

CLIENT : NAVFAC DRILLING CONTRACTOR : Major Drilling

ELEVATION : TBD DRILLING METHOD AND EQUIPMENT : Rotary Sonic

COORDINATES : TBD START: 02/17/2011 END: 02/18/2011 LOGGER : D. Lubell

DEPTH BELOW GROUND SURFACE (ft)	INTERVAL (ft) / Sample Type	RECOVERY (ft)	USCS	GRAPHIC LOG	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR,MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, & INSTRUMENTATION	FID Results (ppm)	WELL DIAGRAM
	NA	NA	SM		**SILTY SAND (SM)**: Olive gray, medium to fine grained, medium dense		0	
65	65.0							
	NA	NA					0	
70	70.0							
	R-1	60.0			**SANDY LIMESTONE (LM)**: Light gray, interbedded cemented sand to fossiliferous limestone, moderate to hard limestone partings up to 8"		0	
75	75.0							
	R-1	60.0					0	
80	80.0		SM		**SILTY SAND (SM)**: Olive gray, medium to fine grained, medium dense			
	R-1	60.0					0	
85	85.0							
	R-1	60.0					0	
90	90.0							
	R-2	60.0			**SILTY SAND (SM)**: Olive gray, fine grained, medium dense to loose		0	Bentonite / formation

PROJECT NUMBER:	BORING NUMBER:
386390.FI.MW	IR69-MW04DD SHEET 4 OF 4

Soil Boring Log

PROJECT : Site 69, Operable Unit No.14 | LOCATION : MCB Camp Lejeune, NC

CLIENT : NAVFAC | DRILLING CONTRACTOR : Major Drilling

ELEVATION : TBD | DRILLING METHOD AND EQUIPMENT : Rotary Sonic

COORDINATES : TBD | START: 02/17/2011 | END: 02/18/2011 | LOGGER : D. Lubell

DEPTH BELOW GROUND SURFACE (ft)	INTERVAL (ft) / Sample Type	RECOVERY (ft)	USCS	GRAPHIC LOG	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR,MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, & INSTRUMENTATION	FID Results (ppm)	WELL DIAGRAM
95	95.0		SM		**SILTY SAND (SM)**: Olive gray, fine grained, medium dense to loose			sand annular seal
	R-2	60.0					0	
100	100.0							
	R-2	60.0					0	
105	105.0							
	R-2	60.0					0	
110	110.0							No.1A Silica sand filter pack
	R-3	60.0					0	
115	115.0							2" Sched. 40 PVC Well screen (0.010 slotted)
	R-3	60.0					0	
120	120.0					Boring terminated at 120 ft bgs		

PROJECT NUMBER:	BORING NUMBER:
386390.FI.MW	IR69-MW31IW SHEET 1 OF 2

Soil Boring Log

PROJECT : Site 69, Operable Unit No.14 LOCATION : MCB Camp Lejeune, NC

CLIENT : NAVFAC DRILLING CONTRACTOR : Major Drilling

ELEVATION : TBD DRILLING METHOD AND EQUIPMENT : Rotary Sonic

COORDINATES : TBD START: 02/15/2011 END: 02/15/2011 LOGGER : D. Lubell

DEPTH BELOW GROUND SURFACE (ft)	INTERVAL (ft) / Sample Type	RECOVERY (ft)	USCS	GRAPHIC LOG	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR,MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, & INSTRUMENTATION	FID Results (ppm)	WELL DIAGRAM
	0.0				**SAND (SP)**: Tan, fine grained, slightly moist			2" Sched. 40 PVC Riser Bentonite grout seal
	HA-1	60.0	SP				0	
5	5.0							
			CL		**SANDY CLAY (CL)**: Tan, fine grained, slightly moist, stiff			
	R-1	36.0	SC		**CLAYEY SAND (SC)**: Tan, fine grained, slightly moist, loose		5.4	
10	10.0							
			ML		**SANDY SILT (ML)**: Tan, fine grained, low plasticity, soft, wet			
	R-2	60.0					0	
			ML		**SANDY SILT (ML)**: Olive gray, fine grained, low plasticity, soft, trace clay			
15	15.0							
	R-3	60.0					0	
20	20.0							
			CL		**SILTY CLAY (CL)**: Olive gray, medium soft to soft			
	R-4	60.0					0	
25	25.0							
	R-5	60.0					0	
30	30.0				**SILTY CLAY (CL)**: Dark olive-gray, cemented sands, shell fragments <3" diameter			

PROJECT NUMBER:	BORING NUMBER:
386390.FI.MW	IR69-MW31IW SHEET 2 OF 2

Soil Boring Log

PROJECT : Site 69, Operable Unit No.14 LOCATION : MCB Camp Lejeune, NC

CLIENT : NAVFAC DRILLING CONTRACTOR : Major Drilling

ELEVATION : TBD DRILLING METHOD AND EQUIPMENT : Rotary Sonic

COORDINATES : TBD START: 02/15/2011 END: 02/15/2011 LOGGER : D. Lubell

DEPTH BELOW GROUND SURFACE (ft)	INTERVAL (ft) / Sample Type	RECOVERY (ft)	USCS	GRAPHIC LOG	SOIL DESCRIPTION SOIL NAME, USCS GROUP SYMBOL, COLOR,MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, & INSTRUMENTATION	FID Results (ppm)	WELL DIAGRAM
	R-6	60.0	CL		**SILTY CLAY (CL)**: Dark olive-gray, cemented sands, shell fragments <3" diameter		0	
35	35.0		LM		**SANDY LIMESTONE (LM)**: Gray, partially cemented sands, clay type matrix, abundant shell fragments <2" diameter			
	R-7	60.0					0.1	
40	40.0							
	R-8	60.0	SM		**SILTY SAND (SM)**: Gray, fine grained sand, medium dense, minor shell fragments		0	
45	45.0							
	R-9	60.0					0	Bentonite annular seal
50	50.0							
	R-10	60.0					0	No.1A Silica sand filter pack
55	55.0							2" Sched. 40 PVC Well screen (0.010 slotted)
	R-11	60.0					0	
60	60.0					Boring terminated at 60 ft bgs		

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3011-A

1. WELL CONTRACTOR:

Ricky Davis
Well Contractor (Individual) Name

SMP Services
Well Contractor Company Name

156-B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) IR69-GW04-DW

3. WELL USE (Check One Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3-9-2010

4. WELL LOCATION:

Camp Lejeune Site 69 Off Hwy 210
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Jacksonville COUNTY Onslow

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐ Slope ☐ Valley ☒ Flat ☐ Ridge ☐ Other

LATITUDE 34 ° 34 ' 46 " DMS **OR** DD

LONGITUDE 77 ° 25 ' 48 " DMS **OR** DD

Latitude/longitude source: ☒ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Camp Lejeune Site 69
Facility Name Facility ID# (if applicable)

Street Address

City or Town State Zip Code

Bob Lowder
Contact Name

Bldg 12 Post Lane (Room 232)
Mailing Address

Camp Lejeune NC 28542
City or Town State Zip Code

(910) 450-9607
Area code Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 90

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☒

c. **WATER LEVEL** Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 2.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** _____ **METHOD OF TEST** _____

f. **DISINFECTION: Type** _____ **Amount** _____

g. **WATER ZONES** (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

	Depth		Diameter	Thickness/ Weight	Material
Top +2.5	Bottom 85	Ft.	2"	Sch 40	PVC
Top	Bottom	Ft.			
Top	Bottom	Ft.			

8. GROUT:

	Depth		Material	Method
Top 0	Bottom 80	Ft.	Cement	Tremie
Top	Bottom	Ft.		
Top	Bottom	Ft.		

9. SCREEN:

	Depth		Diameter	Slot Size	Material
Top 85	Bottom 90	Ft.	2 in.	.010 in.	PVC
Top	Bottom	Ft.	in.	in.	
Top	Bottom	Ft.	in.	in.	

10. SAND/GRAVEL PACK:

	Depth		Size	Material
Top 83	Bottom 90	Ft.	#2	Sand
Top 80	Bottom 83	Ft.	3/8	Bentonite
Top	Bottom	Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	5	Top Soil
5	15	Wet Sand
15	23	Silty Clay- moist
23	65	Wet Sand
65	78	Hard Cemented Sand
78	90	Sand w/ Little Clay

12. REMARKS:

Completed at surface with locking cover, concrete pad & posts
Well # IR69-GW04-DW

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR — DATE 3-22-2010

Ricky Davis
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3011-A

1. WELL CONTRACTOR:
Ricky Davis
Well Contractor (Individual) Name
SMD Services
Well Contractor Company Name
156-B Import Circle
Street Address
Huntsville AL 35806
City or Town State Zip Code
(256) 852-7000
Area code Phone number

2. WELL INFORMATION:
WELL CONSTRUCTION PERMIT#
OTHER ASSOCIATED PERMIT#(if applicable)
SITE WELL ID #(if applicable) IR69-GW04-IW

3. WELL USE (Check One Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)
DATE DRILLED 3-10-2010

4. WELL LOCATION:
Camp Lejeune Site 69 off Hwy 210
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)
CITY: Jacksonville COUNTY Onslow
TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐ Slope ☐ Valley ☒ Flat ☐ Ridge ☐ Other
LATITUDE 34 ° 34 ' 46 " DMS **OR** DD
LONGITUDE 77 ° 25 ' 48 " DMS **OR** DD
Latitude/longitude source: ☒ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)
Camp Lejeune Site 69
Facility Name Facility ID# (if applicable)
Street Address
City or Town State Zip Code
Bob Lowder
Contact Name
Bldg 12 Post Lane (Room 232)
Mailing Address
Jacksonville NC 28542
City or Town State Zip Code
(910) 450-9607
Area code Phone number

6. WELL DETAILS:
a. **TOTAL DEPTH:** 50'
b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☒
c. **WATER LEVEL** Below Top of Casing: FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 2.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.
e. **YIELD (gpm):** **METHOD OF TEST**
f. **DISINFECTION: Type** **Amount**
g. **WATER ZONES** (depth):
Top Bottom Top Bottom
Top Bottom Top Bottom
Top Bottom Top Bottom

7. CASING:	Depth		Diameter	Thickness/ Weight	Material
Top +2.5	Bottom 45	Ft.	2"	Sch 40	PVC
Top	Bottom	Ft.			
Top	Bottom	Ft.			

8. GROUT:	Depth		Material	Method
Top 0	Bottom 40	Ft.	Cement	Tremie
Top	Bottom	Ft.		
Top	Bottom	Ft.		

9. SCREEN:	Depth		Diameter	Slot Size	Material
Top 45	Bottom 50	Ft.	2 in.	.010 in.	PVC
Top	Bottom	Ft.	in.	in.	
Top	Bottom	Ft.	in.	in.	

10. SAND/GRAVEL PACK:	Depth		Size	Material
Top 43	Bottom 50	Ft.	#2	Sand
Top 40	Bottom 43	Ft.	3/8	Bentonite
Top	Bottom	Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	5	Top Soil
5	10	Wet Sand
10	18	Moist Clay
18	23	Sand w/ little clay
23	25	Clay w/ Sand
25	50	Moist Sand

12. **REMARKS:** Completed at surface with locking cover, concrete pad & posts
Well # IR69-GW04-IW

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE 3-22-2010
Ricky Davis
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3011-A

1. WELL CONTRACTOR:

Ricky Davis
Well Contractor (Individual) Name

SMD Services
Well Contractor Company Name

156-B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) IR69-GW05DW

3. WELL USE (Check One Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3-4-2010

4. WELL LOCATION:

Camp Lejeune Site 69 off Hwy 210
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Jacksonville COUNTY Onslow

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐ Slope ☐ Valley ☒ Flat ☐ Ridge ☐ Other

LATITUDE 34 ° 31 ' 48 " DMS **OR** DD

LONGITUDE 77 ° 25 ' 51 " DMS **OR** DD

Latitude/longitude source: ☒ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Camp Lejeune Site 69
Facility Name Facility ID# (if applicable)

Street Address

City or Town State Zip Code

Bob Lowder
Contact Name

Bldg 12 Post Lane (Room 232)
Mailing Address

Camp Lejeune NC 28542
City or Town State Zip Code

(910) 450-9607
Area code Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 90'

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☒

c. **WATER LEVEL** Below Top of Casing: FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 2.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** **METHOD OF TEST**

f. **DISINFECTION: Type** **Amount**

g. **WATER ZONES** (depth):
Top Bottom Top Bottom
Top Bottom Top Bottom
Top Bottom Top Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top +2.5	Bottom 85 Ft.	2"	Sch 40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 79 Ft.	cement	tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 85	Bottom 90 Ft.	2 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 82	Bottom 90 Ft.	#2	Sand
Top 79	Bottom 82 Ft.	3/8	bentonite
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	5	Top Soil
5	30	Moist Sandy Silt
30	39	Sandy Clay
39	50	Moist Clayey sand
50	75	Wet Silty Sand
75	77	Cemented Sand
77	90	Wet Silty Sand

12. REMARKS:

Completed with locking cover, concrete pad & post
Well # IR69-GW05DW

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR 3-22-2010 DATE

Ricky Davis
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3011-A

1. WELL CONTRACTOR:

Ricky Davis
Well Contractor (Individual) Name

SMD Services
Well Contractor Company Name

156-B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) IR69-GW05-IW

3. WELL USE (Check One Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3-6-2010

4. WELL LOCATION:

Camp Lejeune Site 69 off Hwy 210
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Jacksonville COUNTY Onslow

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐Slope ☐Valley ☒Flat ☐Ridge ☐Other

LATITUDE 34 ° 34 ' 48 " DMS **OR** DD

LONGITUDE 77 ° 25 ' 51 " DMS **OR** DD

Latitude/longitude source: ☒GPS ☐Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Camp Lejeune Site 69
Facility Name Facility ID# (if applicable)

Street Address

City or Town State Zip Code

Bob Lowder
Contact Name

Bldg 12 Post Lane (Room 232)
Mailing Address

Camp Lejeune NC 28542
City or Town State Zip Code

(910) 450-9607
Area code Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 60'

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☒

c. **WATER LEVEL** Below Top of Casing: FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 2.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** **METHOD OF TEST**

f. **DISINFECTION: Type** **Amount**

g. **WATER ZONES** (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top +2.5	Bottom 55 Ft.	2"	Sch 40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 50 Ft.	Cement	Tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 55	Bottom 60 Ft.	2 in.	.010 in.	PVC
Top	Bottom Ft. in.		in.	
Top	Bottom Ft. in.		in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 53	Bottom 60 Ft.	#2	Sand
Top 50	Bottom 53 Ft.	3/8	Bentonite
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	5	Top Soil
5	12	Moist Sand
12	15	Silty Clay
15	22	Wet Sand
22	60	Clay w/ little sand

12. REMARKS:

Complete at surface with locking cover, concrete pad & posts
Well # IR69-GW05-IW

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE 3-22-2010

Ricky Davis
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3011-A

1. WELL CONTRACTOR:

Ricky Davis
Well Contractor (Individual) Name

SMP Services
Well Contractor Company Name

156-B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) IR69-GW09-DW

3. WELL USE (Check One Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)

DATE DRILLED 2-24-10

4. WELL LOCATION:

Camp Lejeune Site 69 off Hwy 210
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Jacksonville COUNTY Onslow

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐Slope ☐Valley ☒Flat ☐Ridge ☐Other

LATITUDE 34 ° 34 ' 50 " DMS **OR** DD

LONGITUDE 77 ° 25 ' 46 " DMS **OR** DD

Latitude/longitude source: ☒GPS ☐Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Camp Lejeune Site 69
Facility Name Facility ID# (if applicable)

Street Address

City or Town State Zip Code

Bob Lowder
Contact Name

Bldg 12 Post Lane (Room 232)
Mailing Address

Camp Lejeune NC 28542
City or Town State Zip Code

(910) 450-9607
Area code Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 70

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☒

c. **WATER LEVEL** Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** +2.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** _____ **METHOD OF TEST** _____

f. **DISINFECTION: Type** _____ **Amount** _____

g. **WATER ZONES** (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top +2.5	Bottom 65 Ft.	2"	Sch 40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 60 Ft.	Cement	Tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 65	Bottom 70 Ft.	2 in.	.010 in.	PVC
Top	Bottom Ft. in.	in.	in.	
Top	Bottom Ft. in.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 63	Bottom 70 Ft.	#2	Sand
Top 60	Bottom 63 Ft.	3/8	bentonite
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	5	Top Soil
5	10	Moist-Wet Sand
10	41	Silty Clay
41	50	Wet Sand
50	70	Wet Silty Sand

12. REMARKS:

Complete with locking cover, Concrete pad & posts
Well # IR69-GW09 DW

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

[signature] 3-22-2010
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

Ricky Davis
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3011-A

1. WELL CONTRACTOR:

Ricky Davis
Well Contractor (Individual) Name

SMD Services
Well Contractor Company Name

156-B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) JR 69-GW09-IW

3. WELL USE (Check One Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)

DATE DRILLED 2-25-2010

4. WELL LOCATION:

Camp Lejeune Site 69 off Hwy 210
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Jacksonville COUNTY Onslow

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐ Slope ☐ Valley ☒ Flat ☐ Ridge ☐ Other

LATITUDE 34 ° 34 ' 51 " DMS **OR** DD

LONGITUDE 77 ° 25 ' 46 " DMS **OR** DD

Latitude/longitude source: ☒ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Camp Lejeune Site 69
Facility Name Facility ID# (if applicable)

Street Address

City or Town State Zip Code

Bob Lowder
Contact Name

Bldg 12 Post Lane (Room 232)
Mailing Address

Camp Lejeune NC 28542
City or Town State Zip Code

(910) 450-9607
Area code Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 40'

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☒

c. **WATER LEVEL** Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 2.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** _____ **METHOD OF TEST** _____

f. **DISINFECTION: Type** _____ **Amount** _____

g. **WATER ZONES** (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

	Depth		Diameter	Thickness/ Weight	Material
Top +2.5	Bottom 35	Ft.	2"	Sch 40	PVC
Top	Bottom	Ft.			
Top	Bottom	Ft.			

8. GROUT:

	Depth		Material	Method
Top 0	Bottom 30	Ft.	Cement	Tremie
Top	Bottom	Ft.		
Top	Bottom	Ft.		

9. SCREEN:

	Depth		Diameter		Slot Size		Material
Top 35	Bottom 40	Ft.	2	in.	.010	in.	PVC
Top	Bottom	Ft.		in.		in.	
Top	Bottom	Ft.		in.		in.	

10. SAND/GRAVEL PACK:

	Depth		Size	Material
Top 33	Bottom 40	Ft.	#2	Sand
Top 30	Bottom 33	Ft.	3/8	bentonite
Top	Bottom	Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	5	Top Soil
5	10	Moist-Wet Sand
10	40	Silty Clay

12. REMARKS:

Complete with locking cover, concrete pad & posts
Well # JR 69-GW09-IW

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

[signature] 3-22-2010
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

Ricky Davis
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3011-A

1. WELL CONTRACTOR:

Ricky Davis
Well Contractor (Individual) Name

SMA Services
Well Contractor Company Name

156-B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) IR69-GW11-OW

3. WELL USE (Check One Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3-2-2010

4. WELL LOCATION:

Camp Lejeune Site 69 off Hwy 210
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Jacksonville COUNTY Onslow

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐Slope ☐Valley ☒Flat ☐Ridge ☐Other

LATITUDE 34 ° 34 ' 43 " DMS **OR** DD

LONGITUDE 77 ° 25 ' 46 " DMS **OR** DD

Latitude/longitude source: ☒GPS ☐Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Camp Lejeune Site 69
Facility Name Facility ID# (if applicable)

Street Address

City or Town State Zip Code

Bob Lowder
Contact Name

Bldg 12 Post Lane (Room 232)
Mailing Address

Camp Lejeune NC 28542
City or Town State Zip Code

(910) 450-9607
Area code Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 80'

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☒

c. **WATER LEVEL** Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 2.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** _____ **METHOD OF TEST** _____

f. **DISINFECTION: Type** _____ **Amount** _____

g. **WATER ZONES** (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. **CASING:**

Depth		Diameter	Thickness/ Weight	Material
Top +2.5	Bottom 75 Ft.	2"	Sch 40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 70 Ft.	Cement	Tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. **SCREEN:**

Depth		Diameter	Slot Size	Material
Top 75	Bottom 80 Ft.	2 in.	.010 in.	PVC
Top	Bottom Ft. in.	in.	in.	
Top	Bottom Ft. in.	in.	in.	

10. **SAND/GRAVEL PACK:**

Depth		Size	Material
Top 73	Bottom 80 Ft.	#2	Sand
Top 70	Bottom 73 Ft.	3/8	bentonite
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	5	Top Soil
5	10	Wet Sand
10	15	Silty Clay
15	41	Sandy Clay - moist-wet
41	50	Wet Sand
50	80	Silty Sand w/ Clay

12. **REMARKS:**

Complete with locking cover, concrete pads & posts
Well # IR69-GW11-OW

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

[signature] 3-22-2010
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

Ricky Davis
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3011-A

1. WELL CONTRACTOR:

Ricky Davis
Well Contractor (Individual) Name

SMD Services
Well Contractor Company Name

156-B Import Circle
Street Address

Huntsville | AL | 35806
City or Town | State | Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) FR69-GW11IW

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3-2-2010

4. WELL LOCATION:

Camp Lejeune Site 69 off Hwy 210
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Jacksonville COUNTY Onslow

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐Slope ☐Valley ☒Flat ☐Ridge ☐Other

LATITUDE 34 ° 34 ' 42 " DMS **OR** DD

LONGITUDE 77 ° 25 ' 46 " DMS **OR** DD

Latitude/longitude source: ☒GPS ☐Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Camp Lejeune Site 69
Facility Name | Facility ID# (if applicable)

Street Address

City or Town | State | Zip Code

Bob Lowder
Contact Name

Bldg 12 Post Lane (Bldg 232)
Mailing Address

Camp Lejeune | NC | 28542
City or Town | State | Zip Code

(910) 450-9607
Area code Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 50'

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☒

c. **WATER LEVEL** Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 2.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** _____ **METHOD OF TEST** _____

f. **DISINFECTION: Type** _____ **Amount** _____

g. **WATER ZONES** (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top +2.5	Bottom 45 Ft.	2"	Sch 40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 40 Ft.	Cement	Tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 45	Bottom 50 Ft.	2 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 43	Bottom 50 Ft.	#2	Sand
Top 40	Bottom 43 Ft.	3/8	bentonite
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	5	Top Soil
5	10	Moist Sand
10	50	Silty Clay

12. REMARKS:

Complete with locking cover, concrete pad & posts
Well # FR69-GW11IW

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

RA Davis | 3-22-2010
SIGNATURE OF CERTIFIED WELL CONTRACTOR | DATE

Ricky Davis
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3011-A

1. WELL CONTRACTOR:

Ricky Davis
Well Contractor (Individual) Name

SMD Services
Well Contractor Company Name

156-B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) IR69 GW 13 DW

3. WELL USE (Check One Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3-17-2010

4. WELL LOCATION:

Camp Lejeune Site 69 OFF Hwy 210
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Jacksonville COUNTY Onslow

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐Slope ☐Valley ☒Flat ☐Ridge ☐Other

LATITUDE 34 ° 34 ' 46 " DMS **OR** DD

LONGITUDE 77 ° 25 ' 45 " DMS **OR** DD

Latitude/longitude source: ☒GPS ☐Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Camp Lejeune Site 69
Facility Name Facility ID# (if applicable)

Street Address

City or Town State Zip Code

Bob Lowder
Contact Name

Bldg 12 Post Lane (Room 232)
Mailing Address

Camp Lejeune NC 28542
City or Town State Zip Code

(910) 450-9607
Area code Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 90'

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☒

c. **WATER LEVEL** Below Top of Casing: FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** +2.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** **METHOD OF TEST**

f. **DISINFECTION: Type** **Amount**

g. **WATER ZONES** (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top +2.5	Bottom 85 Ft.	2"	Sch 40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 79 Ft.	Cement	Tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 85	Bottom 90 Ft.	2 in.	.010 in.	PVC
Top	Bottom Ft. in.		in.	
Top	Bottom Ft. in.		in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 82	Bottom 90 Ft.	#2	Sand
Top 79	Bottom 82 Ft.	3/8	Bentonite
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	5	Top Soil
5	10	Moist Sand
10	30	Silty Clay
30	60	Sandy Clay
60	63	Cemented Sand
63	73	Clay w/ little sand
73	77	Cemented Sand
77	90	Silty Sand

12. REMARKS:

Complete with locking cover, concrete pad & posts
Well # IR69 GW 13 DW

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

[signature] 3-22-2010
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

Ricky Davis
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3011-A

1. WELL CONTRACTOR:

Ricky Davis
Well Contractor (Individual) Name

SMD Services
Well Contractor Company Name

156-B Import Circle
Street Address

Huntsville | AL | 35806
City or Town | State | Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT# _____

OTHER ASSOCIATED PERMIT#(if applicable) _____

SITE WELL ID #(if applicable) IR69GW26DW

3. WELL USE (Check One Box) Monitoring ☒ Municipal/Public ☐

Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐

Irrigation ☐ Other ☐ (list use) _____

DATE DRILLED 3-14-2010

4. WELL LOCATION:

Camp Lejeune Site 69 OFF Hwy 210
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Jacksonville COUNTY Onslow

TOPOGRAPHIC / LAND SETTING: (check appropriate box)

☐ Slope ☐ Valley ☒ Flat ☐ Ridge ☐ Other _____

LATITUDE 34 ° 34 ' 45 " DMS OR _____ DD

LONGITUDE 77 ° 25 ' 52 " DMS OR _____ DD

Latitude/longitude source: ☒ GPS ☐ Topographic map

(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Camp Lejeune Site 69
Facility Name | Facility ID# (if applicable)

Street Address

City or Town | State | Zip Code

Bob Lowder
Contact Name

Bldg 12 Post Lane (Room 232)
Mailing Address

Camp Lejeune | NC | 28542
City or Town | State | Zip Code

(910) 450-9607
Area code Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 90'

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☒

c. **WATER LEVEL** Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** +2.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** _____ **METHOD OF TEST** _____

f. **DISINFECTION: Type** _____ **Amount** _____

g. **WATER ZONES** (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top +2.5	Bottom 85 Ft.	2"	Sch 40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 80 Ft.	Cement	Tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 85	Bottom 90 Ft.	2 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 83	Bottom 90 Ft.	#2	Sand
Top 80	Bottom 83 Ft.	3/8	Bentonite
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	5	Top Soil
5	13	Moist Sand
13	30	Silty Clay
30	63	Sandy Clay
63	70	Clay w/ little sand
70	75	Cemented Sand
75	90	Silty Sand

12. REMARKS:

Complete with locking cover, concrete pad & posts
Well # IR69GW26DW

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

R. Davis | 3-22-2010
SIGNATURE OF CERTIFIED WELL CONTRACTOR | DATE

Ricky Davis
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3011-A

1. WELL CONTRACTOR:

Ricky Davis
Well Contractor (Individual) Name

SMD Services
Well Contractor Company Name

156-B Import Circle
Street Address

Huntsville | AL | 35806
City or Town | State | Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) IR69 GW 26 IW

3. WELL USE (Check One Box) Monitoring ☒ Municipal/Public ☐

Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐

Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3-14-2010

4. WELL LOCATION:

Camp Lejeune Site 69 OFF Hwy 210
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Jacksonville COUNTY Onslow

TOPOGRAPHIC / LAND SETTING: (check appropriate box)

☐Slope ☐Valley ☒Flat ☐Ridge ☐Other

LATITUDE 34 °34 ' 45 " DMS **OR** DD

LONGITUDE 77 °25 ' 52 " DMS **OR** DD

Latitude/longitude source: ☒GPS ☐Topographic map

(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Camp Lejeune Site 69
Facility Name | Facility ID# (if applicable)

Street Address

City or Town | State | Zip Code

Bob Lowder
Contact Name

Bldg 12 Post Lane (Room 232)
Mailing Address

Camp Lejeune | NC | 28542
City or Town | State | Zip Code

(910) 450-9607
Area code Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 50

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☒

c. **WATER LEVEL** Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** +2.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** _____ **METHOD OF TEST** _____

f. **DISINFECTION: Type** _____ **Amount** _____

g. **WATER ZONES** (depth):

Top ____ Bottom ____ Top ____ Bottom ____
Top ____ Bottom ____ Top ____ Bottom ____
Top ____ Bottom ____ Top ____ Bottom ____

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top +2.5	Bottom 45 Ft.	2"	Sch 40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 40 Ft.	Cement	Tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 45	Bottom 50 Ft.	2 in.	.010 in.	PVC
Top	Bottom Ft. in.		in.	
Top	Bottom Ft. in.		in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 43	Bottom 50 Ft.	#2	Sand
Top 40	Bottom 43 Ft.	3/8	Bentonite
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	5	Top Soil
5	10	Moist Sand
10	15	Silty Clay
15	27	Sandy Clay
27	42	Stiff Clay
42	50	Wet Sand

12. REMARKS:

Complete with locking cover, concrete pad & posts
well # IR69 GW 26 IW

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

[signature] 3-22-2010
SIGNATURE OF CERTIFIED WELL CONTRACTOR | DATE

Ricky Davis
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3011-A

1. WELL CONTRACTOR:

Ricky Davis
Well Contractor (Individual) Name

SMD Services
Well Contractor Company Name

156-B Import Circle
Street Address

Huntsville | AL | 35806
City or Town | State | Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) IR69-GW27-OW

3. WELL USE (Check One Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)

DATE DRILLED 2-28-2010

4. WELL LOCATION:

Camp Lejeune Site 69 off Hwy 210
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Jacksonville COUNTY Onslow

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐ Slope ☐ Valley ☒ Flat ☐ Ridge ☐ Other

LATITUDE 34 ° 34 ' 48 " DMS **OR** DD

LONGITUDE 77 ° 25 ' 45 " DMS **OR** DD

Latitude/longitude source: ☒ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Camp Lejeune Site 69
Facility Name | Facility ID# (if applicable)

Street Address

City or Town | State | Zip Code

Bob Lowder
Contact Name

Bldg 12 Post Lane (Room 232)
Mailing Address

Camp Lejeune | NC | 28542
City or Town | State | Zip Code

(910) 450-9607
Area code Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 75'

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☒

c. **WATER LEVEL** Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 2.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** _____ **METHOD OF TEST** _____

f. **DISINFECTION: Type** _____ **Amount** _____

g. **WATER ZONES** (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top +2.5	Bottom 70	Ft. 2"	Sch 40	PVC
Top	Bottom	Ft.		
Top	Bottom	Ft.		

8. GROUT:

Depth		Material	Method
Top 0	Bottom 64	Ft. Cement	Tremie
Top	Bottom	Ft.	
Top	Bottom	Ft.	

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 70	Bottom 75	Ft. 2 in.	.010 in.	PVC
Top	Bottom	Ft. in.	in.	
Top	Bottom	Ft. in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 67	Bottom 75	Ft. #2	Sand
Top 64	Bottom 67	Ft. 3/8	bentonite
Top	Bottom	Ft.	

11. DRILLING LOG

Top	Bottom	Formation Description
0	5	Top Soil
5	10	Wet Sand
10	15	Silty Clay
15	43	Wet-Moist Sand
43	50	Wet Sand
50	75	Silty Sand w/ Clay

12. REMARKS:

Complete with locking cover, concrete pad & posts
Well # IR69-GW27-OW

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

[signature] 3-22-2010
SIGNATURE OF CERTIFIED WELL CONTRACTOR | DATE

Ricky Davis
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3011-A

1. WELL CONTRACTOR:

Ricky Davis
Well Contractor (Individual) Name

SMD Services
Well Contractor Company Name

156-B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) IR69-GW-27IW

3. WELL USE (Check One Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3-1-2010

4. WELL LOCATION:

Camp Lejeune Site 69 off Hwy 210
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Jacksonville COUNTY Onslow

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐Slope ☐Valley ☒Flat ☐Ridge ☐Other

LATITUDE 34 ° 34 ' 48 " DMS **OR** DD

LONGITUDE 77 ° 25 ' 46 " DMS **OR** DD

Latitude/longitude source: ☒GPS ☐Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Camp Lejeune Site 69
Facility Name Facility ID# (if applicable)

Street Address

City or Town State Zip Code

Bob Lowder
Contact Name

Bldg 12 Post Lane (Room 232)
Mailing Address

Camp Lejeune NC 28542
City or Town State Zip Code

(910) 450-9607
Area code Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 40'

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☒

c. **WATER LEVEL** Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 2.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** _____ **METHOD OF TEST** _____

f. **DISINFECTION: Type** _____ **Amount** _____

g. **WATER ZONES** (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top +2.5	Bottom 35 Ft.	2"	Sch 40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 29 Ft.	Cement	Tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 35	Bottom 40 Ft.	2 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 33	Bottom 40 Ft.	#2	Sand
Top 29	Bottom 33 Ft.	3/8	bentonite
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	5	Top Soil
5	10	Moist Sand
10	40	Silty Clay

12. REMARKS:

Complete with locking cover, concrete pad & posts.
Well # IR69-~~[illegible]~~ GW27-IW

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

[signature] 3-22-2010
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

Ricky Davis
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3011-A

1. WELL CONTRACTOR:

Ricky Davis
Well Contractor (Individual) Name

SMD Services
Well Contractor Company Name

156-B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) IR69 GW 28 DW

3. WELL USE (Check One Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation☐ Other ☐ (list use)

DATE DRILLED 3-15-2010

4. WELL LOCATION:

Camp Lejeune Site 69 OFF Hwy 210
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Jacksonville COUNTY Onslow

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐Slope ☐Valley ☒Flat ☐Ridge ☐Other

LATITUDE 34 ° 34 ' 46 " DMS **OR** DD

LONGITUDE 77 ° 25 ' 40 " DMS **OR** DD

Latitude/longitude source: ☒GPS ☐Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Camp Lejeune Site 69
Facility Name Facility ID# (if applicable)

Street Address

City or Town State Zip Code

Bob Lowder
Contact Name

Bldg 12 Post Lane (Room 232)
Mailing Address

Camp Lejeune NC 28542
City or Town State Zip Code

(910) 450-9607
Area code Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 85'

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☒

c. **WATER LEVEL** Below Top of Casing: FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** +2.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** **METHOD OF TEST**

f. **DISINFECTION: Type** **Amount**

g. **WATER ZONES** (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top +2.5	Bottom 80 Ft.	2"	Sch40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 75 Ft.	Cement	Tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 80	Bottom 85 Ft.	2 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 78	Bottom 85 Ft.	#2	Sand
Top 75	Bottom 78 Ft.	3/8	Bentonite
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	5	Top Soil
5	10	Moist Sand
10	15	Silty Clay
15	27	Sandy Clay
27	70	Clay w/ some sand
70	76	Cemented Sand
76	81	Sandy Clay
81	85	Silty Sand

12. REMARKS:

Complete with locking cover, concrete pad & posts
well # IR 69 GW 28 DW

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

R Davis 3-22-2010
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

Ricky Davis
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3011-A

1. WELL CONTRACTOR:

Ricky Davis
Well Contractor (Individual) Name

SMD Services
Well Contractor Company Name

156-B Import Circle
Street Address

Huntsville | AL | 35806
City or Town | State | Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT#

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable) IR69 GW 28 IW

3. WELL USE (Check One Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)

DATE DRILLED 3-16-2010

4. WELL LOCATION:

Camp Lejeune Site 69 OFF Hwy 210
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Jacksonville COUNTY Onslow

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐Slope ☐Valley ☒Flat ☐Ridge ☐Other

LATITUDE 34 °34 ' 45 " DMS **OR** DD

LONGITUDE 77 °25 ' 40 " DMS **OR** DD

Latitude/longitude source: ☒GPS ☐Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Camp Lejeune Site 69
Facility Name | Facility ID# (if applicable)

Street Address

City or Town | State | Zip Code

Bob Lowder
Contact Name

Bldg 12 Post Lane (Room 232)
Mailing Address

Camp Lejeune | NC | 28542
City or Town | State | Zip Code

(910) 450-9607
Area code Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 55

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☒

c. **WATER LEVEL** Below Top of Casing: _____ FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** +2.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** _____ **METHOD OF TEST** _____

f. **DISINFECTION: Type** _____ **Amount** _____

g. **WATER ZONES** (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top +2.5	Bottom 50 Ft.	2"	Sch 40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 44 Ft.	Cement	Tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 50	Bottom 55 Ft.	2 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 47	Bottom 55 Ft.	#2	Sand
Top 44	Bottom 47 Ft.	3/8	Bentonite
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	5	Top Soil
5	10	Moist Sand
10	15	Silty Clay
15	27	Sandy Clay
27	41	Clay
41	55	Wet Sand

12. REMARKS:
Complete with locking cover, concrete pad & posts
Well # IR69 GW 28 FW

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

[signature] 3-22-2010
SIGNATURE OF CERTIFIED WELL CONTRACTOR | DATE

Ricky Davis
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 4078B

381726

1. WELL CONTRACTOR:
KEVIN B HEINRICH
Well Contractor (Individual) Name
MAJOR DRILLING ENVIRONMENTAL
Well Contractor Company Name
1565 Impont Circle
Street Address
HUNTSVILLE AL 35806
City or Town State Zip Code
(256) 852-7000
Area code Phone number

2. WELL INFORMATION:
WELL CONSTRUCTION PERMIT# N/A
OTHER ASSOCIATED PERMIT#(if applicable) N/A
SITE WELL ID #(if applicable) IR69 MW 29 IW

3. WELL USE (Check One Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)
DATE DRILLED 2-19-11

4. WELL LOCATION:
CAMP LEJEUNE
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)
CITY: JACKSONVILLE NC COUNTY ONSLOW
TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐ Slope ☐ Valley ☒ Flat ☐ Ridge ☐ Other
LATITUDE 34·34·42"N " DMS OR 3x.xxxxxxxx DD
LONGITUDE 77·25·43" W " DMS OR 7x.xxxxxxxx DD
Latitude/longitude source: ☒ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)
CAMP LEJEUNE MANNE CAMP BASE EMD/EQB
Facility Name Facility ID# (if applicable)
PSC Box 20004
Street Address
JACKSONVILLE NC 28542-20004
City or Town State Zip Code
CHANDY RYCHAK
Contact Name
SAME AS FACILITY
Mailing Address
City or Town State Zip Code
(910) 541-9607
Area code Phone number

6. WELL DETAILS:
a. TOTAL DEPTH: 60'
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
c. WATER LEVEL Below Top of Casing: 23.61 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 2.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.
e. YIELD (gpm): N/A METHOD OF TEST
f. DISINFECTION: Type N/A Amount
g. WATER ZONES (depth):
Top Bottom Top Bottom
Top Bottom Top Bottom
Top Bottom Top Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0'	Bottom 55'	Ft. 2"	Sch. 40	PVC
Top	Bottom	Ft.		
Top	Bottom	Ft.		

8. GROUT:

Depth		Material	Method
Top 0'	Bottom 50'	Ft. Cement/Bent	TREMIE
Top 50'	Bottom 53'	Ft. Bentonite chips	GRAVITY
Top	Bottom	Ft.	

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 55'	Bottom 60'	Ft. 2" in.	.010 in.	PVC
Top	Bottom	Ft. in.	in.	
Top	Bottom	Ft. in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 53'	Bottom 60'	Ft. 1A	SAND
Top	Bottom	Ft.	
Top	Bottom	Ft.	

11. DRILLING LOG

Top	Bottom	Formation Description
0	14'	Yellowish Silty Clay
14'	20	grey Silty Clay
20'	40'	grey to Brownish Silty Sand w/ gravel
40	60'	grey Silty SAND

12. REMARKS:

RECEIVED
MAR 04 2011
Information Processing Unit
DWQ/IPU

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE 2-19-11

WESLEY CASTEEL
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 4078B

391725

1. WELL CONTRACTOR:
Kevin B. Hornbuck
Well Contractor (Individual) Name
Major Drilling Environmental
Well Contractor Company Name
156 B Import Circle
Street Address
Huntsville AL 35806
City or Town State Zip Code
(256) 852-7000
Area code Phone number

2. WELL INFORMATION:
WELL CONSTRUCTION PERMIT# N/A
OTHER ASSOCIATED PERMIT#(if applicable) N/A
SITE WELL ID #(if applicable) IR 69 MW 04 DD

3. WELL USE (Check One Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)
DATE DRILLED 2-17-11

4. WELL LOCATION:
Camp Lejeune NC
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)
CITY: Jacksonville NC COUNTY Onslow
TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐Slope ☐Valley ☒Flat ☐Ridge ☐Other
LATITUDE 34.34.45"N * DMS OR 3x.xxxxxxxx DD
LONGITUDE 77.25.45"W * DMS OR 7x.xxxxxxxx DD
Latitude/longitude source: ☒GPS ☐Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)
Camp Lejeune Marine Corp Base EMD/EQB
Facility Name Facility ID# (if applicable)
PSC Box 20004
Street Address
Jacksonville NC 28542-20004
City or Town State Zip Code
Charity Rychak
Contact Name
Same as facility
Mailing Address
City or Town State Zip Code
(910) 451-9607
Area code Phone number

6. WELL DETAILS:
a. TOTAL DEPTH: 120'
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
c. WATER LEVEL Below Top of Casing: 28.3' FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 2.5' FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.
e. YIELD (gpm): N/A METHOD OF TEST
f. DISINFECTION: Type N/A Amount
g. WATER ZONES (depth):
Top Bottom Top Bottom
Top Bottom Top Bottom
Top Bottom Top Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0'	Bottom 115'	Ft. 2"	Sch 40	PVC
Top	Bottom	Ft.		
Top	Bottom	Ft.		

8. GROUT:

Depth		Material	Method
Top 0'	Bottom 92'	Ft. Cement/Bent.	Tremie
Top 92'	Bottom 110'	Ft. Bentonite chips	Gravity
Top	Bottom	Ft.	

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 115'	Bottom 120'	Ft. 2" in.	.010 in.	PVC
Top	Bottom	Ft. in.	in.	
Top	Bottom	Ft. in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 110'	Bottom 120'	Ft. #1A	Sand / native sand
Top	Bottom	Ft.	
Top	Bottom	Ft.	

11. DRILLING LOG

Top	Bottom	Formation Description
0'	2'	Sand
2'	18'	Brownish Silty Clay
18'	71'	Grey Silty Clay
		Silty Sand
71'	80'	Cemented Sand
80'	120'	Grey Fine Sand

RECEIVED
MAR 04 2011
Information Processing Unit
DWQ/BOG

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Kevin B. Hornbuck 2-18-11
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE
Wesley Castell
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 4078 B

301734

1. WELL CONTRACTOR:
KEVIN B. HEINRICH
Well Contractor (Individual) Name
MAJOR DRILLING ENVIRONMENTAL
Well Contractor Company Name
156 B Import Circle
Street Address
Huntsville AL 35806
City or Town State Zip Code
(256) 852-7000
Area code Phone number

2. WELL INFORMATION:
WELL CONSTRUCTION PERMIT# N/A
OTHER ASSOCIATED PERMIT#(if applicable) N/A
SITE WELL ID #(if applicable) IR69 MW 30 LW

3. WELL USE (Check One Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)
DATE DRILLED 2-18-11

4. WELL LOCATION:
CAMP LEJEUNE NC
(Street Name, Numbers) Community, Subdivision, Lot No., Parcel, Zip Code)
CITY: JACKSONVILLE NC COUNTY ONSLOW
TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐ Slope ☐ Valley ☒ Flat ☐ Ridge ☐ Other
LATITUDE 34·34·52" N " DMS OR 3X.XXXXXXXX DD
LONGITUDE 77·25·47" W " DMS OR 7X.XXXXXXXX DD
Latitude/longitude source: ☒ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map endattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)
CAMP LEJEUNE MARINE CORPS BASE EMD/EQB
Facility Name Facility ID# (if applicable)
PSC BOX 20004
Street Address
JACKSONVILLE NC 28542-20004
City or Town State Zip Code
Chandy Rychak
Contact Name
SAME AS FACILITY
Mailing Address
City or Town State Zip Code
(910) 451-9607
Area code Phone number

6. WELL DETAILS:
a. TOTAL DEPTH: 45'
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
c. WATER LEVEL Below Top of Casing: 22.14' FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 2.5' FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.
e. YIELD (gpm): N/A METHOD OF TEST
f. DISINFECTION: Type N/A Amount
g. WATER ZONES (depth):
Top Bottom Top Bottom
Top Bottom Top Bottom
Top Bottom Top Bottom

7. CASING:	Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 40'	Ft.	2"	Sch 40	PVC
Top	Bottom	Ft.			
Top	Bottom	Ft.			

8. GROUT:	Depth		Material	Method
Top 0'	Bottom 35'	Ft.	Cement/Bent	Tremie
Top 35'	Bottom 38'	Ft.	Bent Chips	Gravity
Top	Bottom	Ft.		

9. SCREEN:	Depth		Diameter	Slot Size	Material
Top 40'	Bottom 45'	Ft.	2" in.	.010 in.	PVC
Top	Bottom	Ft.	in.	in.	
Top	Bottom	Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth			Size	Material
Top 38'	Bottom 45'	Ft.	1A	SAND
Top	Bottom	Ft.		
Top	Bottom	Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	20'	Yellowish Silty Clay
20'	45'	gray Silty Sand

RECEIVED
MAR 04 2011
Information Processing Unit
DWQ/BOG

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE 2-18-11

WESLEY CASTELLE
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

301723

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 4078 B

1. WELL CONTRACTOR:
Kevin B. Heinrich
Well Contractor (Individual) Name
Major Drilling Environmental
Well Contractor Company Name
156 B Import Circle
Street Address
Huntsville AL 35806
City or Town State Zip Code
(256) 852-7000
Area code Phone number

2. WELL INFORMATION:
WELL CONSTRUCTION PERMIT# N/A
OTHER ASSOCIATED PERMIT#(if applicable) N/A
SITE WELL ID #(if applicable) IR69 MW #11 DD

3. WELL USE (Check One Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)
DATE DRILLED 2-16-11

4. WELL LOCATION:
Camp Lejeune NC
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)
CITY Jacksonville NC COUNTY Onslow
TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐ Slope ☐ Valley ☒ Flat ☐ Ridge ☐ Other
LATITUDE 34.34.44 N * DMS OR 3X.XXXXXXXX DD
LONGITUDE 77.25.46 W * DMS OR 7X.XXXXXXXX DD
Latitude/longitude source: ☒ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)
Camp Lejeun Marine Corp Base EMD/EQB
Facility Name Facility ID# (if applicable)
PSC Box 20004
Street Address
Jacksonville NC 28542 20004
City or Town State Zip Code
Chanity Rychak
Contact Name
Same as Facility
Mailing Address
City or Town State Zip Code
(910) 451-9607
Area code Phone number

6. WELL DETAILS:
a. TOTAL DEPTH: 120'
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
c. WATER LEVEL Below Top of Casing: 26.4' FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 2.5' FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.
e. YIELD (gpm): N/A METHOD OF TEST
f. DISINFECTION: Type N/A Amount
g. WATER ZONES (depth):
Top Bottom Top Bottom
Top Bottom Top Bottom
Top Bottom Top Bottom

7. CASING:	Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 115'	Ft.	8"	Sch. 40	PVC
Top	Bottom	Ft.			
Top	Bottom	Ft.			

8. GROUT:	Depth		Material	Method
Top 0'	Bottom 106'	Ft.	Cement / Bent.	Tremmic
Top 106'	Bottom 112'	Ft.	Bent. chips	~~Tremmie~~ gravity
Top	Bottom	Ft.		

9. SCREEN:	Depth		Diameter	Slot Size	Material
Top 115'	Bottom 120'	Ft.	8" in.	.010 in.	PVC
Top	Bottom	Ft. in.		in.	
Top	Bottom	Ft. in.		in.	

10. SAND/GRAVEL PACK:	Depth		Size	Material
Top 112'	Bottom 120'	Ft.	#1A	Sand
Top	Bottom	Ft.		
Top	Bottom	Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	29'	Brown to Yellowish Brown Silty Clay
29'	40'	Sand
40'	65'	Silty Sand
65'	70'	Cemented Sand
70'	120'	Grey Fine Sand

RECEIVED
MAR 04 2011
Information Processing Unit
DWQ/BOG

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR 2-15-11 DATE

Wesley Castell
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 4078-B

301722

1. WELL CONTRACTOR:
Kevin B. Deinuche
Well Contractor (Individual) Name
Major Drilling Environmental
Well Contractor Company Name
156 B Import Circle
Street Address
Huntsville AL 35806
City or Town State Zip Code
(256) 852-7000
Area code Phone number

2. WELL INFORMATION:
WELL CONSTRUCTION PERMIT# N/A
OTHER ASSOCIATED PERMIT#(if applicable) N/A
SITE WELL ID #(if applicable) IR69-MW #31 IW

3. WELL USE (Check One Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)
DATE DRILLED 2-15-11

4. WELL LOCATION:
Camp Lejeune NC
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)
CITY: Jacksonville NC COUNTY ONSLOW
TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐Slope ☐Valley ☒Flat ☐Ridge ☐Other
LATITUDE 34°34'40"N " DMS OR 3x.xxxxxxxx DD
LONGITUDE 77°25'57"W " DMS OR 7x.xxxxxxxx DD
Latitude/longitude source: ☒GPS ☐Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)
Camp Lejeune / EMD / EQB MarineCorp
Facility Name Facility ID# (if applicable)
PSC Box 20004
Street Address
Jacksonville NC 28542-20004
City or Town State Zip Code
Charity Rychak
Contact Name
Same as Facility
Mailing Address
City or Town State Zip Code
(910) 451-9607
Area code Phone number

6. WELL DETAILS:
a. TOTAL DEPTH: 57.5'
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
c. WATER LEVEL Below Top of Casing: 23.03 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 2.5' FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.
e. YIELD (gpm): N/A METHOD OF TEST
f. DISINFECTION: Type N/A Amount
g. WATER ZONES (depth):
Top 20' Bottom 57.5' Top Bottom
Top Bottom Top Bottom
Top Bottom Top Bottom

7. CASING:

	Depth		Diameter	Thickness/ Weight	Material
Top 0'	Bottom 52.5'	Ft.	2"	Sch 40	PVC
Top	Bottom	Ft.			
Top	Bottom	Ft.			

8. GROUT:

	Depth		Material	Method
Top 0'	Bottom 48'	Ft.	Cement/Bent. tablets	
Top 48'	Bottom 51'	Ft.	Bent. chips	Gravity
Top	Bottom	Ft.		

9. SCREEN:

	Depth		Diameter	Slot Size	Material
Top 52.5'	Bottom 57.5'	Ft.	2" in.	.010 in.	PVC
Top	Bottom	Ft.	in.	in.	
Top	Bottom	Ft.	in.	in.	

10. SAND/GRAVEL PACK:

	Depth		Size	Material
Top 51'	Bottom 57.5'	Ft.	#1A	Sand
Top	Bottom	Ft.		
Top	Bottom	Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0'	18'	Lt Brown Sandy Silt
18'	29'	Grey Silty Clay
29'	35'	Layered Grey Silty Clay
		with Sand & Gravel lenses
35'	40'	5 & 6
40'	60'	Grey Silty Sand

RECEIVED
MAR 04 2011
Information Processing
DWQ/BOG

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE 2-15-11

Wesley Casteel
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

PROJECT NUMBER	WELL NUMBER	
374082.FI.FI.69	IR69-GW04DW	SHEET 1 of 1

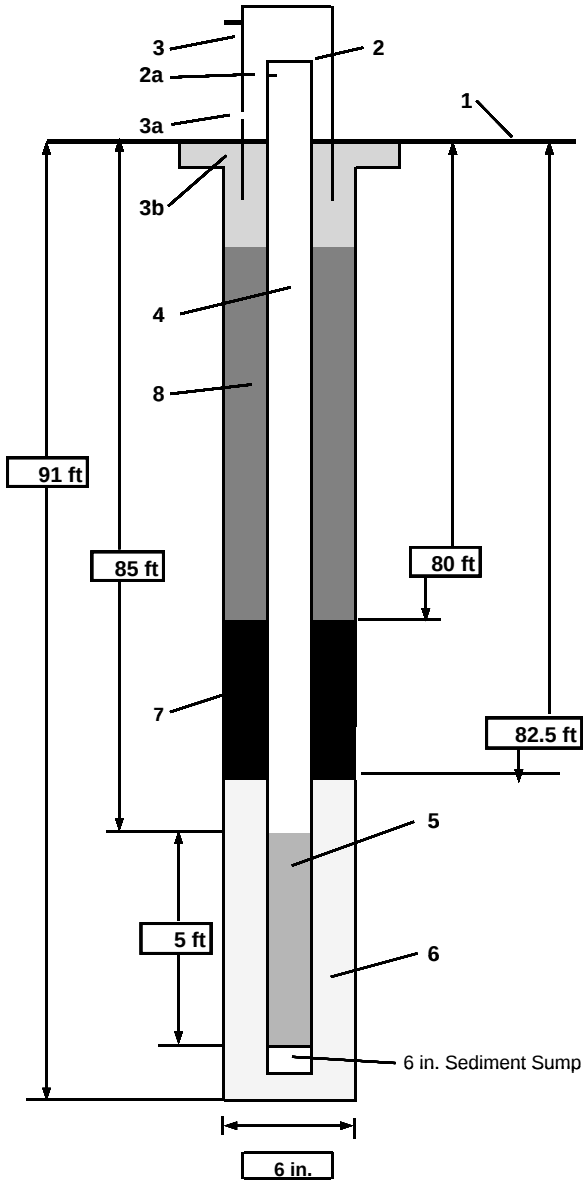
WELL COMPLETION DIAGRAM

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU14 - Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL**

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing x 4" inner core barrel**

WATER LEVELS : **TBD** **START** : 3/08/2010 9:30 hrs. **END** : 3/09/2010 14:30 hrs. LOGGED BY: **R. Gomez/SAN**



1- Ground elevation at well	11.28 ft
2- Top of casing elevation	38.58 ft
a) vent hole?	no
3- Wellhead protection cover type	Steel Locking Protective Casing
a) weep hole?	no
b) concrete pad dimensions	2 ft x 2 ft
4- Diameter/type of well casing	2 in. Sched 40 PVC
5- Type/slot size of screen	2 in. Sched 40 PVC 0.010 slotted
6- Type screen filter	#2 (20/30 grade) silica sand
a) Quantity used	(3.5) 50 lb bags
7- Type of seal	Bentonite 3/8" pellets
a) Quantity used	~25 lbs
8- Grout	
a) Grout mix used	(3) 94 lb bags Portland Type I/II cement
	(1/3) 50 lb bag bentonite powder
b) Method of placement	tremie pipe
c) Vol. of well casing grout	160 gallons

Comments

Advanced 8 in. override casing to 40 ft bgs

NOTE: Diagram is not to scale.

PROJECT NUMBER	WELL NUMBER	
374082.FI.FI.69	IR69-GW04IW	SHEET 1 of 1

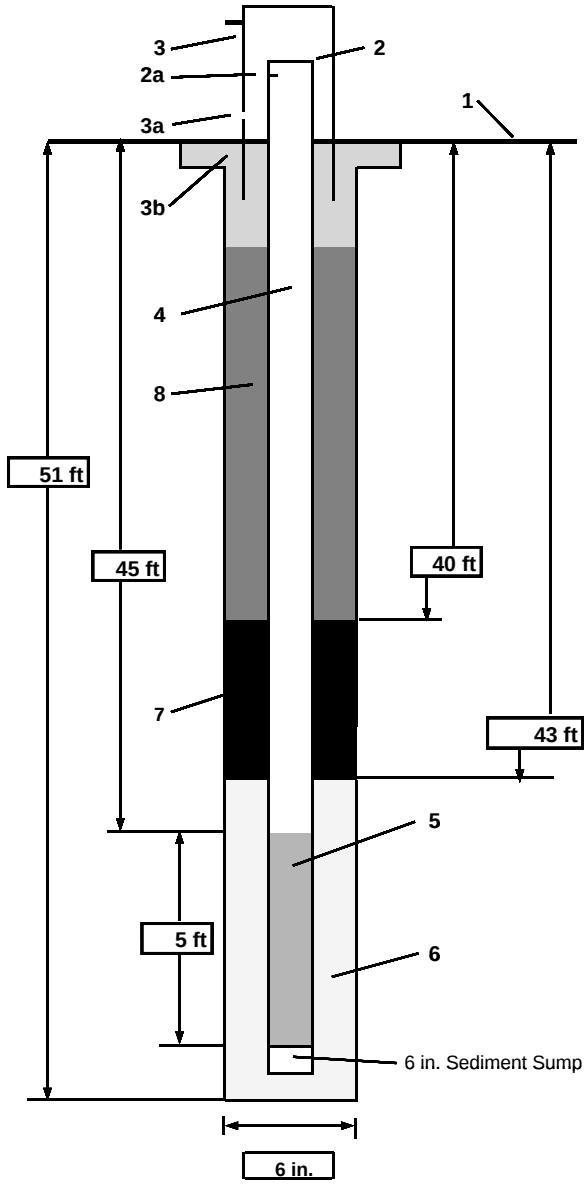
WELL COMPLETION DIAGRAM

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU14 - Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL**

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing x 4" inner core barrel**

WATER LEVELS : **TBD** **START** : 3/09/2010 16:00 hrs. **END** : 3/10/2010 12:00 hrs. LOGGED BY: **R. Gomez/SAN**



1- Ground elevation at well	11.26 ft
2- Top of casing elevation	39.49 ft
a) vent hole?	no
3- Wellhead protection cover type	Steel Locking Protective Casing
a) weep hole?	no
b) concrete pad dimensions	2 ft x 2 ft
4- Diameter/type of well casing	2 in. Sched 40 PVC
5- Type/slot size of screen	2 in. Sched 40 PVC 0.010 slotted
6- Type screen filter	#2 (20/30 grade) silica sand
a) Quantity used	(3.5) 50 lb bags
7- Type of seal	Bentonite 3/8" pellets
a) Quantity used	~25 lbs
8- Grout	
a) Grout mix used	(3) 94 lb bags Portland Type I/II cemen
	~15 lbs bentonite powder
b) Method of placement	tremie pipe
c) Vol. of well casing grout	120 gallons

Comments

Advanced 8 in. override casing to 40 ft bgs

NOTE: Diagram is not to scale.

PROJECT NUMBER	WELL NUMBER	
374082.FI.FI.69	IR69-GW05DW	SHEET 1 of 1

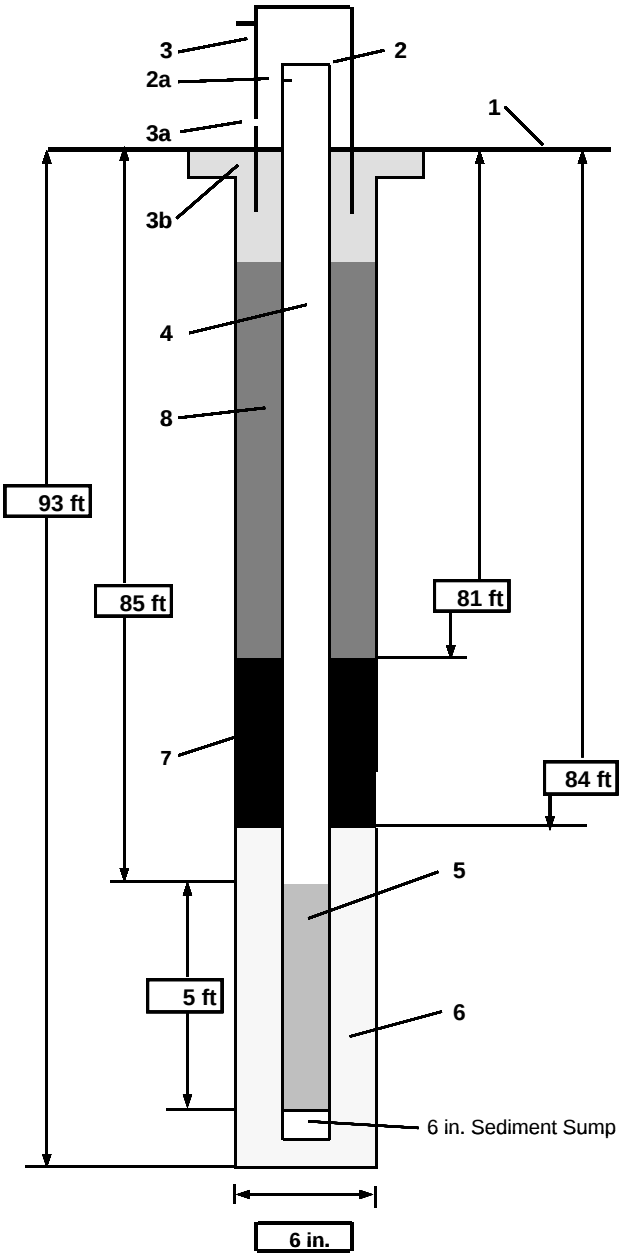
WELL COMPLETION DIAGRAM

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU14 - Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL**

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing x 4" inner core barrel**

WATER LEVELS : **TBD** **START** : 3/03/2010 13:15 hrs. **END** : 3/04/2010 15:00 hrs. LOGGED BY: **R. Gomez/SAN**



1- Ground elevation at well	9.91 ft
2- Top of casing elevation	34.92 ft
a) vent hole?	no
3- Wellhead protection cover type	Steel Locking Protective Casing
a) weep hole?	no
b) concrete pad dimensions	2 ft x 2 ft
4- Diameter/type of well casing	2 in Sched 40 PVC
5- Type/slot size of screen	2 in. Sched 40 PVC 0.010 slotted
6- Type screen filter	#2 (20/30 grade) silica sand
a) Quantity used	(2) 50 lb bags
7- Type of seal	Bentonite 3/8" pellets
a) Quantity used	(1) 50 lb bag
8- Grout	
a) Grout mix used	(3) 94 lb bags Portland I/II cement
	~15 lbs bentonite powder
b) Method of placement	tremie pipe
c) Vol. of well casing grout	125 gallons

Comments

NOTE: Diagram is not to scale.

PROJECT NUMBER	WELL NUMBER	
374082.FI.FI.69	IR69-GW05IW	SHEET 1 of 1

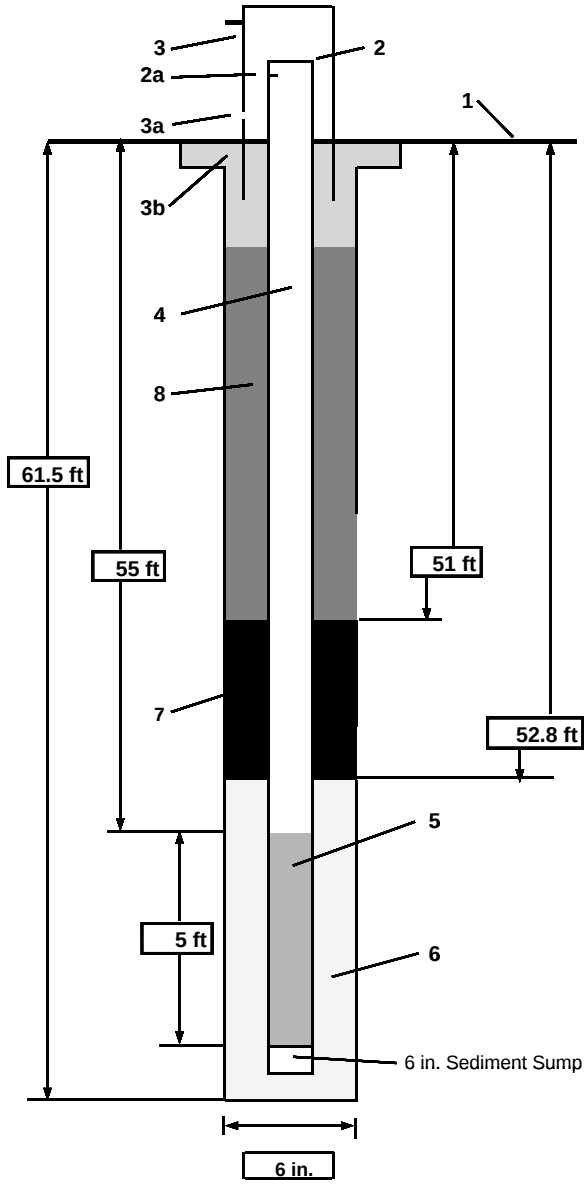
WELL COMPLETION DIAGRAM

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU14 - Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL**

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing x 4" inner core barrel**

WATER LEVELS : **TBD** **START** : 3/06/2010 9:15 hrs. **END** : 3/06/2010 15:30 hrs. LOGGED BY: **R. Gomez/SAN**



1- Ground elevation at well	9.84 ft
2- Top of casing elevation	35.01 ft
a) vent hole?	no
3- Wellhead protection cover type	Steel Locking Protective Casing
a) weep hole?	no
b) concrete pad dimensions	2 ft x 2 ft
4- Diameter/type of well casing	2 in. Sched 40 PVC
5- Type/slot size of screen	2 in. Sched 40 PVC 0.010 slotted
6- Type screen filter	#2 (20/30 grade) silica sand
a) Quantity used	(2.75) 50 lb bags
7- Type of seal	Bentonite 3/8" pellets
a) Quantity used	~25 lbs
8- Grout	
a) Grout mix used	(3) 94 lb bags Portland Type I/II
	~15 lbs bentonite powder
b) Method of placement	tremie pipe
c) Vol. of well casing grout	48 gallons

Comments

NOTE: Diagram is not to scale.

PROJECT NUMBER	WELL NUMBER	
374082.FI.FI.69	IR69-GW09DW	SHEET 1 of 1

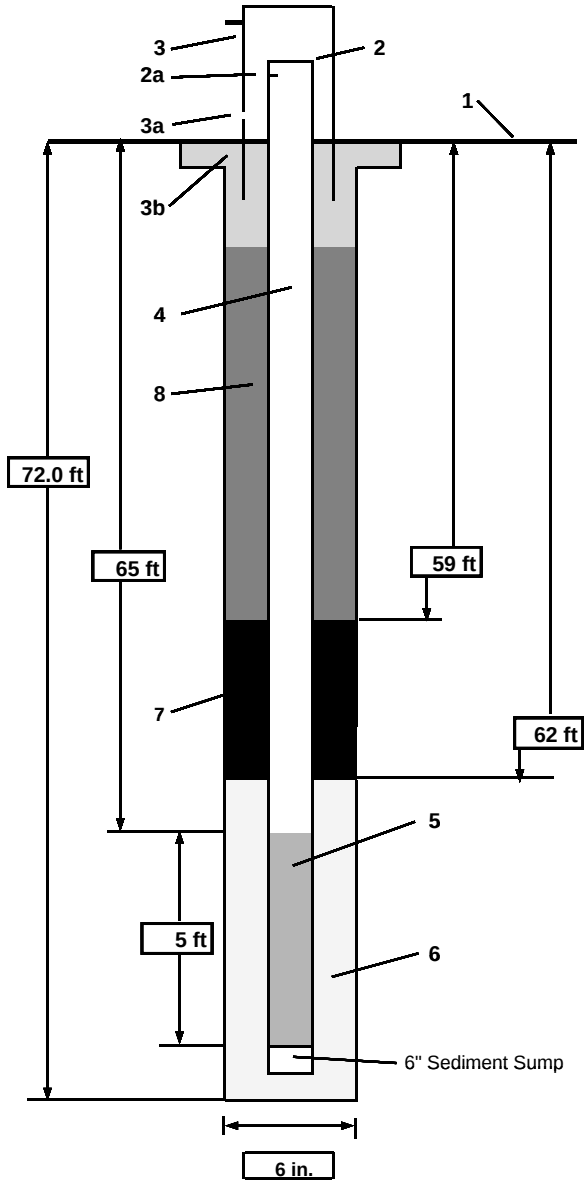
WELL COMPLETION DIAGRAM

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU14 - Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL**

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing x 4" inner core barrel**

WATER LEVELS : **8.18 ft** **START** : 2/24/2010 1245 hrs. **END** : 2/24/10 1715 hrs. LOGGED BY: **R. Gomez/SAN**



1- Ground elevation at well	2.67 ft
2- Top of casing elevation	11.30 ft
a) vent hole?	no
3- Wellhead protection cover type	Steel Locking Protective Casing
a) weep hole?	no
b) concrete pad dimensions	2 ft x 2 ft
4- Diameter/type of well casing	2 in Sched 40 PVC
5- Type/slot size of screen	2 in Sched 40 PVC 0.010 slotted
6- Type screen filter	#2 (20/30) silica sand
a) Quantity used	(2) 50 lb bags
7- Type of seal	Bentonite 3/8" pellets
a) Quantity used	~25 lbs
8- Grout	
a) Grout mix used	(3) 94 lb bags Portland Type I/II cemen
	~15 lbs bentonite powder
b) Method of placement	tremie pipe
c) Vol. of well casing grout	100 gallons

Comments

NOTE: Diagram is not to scale.

PROJECT NUMBER	WELL NUMBER	
374082.FI.FI.69	IR69-GW09IW	SHEET 1 of 1

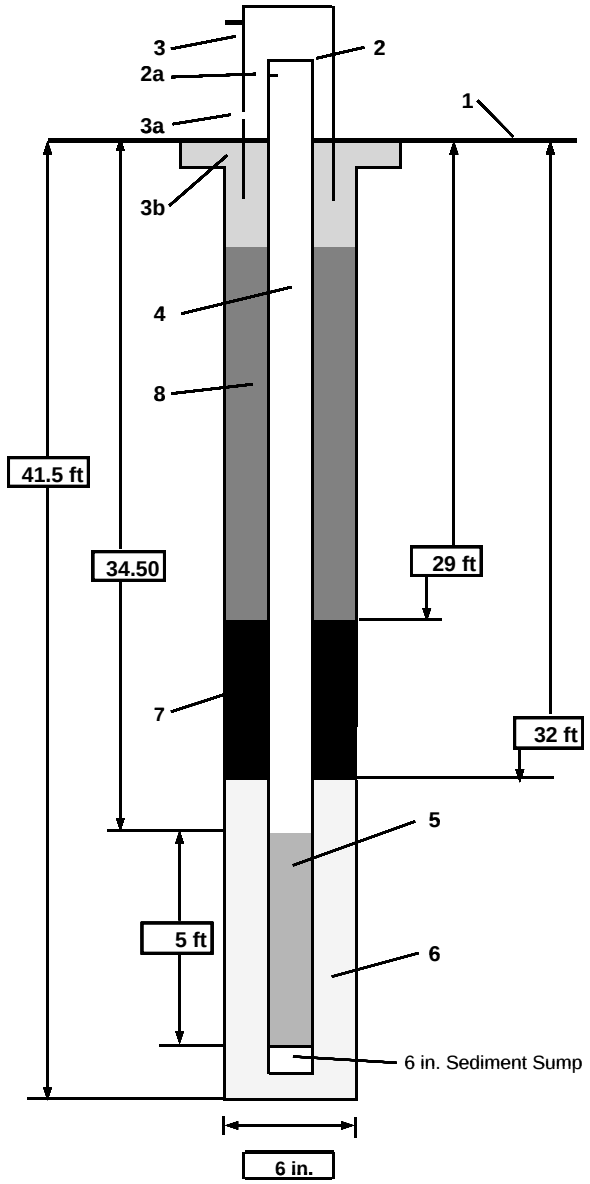
WELL COMPLETION DIAGRAM

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU14 - Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL**

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing x 4" inner core barrel**

WATER LEVELS : **7.72 ft** **START** : 2/25/2010 10:40 hrs. **END** : 2/25/10 13:35 hrs. LOGGED BY: **R. Gomez/SAN**



1- Ground elevation at well	2.58 ft
2- Top of casing elevation	10.93 ft
a) vent hole?	no
3- Wellhead protection cover type	Steell Locking Protective Casing
a) weep hole?	no
b) concrete pad dimensions	2 ft x 2 ft
4- Diameter/type of well casing	2 in. Sched 40 PVC
5- Type/slot size of screen	2 in. Sched 40 PVC 0.010 slotted
6- Type screen filter	#2 (20/30 grade) silica sand
a) Quantity used	(2) 50 lb bags
7- Type of seal	Bentonite 3/8" pellets
a) Quantity used	~25 lbs
8- Grout	
a) Grout mix used	(3) 94 lb bags Portland Type I/II
	~15 lbs bentonite powder
b) Method of placement	tremie pipe
c) Vol. of well casing grout	80 gallons

Comments

NOTE: Diagram is not to scale.

PROJECT NUMBER	WELL NUMBER	
374082.FI.FI.69	IR69-GW11DW	SHEET 1 of 1

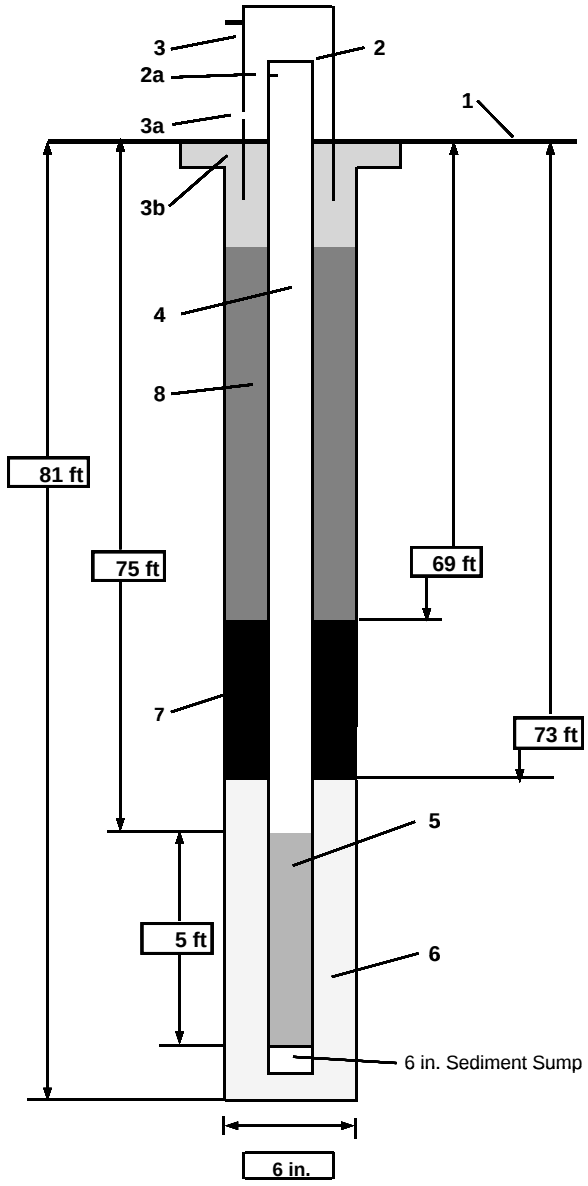
WELL COMPLETION DIAGRAM

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU14 - Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL**

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing x 4" inner core barrel**

WATER LEVELS : **TBD** **START** : 3/01/2010 13:45 hrs. **END** : 3/02/2010 10:00 hrs. LOGGED BY: **R. Gomez/SAN**



1- Ground elevation at well	8.32 ft
2- Top of casing elevation	29.71 ft
a) vent hole?	no
3- Wellhead protection cover type	Steel Locking Protective Casing
a) weep hole?	no
b) concrete pad dimensions	2 ft x 2 ft
4- Diameter/type of well casing	2 in Sched 40 PVC
5- Type/slot size of screen	2 in. Sched 40 PVC 0.010 slotted
6- Type screen filter	#2 (20/30 grade) silica sand
a) Quantity used	(2) 50-lb bags
7- Type of seal	Bentonite 3/8" pellets
a) Quantity used	~38 lbs
8- Grout	
a) Grout mix used	(3) 94 lb bags Portland Type I/II
	~15 lbs bentonite powder
b) Method of placement	tremie pipe
c) Vol. of well casing grout	105 gallons

Comments

NOTE: Diagram is not to scale.

PROJECT NUMBER	WELL NUMBER	
374082.FI.FI.69	IR69-GW11IW	SHEET 1 of 1

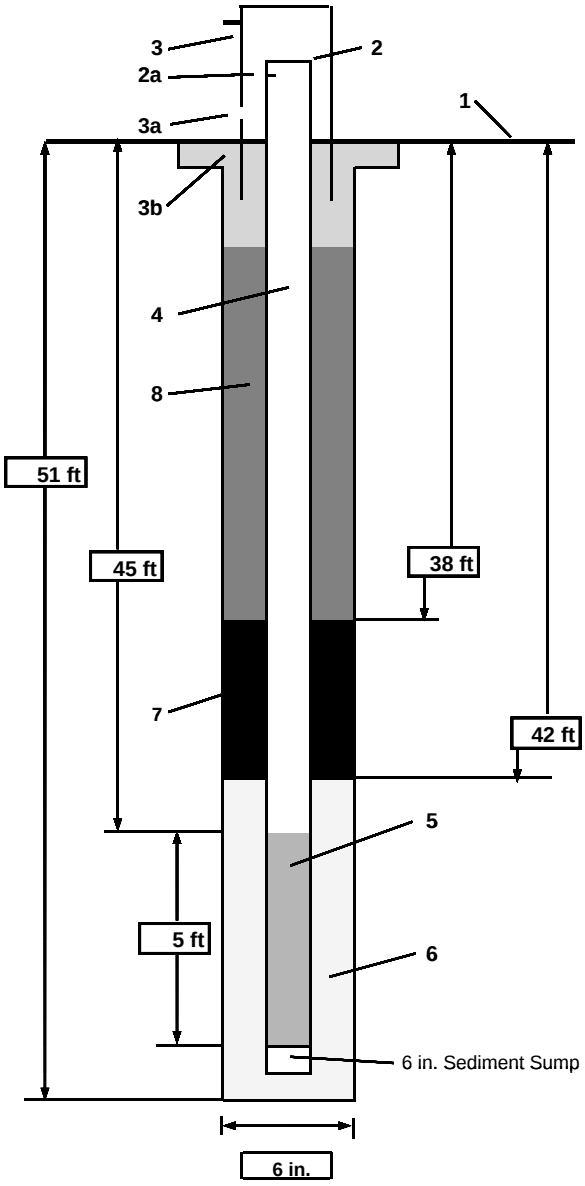
WELL COMPLETION DIAGRAM

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU14 - Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL**

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing x 4" inner core barrel**

WATER LEVELS : **TBD** **START** : 3/01/2010 13:45 hrs. **END** : 3/02/2010 10:00 hrs. LOGGED BY: **R. Gomez/SAN**



1- Ground elevation at well	8.32 ft
2- Top of casing elevation	29.58 ft
a) vent hole?	no
3- Wellhead protection cover type	Locking Steel Protective Casing
a) weep hole?	no
b) concrete pad dimensions	2 ft x 2 ft
4- Diameter/type of well casing	2 in Sched 40 PVC
5- Type/slot size of screen	2 in. Sched 40 PVC 0.010 slotted
6- Type screen filter	#2 (20/30 grade) silica sand
a) Quantity used	(3.5) 50 lb bags
7- Type of seal	Bentonite 3/8" pellets
a) Quantity used	50 lbs
8- Grout	
a) Grout mix used	(3) 94 lb bags Portland Type I/II cement
	~15 lbs bentonite powder
b) Method of placement	tremie pipe
c) Vol. of well casing grout	44 gallons

Comments

NOTE: Diagram is not to scale.

PROJECT NUMBER	WELL NUMBER	
374082FI.FI.69	IR69-GW13DW	SHEET 1 of 1

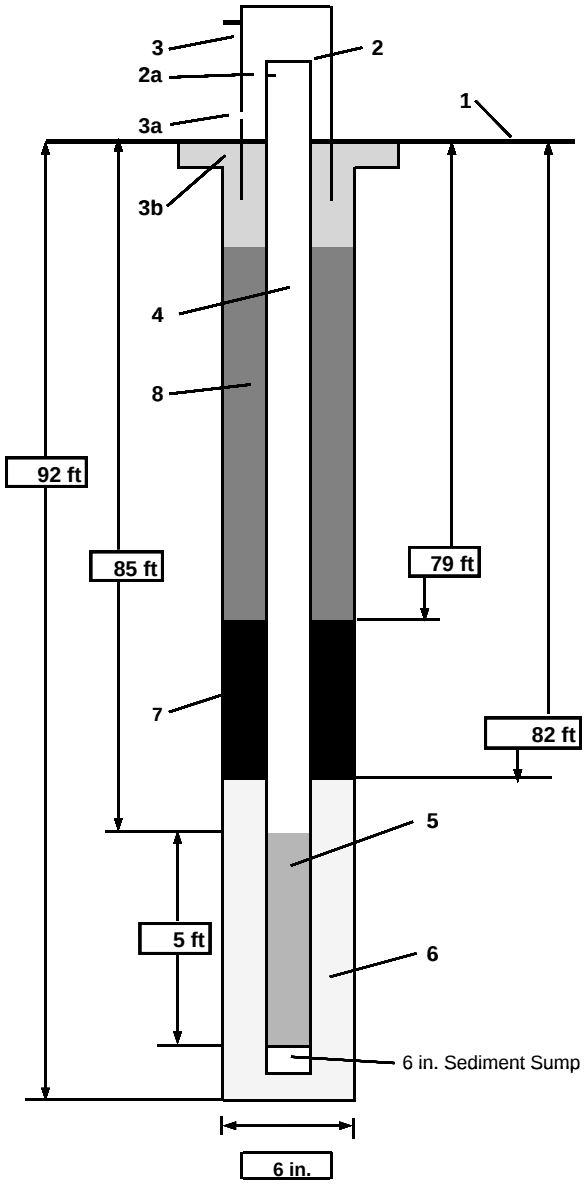
WELL COMPLETION DIAGRAM

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU14 - Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL**

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing x 4" inner core barrel**

WATER LEVELS : **TBD** **START** : 3/16/2010 15:00 hrs. **END** : 3/17/2010 12:00 hrs. LOGGED BY: **R. Gomez/SAN**



1- Ground elevation at well	10.53 ft
2- Top of casing elevation	36.77 ft
a) vent hole?	no
3- Wellhead protection cover type	Locking Steel Protective Casing
a) weep hole?	no
b) concrete pad dimensions	2 ft x 2 ft
4- Diameter/type of well casing	2-inch Sched 40 PVC
5- Type/slot size of screen	2 in. Sched 40 PVC 0.010 slotted
6- Type screen filter	#2 (20/30 grade) silica sand
a) Quantity used	(3) 50-lb bags
7- Type of seal	Bentonite 3/8" pellets
a) Quantity used	~25 lbs
8- Grout	
a) Grout mix used	(3) 94 lb bags Portland Type I/II cement
	~15 lbs bentonite powder
b) Method of placement	tremie pipe
c) Vol. of well casing grout	160 gallons

Comments

NOTE: Diagram is not to scale.

PROJECT NUMBER	WELL NUMBER	
374082.FI.FI.69	IR69-GW26DW	SHEET 1 of 1

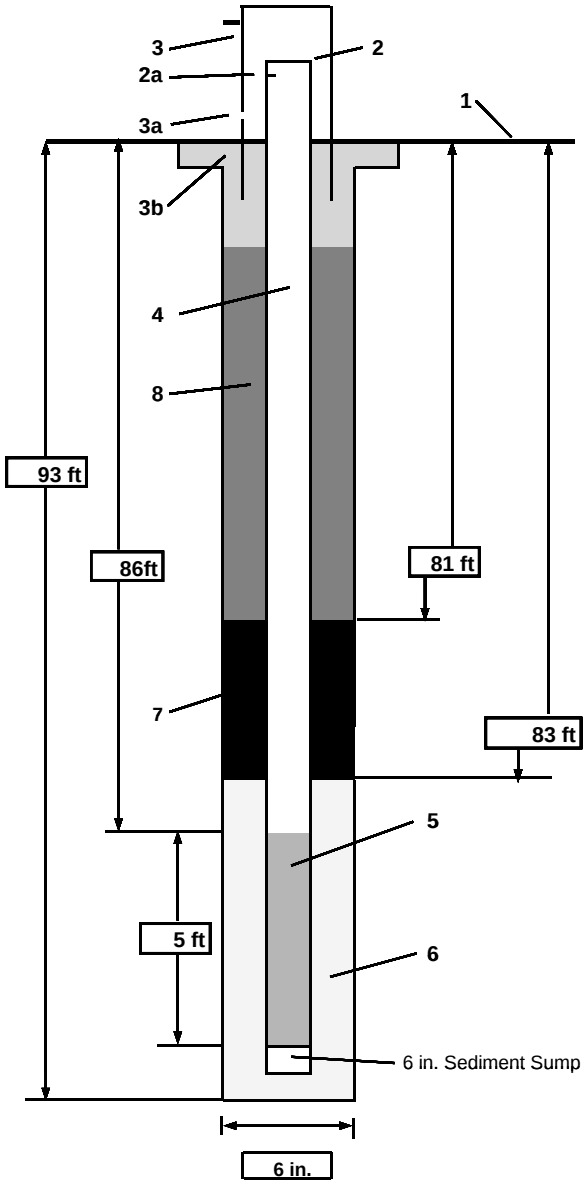
WELL COMPLETION DIAGRAM

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU14 - Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL**

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing x 4" inner core barrel**

WATER LEVELS : **TBD** **START** : 3/11/2010 9:05 hrs. **END** : 3/14/2010 12:00 hrs. LOGGED BY: **R. Gomez/SAN**



1-	Ground elevation at well	11.37 ft
2-	Top of casing elevation	39.70 ft
	a) vent hole?	no
3-	Wellhead protection cover type	Steel Locking Protective Casing
	a) weep hole?	no
	b) concrete pad dimensions	2 ft x 2 ft
4-	Diameter/type of well casing	2 in. Sched 40 PVC
5-	Type/slot size of screen	2 in. Sched 40 PVC 0.010 slotted
6-	Type screen filter	#2 (20/30 grade) silica sand
	a) Quantity used	(3) 50 lb bags
7-	Type of seal	Bentonite 3/8" pellets
	a) Quantity used	~25 lbs
8-	Grout	
	a) Grout mix used	(3) 94 lb bags Portland Type I/II cement
		~15 lbs bentonite powder
	b) Method of placement	tremie pipe
	c) Vol. of well casing grout	200

Comments

Advanced 8 in. override casing to 40 ft bgs

NOTE: Diagram is not to scale.

PROJECT NUMBER	WELL NUMBER	
374082.FI.FI.69	IR69-GW26IW	SHEET 1 of 1

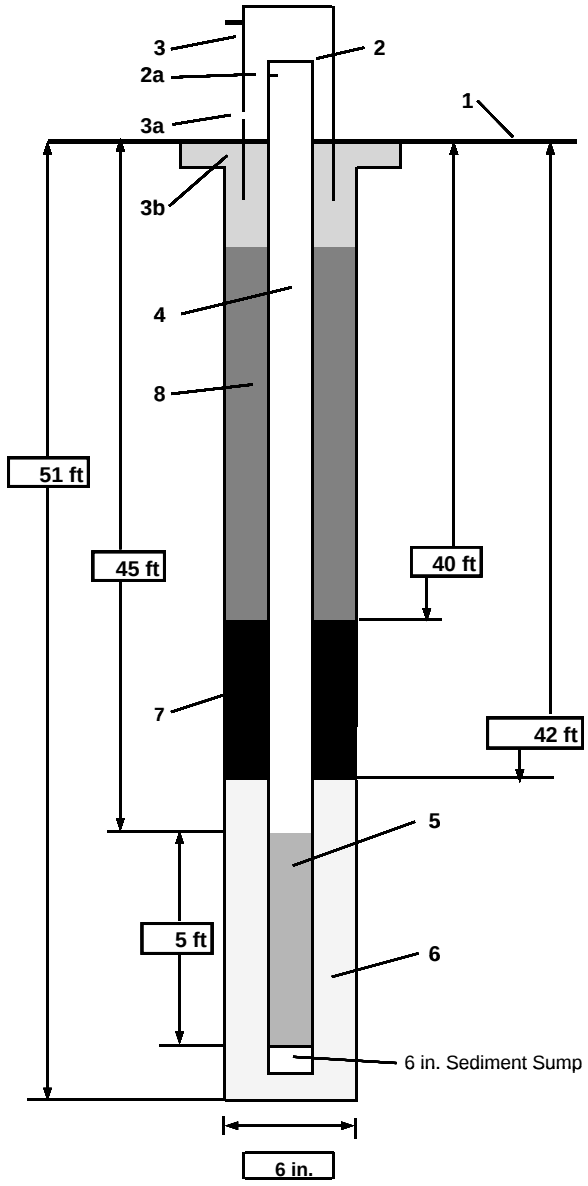
WELL COMPLETION DIAGRAM

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU14 - Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL**

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing X 4" inner core barrel**

WATER LEVELS: **START** : 3/14/2010 13:30 hrs. **END** : 3/14/2010 16:00 hrs. LOGGED BY: **R. Gomez/SAN**



1- Ground elevation at well	11.46 ft
2- Top of casing elevation	40.01 ft
a) vent hole?	no
3- Wellhead protection cover type	Steel Locking Protective Casing
a) weep hole?	no
b) concrete pad dimensions	2 ft x 2 ft
4- Diameter/type of well casing	2 in. Sched 40 PVC
5- Type/slot size of screen	2 in. Sched 40 PVC 0.010 slotted
6- Type screen filter	#2 (20/30 grade) silica sand
a) Quantity used	(2) 50 lb bags
7- Type of seal	Bentonite 3/8" pellets
a) Quantity used	~25 lbs
8- Grout	
a) Grout mix used	(3) 94 lb bags Portland Type I/II cemen
	~15 lbs bentonite powder
b) Method of placement	tremie pipe
c) Vol. of well casing grout	50 gallons

Comments

Advanced 8 in. override casing to 40 ft bgs

NOTE: Diagram is not to scale.

PROJECT NUMBER	WELL NUMBER	
374082.FI.FI.69	IR69-GW27DW	SHEET 1 of 1

CH2MHILL

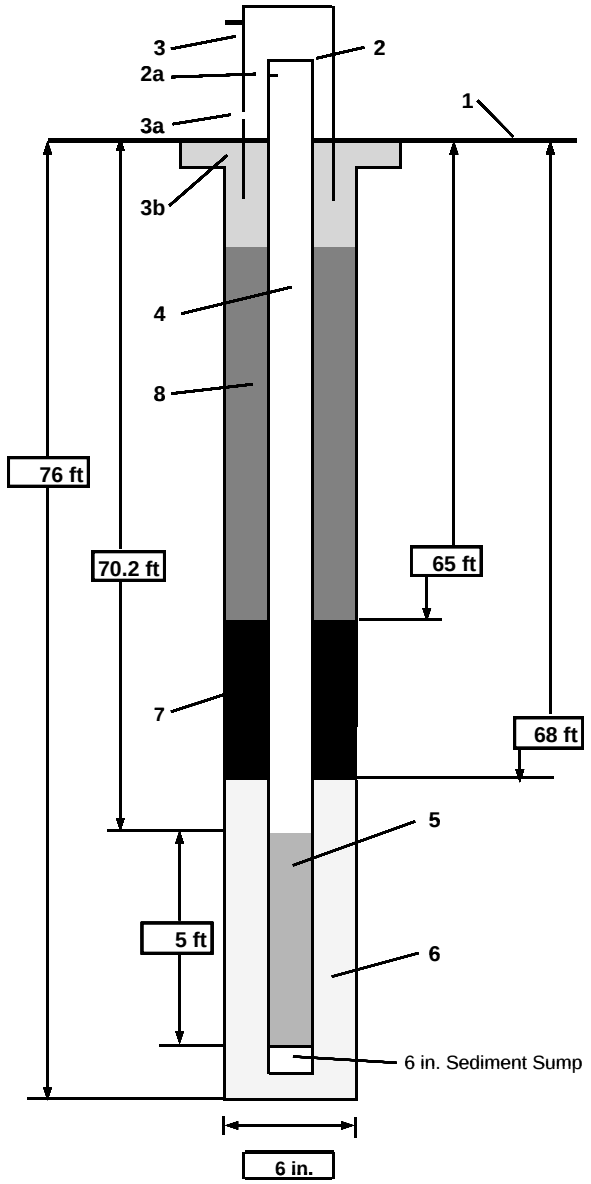
WELL COMPLETION DIAGRAM

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU14 - Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL**

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing x. 4" inner core barrel**

WATER LEVELS: 26.69 ft **START** : 2/28/2010 9:30 hrs. **END** : 2/28/2010 15:45 hrs. LOGGED BY: **R. Gomez/SAN**



1-	Ground elevation at well	8.52 ft
2-	Top of casing elevation	30.39 ft
	a) vent hole?	no
3-	Wellhead protection cover type	Steel Locking Protective Casing
	a) weep hole?	no
	b) concrete pad dimensions	2 ft x 2 ft
4-	Diameter/type of well casing	2 in. Sched 40 PVC
5-	Type/slot size of screen	2 in. Sched 40 PVC 0.010 slotted
6-	Type screen filter	#2 (20/30 grade) silica sand
	a) Quantity used	(2) 50 lb bags
7-	Type of seal	Bentonite 3/8" pellets
	a) Quantity used	~25 lbs
8-	Grout	
	a) Grout mix used	(3) 94 lb bags Portland Type I/II cemen
		~15 lbs bentonite powder
	b) Method of placement	tremie pipe
	c) Vol. of well casing grout	130 gallons

Comments

NOTE: Diagram is not to scale.

PROJECT NUMBER	WELL NUMBER	
374082.FI.FI.69	IR69-GW27IW	SHEET 1 of 1

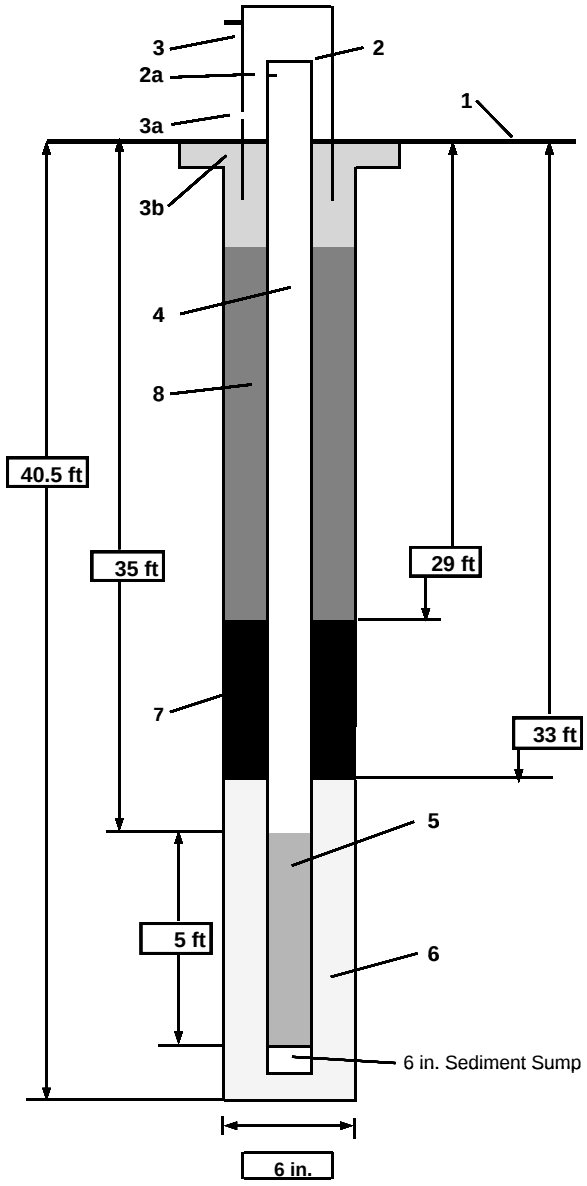
WELL COMPLETION DIAGRAM

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU14 - Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL**

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing x 4" inner core barrel**

WATER LEVELS: 25.57 ft **START** : 3/01/2010 9:00 hrs. **END** : 3/01/2010 10:45 hrs. LOGGED BY: **R. Gomez/SAN**



1-	Ground elevation at well	8.56 ft
2-	Top of casing elevation	30.46 ft
	a) vent hole?	no
3-	Wellhead protection cover type	Steel Locking Protective Casing
	a) weep hole?	no
	b) concrete pad dimensions	2 ft x 2 ft
4-	Diameter/type of well casing	2 in. Sched 40 PVC
5-	Type/slot size of screen	2 in. Sched 40 PVC 0.010 slotted
6-	Type screen filter	#2 (20/30 grade) silica sand
	a) Quantity used	(3) 50 lb bags
7-	Type of seal	Bentonite 3/8" pellets
	a) Quantity used	~25 lbs
8-	Grout	
	a) Grout mix used	(3) 94 lb bags Portland Type I/II cement
		~15 lbs bentonite powder
	b) Method of placement	tremie pipe
	c) Vol. of well casing grout	80 gallons

Comments

NOTE: Diagram is not to scale.

PROJECT NUMBER	WELL NUMBER	
374082.FI.FI.69	IR69-GW28DW	SHEET 1 of 1

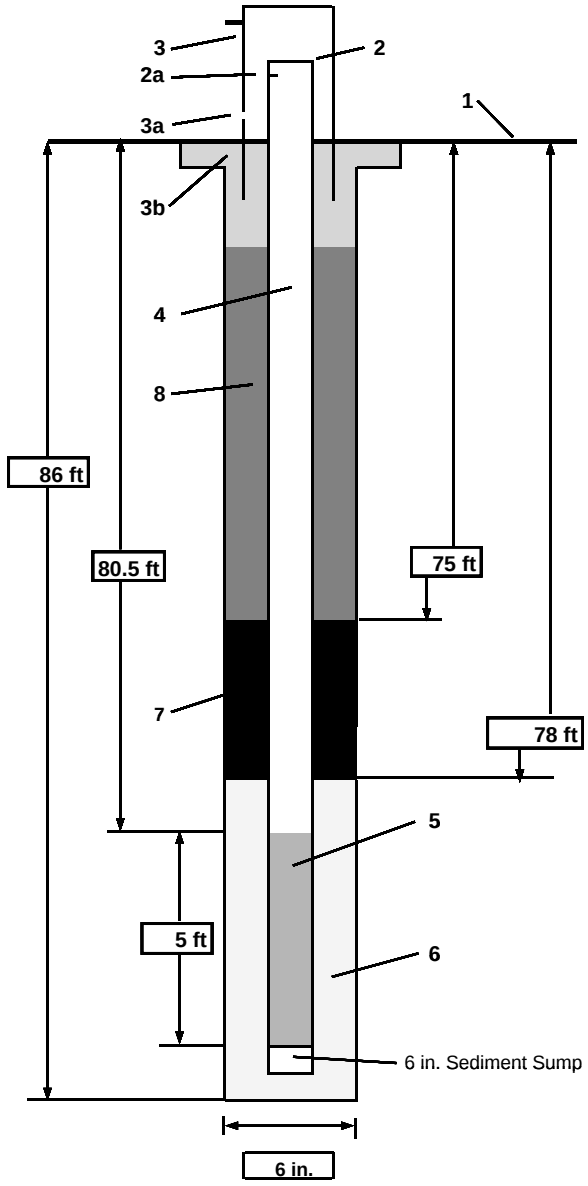
WELL COMPLETION DIAGRAM

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU14 - Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL**

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing x 4" inner core barrel**

WATER LEVELS : 30.61 ft **START** : 3/15/2010 11:00 hrs. **END** : 3/15/2010 17:00 hrs. LOGGED BY: **R. Gomez/SAN**



1- Ground elevation at well	9.47 ft
2- Top of casing elevation	33.64 ft
a) vent hole?	no
3- Wellhead protection cover type	Steel Locking Protective Casing
a) weep hole?	no
b) concrete pad dimensions	2 ft x 2 ft
4- Diameter/type of well casing	2 in. Sched 40 PVC
5- Type/slot size of screen	2 in. Sched 40 PVC 0.010 slotted
6- Type screen filter	#2 (20/30 grade) silica sand
a) Quantity used	(2.5) 50 lb bags
7- Type of seal	Bentonite 3/8" pellets
a) Quantity used	~25 lbs
8- Grout	
a) Grout mix used	(3) 94 lb bags Portland Type I/II
	~15 lbs bentonite powder
b) Method of placement	tremie pipe
c) Vol. of well casing grout	120 gallons

Comments

Advanced 8 in. override casing to 40 ft bgs

NOTE: Diagram is not to scale.

PROJECT NUMBER	WELL NUMBER	
374082.FI.FI.69	IR69-GW28IW	SHEET 1 of 1

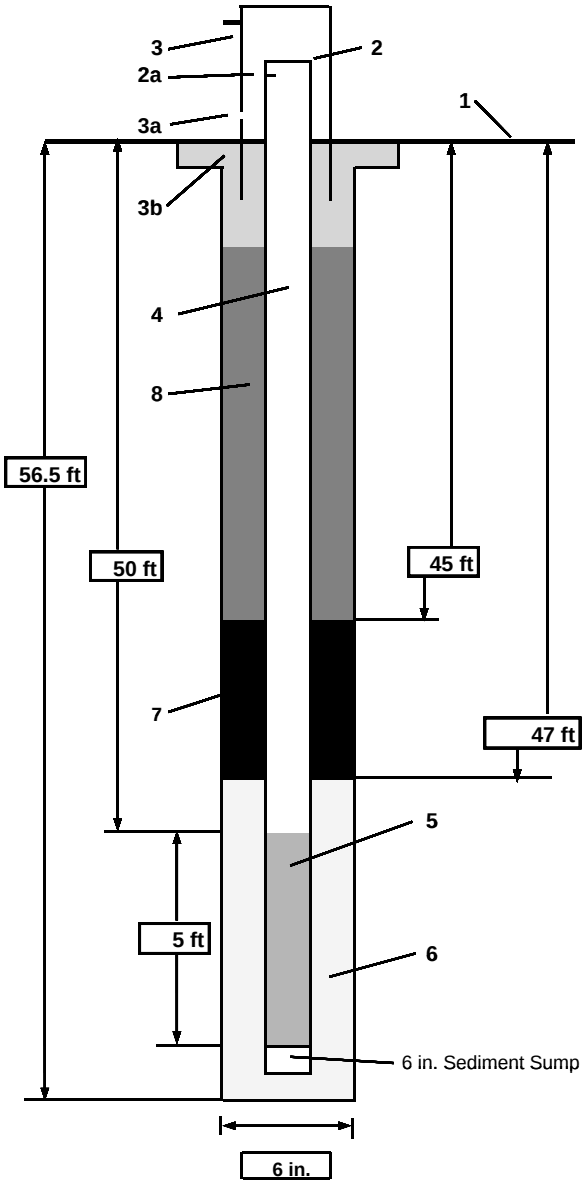
WELL COMPLETION DIAGRAM

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU14 - Site 69**

DRILLING CONTRACTOR : **SMD Huntsville, AL**

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing x 4" inner core barrel**

WATER LEVELS : 30.72 ft **START** : 3/16/2010 8:30 hrs. **END** : 3/16/2010 11:30 hrs. LOGGED BY: **R. Gomez/SAN**



1- Ground elevation at well	9.45 ft
2- Top of casing elevation	34.00 ft
a) vent hole?	no
3- Wellhead protection cover type	Steel Locking Protective Casing
a) weep hole?	no
b) concrete pad dimensions	2 ft x 2 ft
4- Diameter/type of well casing	2 in. Sched 40 PVC
5- Type/slot size of screen	2 in. Sched 40PVC 0.010 slotted
6- Type screen filter	#2 (20/30 grade) silica sand
a) Quantity used	(2.5) 50 lb bags
7- Type of seal	Bentonite 3/8" pellets
a) Quantity used	~25 lbs
8- Grout	
a) Grout mix used	(3) 94 lb bags Portland Type I/II cement
	~15 lbs bentonite powder
b) Method of placement	tremie pipe
c) Vol. of well casing grout	60 gallons

Comments

Advanced override 8" casing to 40 ft bgs

NOTE: Diagram is not to scale.

CH2MHILL	PROJECT NUMBER 374082.FI.FI.69	WELL NUMBER IR69-MW04DD	SHEET 1 of 1

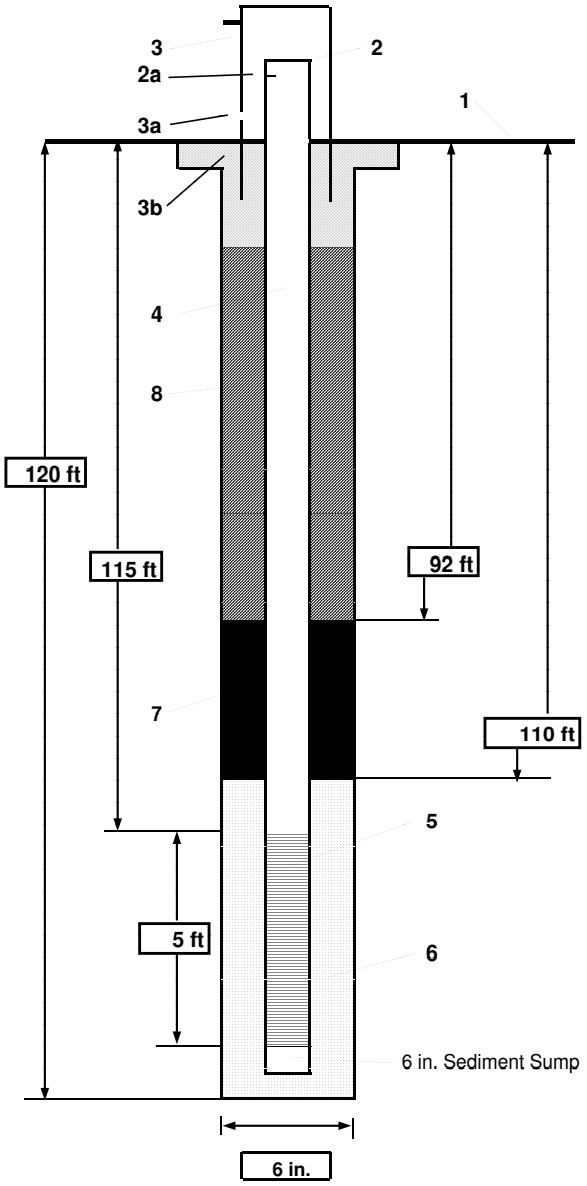
WELL COMPLETION DIAGRAM

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU14 - Site 69**

DRILLING CONTRACTOR : **Major Drilling Environmental, Huntsville, AL**

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing x 4" inner core barrel**

WATER LEVELS : 25.48 ft. **START** : 2/17/2011 08:55 hrs. **END** : 2/18/2011 14:30 hrs. LOGGED BY: **D. Lubell/RDU**



1- Ground elevation at well	Not Surveyed
2- Top of casing elevation	Not Surveyed
a) vent hole?	no
3- Wellhead protection cover type	Steel Locking Protective Casing
a) weep hole?	no
b) concrete pad dimensions	2 ft x 2 ft
4- Diameter/type of well casing	2 in. Sched 40 PVC
5- Type/slot size of screen	2 in. Sched 40PVC 0.010 slotted
6- Type screen filter	#1A (18/30 grade) DSI Sand
a) Quantity used	(3) 50 lb bags
7- Type of seal	Bentonite 3/8" pellets
a) Quantity used	~25 lbs
8- Grout	
a) Grout mix used	(3) 94 lb bags Portland Type I/II cement ~15 lbs bentonite powder
b) Method of placement	tremie pipe
c) Vol. of well casing grout	250 gallons

Comments

Advanced override 8" casing to 40 ft bgs

NOTE: Diagram is not to scale.

PROJECT NUMBER	WELL NUMBER	
374082.FI.FI.69	IR69-MW11DD	SHEET 1 of 1

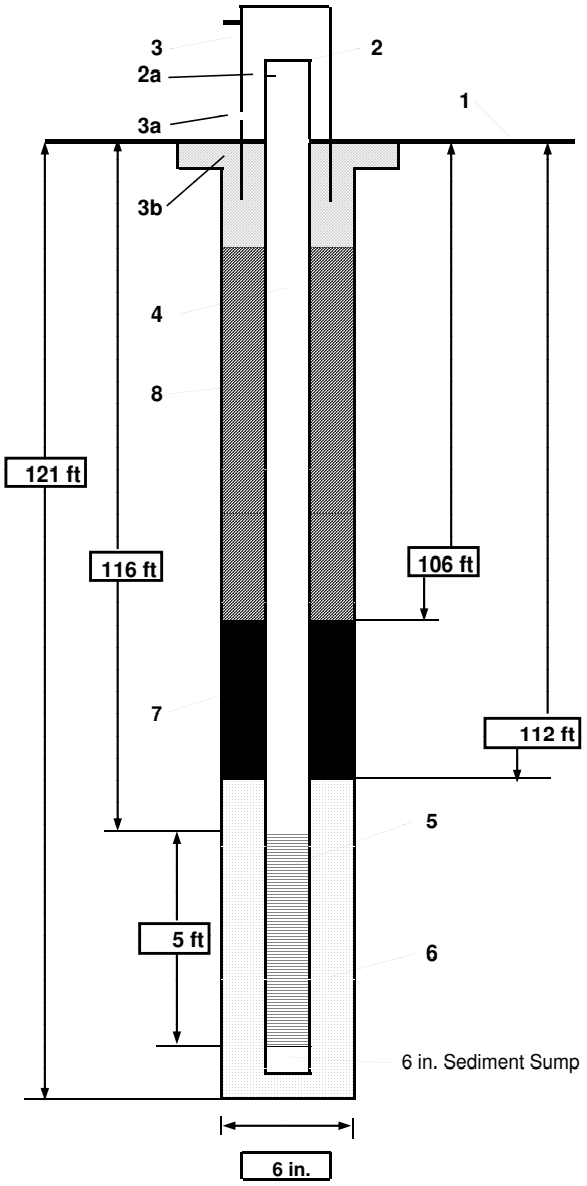
WELL COMPLETION DIAGRAM

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU14 - Site 69**

DRILLING CONTRACTOR : **Major Drilling Environmental, Huntsville, AL**

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing x 4" inner core barrel**

WATER LEVELS : 25.72 ft. **START** : 2/15/2011 17:15 hrs. **END** : 2/16/2011 16:50 hrs. LOGGED BY: **D. Lubell/RDU**



1- Ground elevation at well	Not Surveyed
2- Top of casing elevation	Not Surveyed
a) vent hole?	no
3- Wellhead protection cover type	Steel Locking Protective Casing
a) weep hole?	no
b) concrete pad dimensions	2 ft x 2 ft
4- Diameter/type of well casing	2 in. Sched 40 PVC
5- Type/slot size of screen	2 in. Sched 40PVC 0.010 slotted
6- Type screen filter	#1A (18/30 grade) DSI Sand
a) Quantity used	(3) 50 lb bags
7- Type of seal	Bentonite 3/8" pellets
a) Quantity used	~25 lbs
8- Grout	
a) Grout mix used	(3) 94 lb bags Portland Type I/II cement ~15 lbs bentonite powder
b) Method of placement	tremie pipe
c) Vol. of well casing grout	140 gallons

Comments

Advanced override 8" casing to 40 ft bgs

NOTE: Diagram is not to scale.

PROJECT NUMBER	WELL NUMBER	
374082.FI.FI.69	IR69-GW29IW	SHEET 1 of 1

CH2MHILL

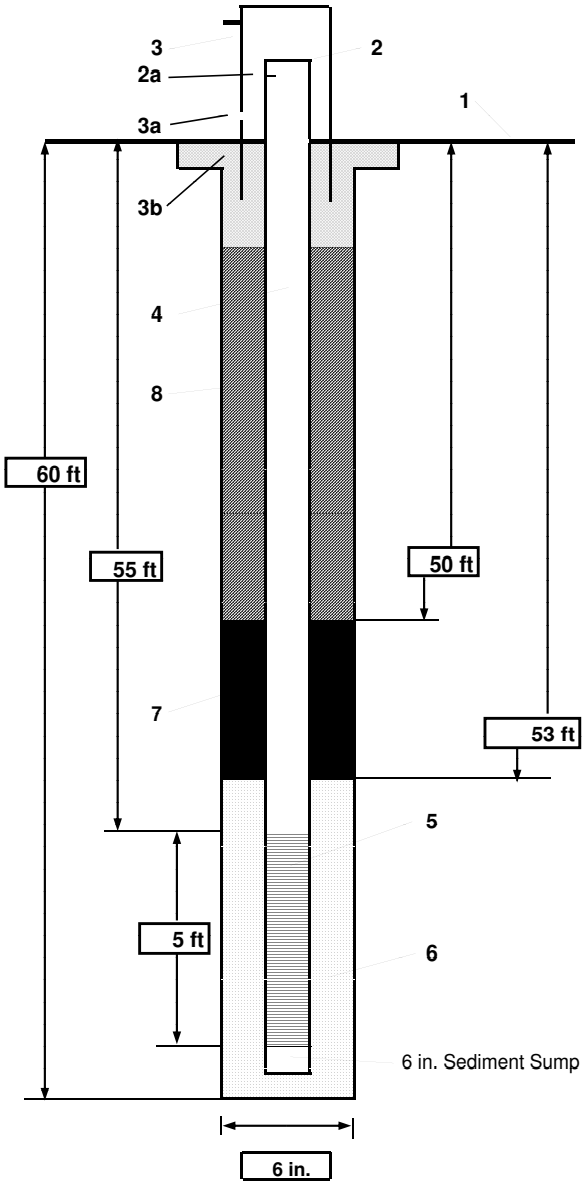
WELL COMPLETION DIAGRAM

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU14 - Site 69**

DRILLING CONTRACTOR : **Major Drilling Environmental, Huntsville, AL**

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing x 4" inner core barrel**

WATER LEVELS : 17.15 ft. **START** : 2/19/2011 11:30 hrs. **END** : 2/19/2011 13:35 hrs. LOGGED BY: **D. Lubell/RDU**



1- Ground elevation at well	Not Surveyed
2- Top of casing elevation	Not Surveyed
a) vent hole?	no
3- Wellhead protection cover type	Steel Locking Protective Casing
a) weep hole?	no
b) concrete pad dimensions	2 ft x 2 ft
4- Diameter/type of well casing	2 in. Sched 40 PVC
5- Type/slot size of screen	2 in. Sched 40PVC 0.010 slotted
6- Type screen filter	#1A (18/30 grade) DSI Sand
a) Quantity used	(3) 50 lb bags
7- Type of seal	Bentonite 3/8" pellets
a) Quantity used	~25 lbs
8- Grout	
a) Grout mix used	(3) 94 lb bags Portland Type I/II cement ~15 lbs bentonite powder
b) Method of placement	tremie pipe
c) Vol. of well casing grout	80 gallons

Comments

NOTE: Diagram is not to scale.

PROJECT NUMBER	WELL NUMBER	
374082.FI.FI.69	IR69-GW30IW	SHEET 1 of 1

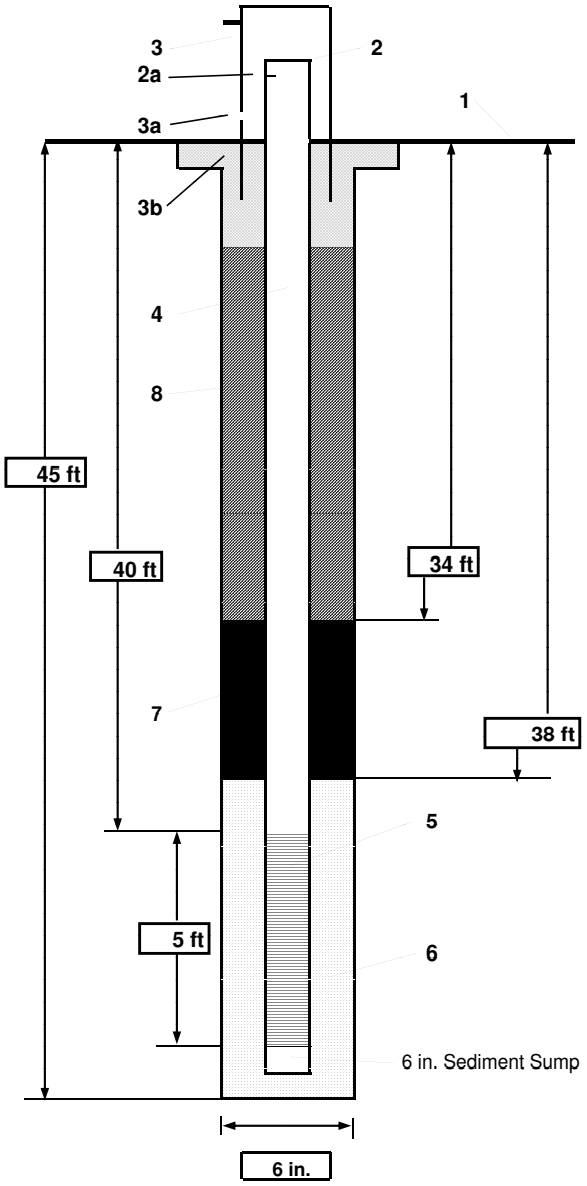
WELL COMPLETION DIAGRAM

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU14 - Site 69**

DRILLING CONTRACTOR : **Major Drilling Environmental, Huntsville, AL**

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing x 4" inner core barrel**

WATER LEVELS : 22.10 ft. **START** : 2/18/2011 16:10 hrs. **END** : 2/18/2011 17:50 hrs. LOGGED BY: **D. Lubell/RDU**



1- Ground elevation at well	Not Surveyed
2- Top of casing elevation	Not Surveyed
a) vent hole?	no
3- Wellhead protection cover type	Steel Locking Protective Casing
a) weep hole?	no
b) concrete pad dimensions	2 ft x 2 ft
4- Diameter/type of well casing	2 in. Sched 40 PVC
5- Type/slot size of screen	2 in. Sched 40PVC 0.010 slotted
6- Type screen filter	#2 (18/30 grade) silica sand
a) Quantity used	(3) 50 lb bags
7- Type of seal	Bentonite 3/8" pellets
a) Quantity used	~25 lbs
8- Grout	
a) Grout mix used	(3) 94 lb bags Portland Type I/II cement ~15 lbs bentonite powder
b) Method of placement	tremie pipe
c) Vol. of well casing grout	100 gallons

Comments

NOTE: Diagram is not to scale.

PROJECT NUMBER	WELL NUMBER	
374082.FI.FI.69	IR69-MW31IW	SHEET 1 of 1

CH2MHILL

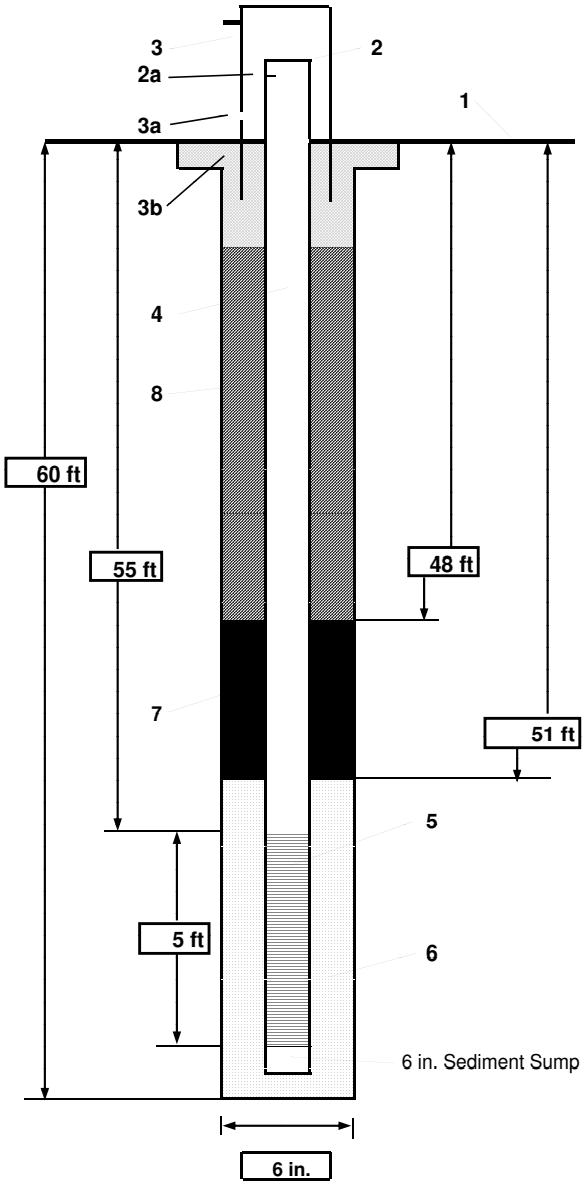
WELL COMPLETION DIAGRAM

PROJECT : **Navy CLEAN III - CTO-223 - Camp Lejeune, NC** LOCATION : **OU14 - Site 69**

DRILLING CONTRACTOR : **Major Drilling Environmental, Huntsville, AL**

DRILLING METHOD AND EQUIPMENT USED : **Rotary-Sonic - Geoprobe 8140DT rig - 6" casing x 4" inner core barrel**

WATER LEVELS : 23.40 ft. **START** : 2/15/2011 11:15 hrs. **END** : 2/15/2011 15:35 hrs. LOGGED BY: **D. Lubell/RDU**



1- Ground elevation at well	Not Surveyed
2- Top of casing elevation	Not Surveyed
a) vent hole?	no
3- Wellhead protection cover type	Steel Locking Protective Casing
a) weep hole?	no
b) concrete pad dimensions	2 ft x 2 ft
4- Diameter/type of well casing	2 in. Sched 40 PVC
5- Type/slot size of screen	2 in. Sched 40PVC 0.010 slotted
6- Type screen filter	#1A (18/30 grade) DSI Sand
a) Quantity used	(3) 50 lb bags
7- Type of seal	Bentonite 3/8" pellets
a) Quantity used	~25 lbs
8- Grout	
a) Grout mix used	(3) 94 lb bags Portland Type I/II cement ~15 lbs bentonite powder
b) Method of placement	tremie pipe
c) Vol. of well casing grout	100 gallons

Comments

NOTE: Diagram is not to scale.

Appendix E
Laboratory and Data Validation Summary Reports

DataQual

Environmental Services, LLC

CH2M HILL
5700 Cleveland Street
Suite 101
Virginia Beach, VA 23462

July 30, 2010
CompuChem & Test America-Savannah
SDG#s 1003029 & CLJ55553-1

MCB Camp Lejeune, CTO-81 – Site 69

Dear Ms. Buckley,

The following Data Validation report is provided as requested for the parameters noted in the table below for SDG #s 1003029 & CLJ55553-1. The data validation was performed in accordance with the SW846 Methods 8260B for volatiles, 8270C and 8270C-SIM for semivolatiles and PAH, 8081A for pesticides, 8082 for PCBs, 8141A for organophosphorous pesticides (OPP) and 6010B/7470A/7471A for metals and mercury and good professional judgment. Also used in the validation of these samples were The National Functional Guidelines for Organic Data Review (June, 2008) and the National Functional Guidelines for Inorganic Data Review (October, 2004), as applicable. All areas of concern are discussed in the body of the report and a summary of data qualifications is provided.

Sample ID	Lab ID	Matrix	VOA	SVOA	LL PAH	Pest	PCBs	OPP	Metals
IR69-EB01-022710-GW	1003029-06	water	X	X	X	X	X	X	X
IR69-EB01-022810-GW	1003029-07	water	X	X	X	X	X	X	X
IR69-EB01-022810-SB	1003029-08	water	X	X	X	X	X	X	X
IR69-EB01-030110-GW	1003029-18	water	X	X	X	X	X	X	X
IR69-EB01-030210-GW	1003029-19	water	X	X	X	X	X	X	X
IR69-FB01-030310	1003029-09	water	X	X	X	X	X	X	X
IR69-GW02-10A	1003029-12	water	X	X	X	X	X	X	X
IR69-GW02DW-10A	1003029-13	water	X	X	X	X	X	X	X
IR69-GW09-10A	1003029-14	water	X	X	X	X	X	X	X
IR69-GW11-10A	1003029-15	water	X	X	X	X	X	X	X
IR69-GW12-10A	1003029-01	water	X	X	X	X	X	X	X
IR69-GW12DW-10A	1003029-02	water	X	X	X	X	X	X	X
IR69-GW13-10A	1003029-16	water	X	X	X	X	X	X	X
IR69-GW13IW-10A	1003029-17	water	X	X	X	X	X	X	X
IR69-GW14-10A	1003029-03	water	X	X	X	X	X	X	X
IR69-GW14DW-10A	1003029-05	water	X	X	X	X	X	X	X
IR69-GW14IW-10A	1003029-04	water	X	X	X	X	X	X	X
IR69-TB01-030110	1003029-11	water	X						
IR69-TB01-030310	1003029-10	water	X						
IR69-TB01-030410	1003029-20	water	X						
IR69-GW02-10A MS	1003029-12MS	water	X	X	X	X	X	X	X
IR69-GW02-10A MSD	1003029-12MSD	water	X	X	X	X	X	X	X

The following quality control samples were provided with this SDG: samples IR69-TB01-030110, IR69-TB01-030310 and IR69-TB01-030410- trip blanks; samples IR69-

EB01-022710-GW, IR69-EB01-022810-GW, IR69-EB01-022810-SB, IR69-EB01-030110-GW and IR69-EB01-030210-GW- equipment blanks; sample IR69-FB01-030310- field blank.

The samples were evaluated based on the following criteria:

• Data Completeness	*
• Technical Holding Times	*
• GC/MS Tunes	*
• GC Performance	*
• Initial/Continuing Calibrations	
• CRI Standards	*
• Interference Check Sample	*
• Blanks	
• Internal Standards	*
• Surrogates	*
• Laboratory Control Samples	*
• Matrix Spike Recoveries	
• Matrix Duplicate RPDs	
• Post Digestion Spike Recoveries	*
• Serial Dilutions	
• Field Duplicates	NA
• Identification/Quantitation	
• Reporting Limits	*
• Tentatively Identified Compounds	NA

* - indicates that no qualifications were required based on this criteria

Overall Evaluation of Data/Potential Usability Issues

A summary of qualifications applied to the sample results are noted below for the fractions validated. Specific details regarding qualification of the data are addressed in the Specific Evaluation section of this narrative. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte the validator has chosen the qualifier that best indicates possible bias in the results and flagged the data accordingly. However, information regarding all quality control issues is provided in the body of the report and on the qualification summary page. Please note that when a compound or analyte is flagged due to blank contamination the BL qualifier code takes precedence over all other qualifier codes except a code that explains rejected data.

VOA

Several sample compounds were qualified as estimated based on high %Ds and low RRFs which were exhibited in the continuing calibrations.

Blank contamination was exhibited in the method and or QC blanks that resulted in qualifications to the data.

The matrix spike and matrix spike duplicate exhibited low recoveries for one compound that resulted in qualifications to the associated sample.

Dilutions were required to obtain results within the calibration range.

SVOA

Several sample compounds were qualified as estimated based on high %Ds which were exhibited in the continuing calibrations.

Blank contamination was exhibited in the method and QC blanks that resulted in qualifications to the data.

One of the LCS samples was not spiked; therefore all samples associated with this LCS were re-analyzed. The re-extraction was preformed out of holding time. Within the batch of samples, associated with this LCS, was a matrix spike and matrix spike duplicate; recoveries for these samples were within criteria. Therefore the initial analysis of these samples was used and the re-analysis was excluded.

Pesticides

Some of the reported positive results exhibited column quantitation %Ds that were >40% (P flagged by the laboratory). These results were qualified as estimated J.

Organophosporous Pesticides (OPP)

One compound was not recovered in the MS/MSD pair and was recovered below QC limits in the laboratory control samples. Qualifications were required in the samples.

Metals

Qualifications were required in the samples due to laboratory and field blank contamination.

One analyte required qualification in the samples due to non-compliant matrix spike recoveries.

One analyte required qualification in the samples due to non-compliant matrix duplicate results.

One analyte required qualification in the samples due to non-compliant serial dilution %Ds.

All results reported between the MDL and the RL (B flagged by the laboratory) were qualified as estimated J.

Specific Evaluation of Data

Data Completeness

The OPP fraction required resubmissions due to incorrectly reported continuing calibration standards. The metals fraction required resubmission due to unexplained RE samples. Please note: All field sample and QC blank IDs were missing the first four (IR69) and/or the last four (-10A) characters. The characters were added to the Form 1s in the DV reports by the data validator.

Technical Holding Times

According to chain of custody records, sampling was performed on 2/16/10, 2/26-28/10, 3/1-3/10 and samples were received at the laboratory 3/04-5/10. All sample preparation and analysis was performed within method holding time requirements.

Initial/Continuing Calibration

VOA

Calibration standards exhibited %Ds and RRF that were non-compliant. A summary of these non-compliances and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	RRF, %RSD, %D	Samples	Q Flag	Q Code
IC 3/04/10	acetone 2-butanone	0.0393 0.0442	all samples	J R	ICL
CC 3/04/10	dichlorodifluoromethane trichlorofluoromethane 1,1,2-trichloro-1,2,2-trifluoroethane 1,1,1-trichloroethane carbon tetrachloride bromodichloromethane	34.17 32.83 29.88 24.08 26.89 20.82	IR69-GW12-10A, IR69-GW12DW-10A, IR69-GW14-10A, IR69-GW14IW-10A, IR69-GW14DW-10A, IR69-FB01-022710-GW, IR69-EB01-022810-GW, IR69-EB01-022810-SB, IR69-FB01-030310, IR69-TB01-030310, IR69-TB01-030110	J UJ	CCH
CC 3/08/10	bromomethane methyl acetate 4-methyl-2-pentanone 2-hexanone	-37.73 -27.28 -52.76 -53.69	IR69-GW09-10A	J UJ	CCL

SVOA

Calibration standards exhibited %Ds that were non-compliant. A summary of these non-compliances and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	RRF, %RSD, %D	Samples	Q Flag	Q Code
CC 3 20 10	caprolactam	37.17	IR69-GW02-10A, IR69-GW02DW-10A, IR69-GW09-10A, IR69-GW11-10A, IR69-GW13-10A, IR69-GW13IW-10A, IR69-FB01-030110-GW	J UJ	CCH

Blanks

VOA

The associated method and/or QC blanks exhibited contamination as noted in the following table. Compounds for which there was no action required, are not included in the following table.

Blank ID	Compound	Conc	Reporting Limit
VBLKGN	1,2,4-trichlorobenzene	0.076J ug/L	0.5 ug/L
IR69-TB01-030310	acetone	2.4J ug/L	2.5 ug/L
IR69-TB01-030410	acetone	0.71J	2.5
	methylene chloride	0.035J	0.5
	cis-1,2-dichloroethene	0.060J	0.5
IR69-EB01-022710-GW	acetone	6.3	2.5
	benzene	0.18J	0.5
	toluene	2.9	0.5
IR69-EB01-022810-GW	acetone	5.2	2.5
	benzene	0.17J	0.5
	toluene	1.8	0.5
IR69-EB01-030110-GW	acetone	5.8	2.5
	benzene	0.093J	0.5
	toluene	0.76	0.5
IR69-EB01-030210-GW	acetone	8	2.5
	benzene	0.050J	0.5
	toluene	1.7	0.5
IR69-FB01-030310	toluene	4.1	0.5

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Q Code
IR69-GW09-10A	1,2,4-trichlorobenzene	U at RL	MBL
IR69-GW02-10A, IR69-GW02DW-10A, IR69-GW11-10A, IR69-GW14IW-10A	acetone	U at RL	TBL
IR69-GW02DW-10A	methylene chloride	U at RL	TBL
IR69-GW02-10A	benzene	U at RL	EBL
IR69-GW02-10A, IR69-GW02DW-10A, IR69-GW09-10A, IR69-GW13-10A	toluene	U at RL	EBL

Sample ID	Compound	Q Flag	Q Code
IR69-GW11-10A	cis-1,2-dichloroethene	U at RL	TBL
IR69-GW14DW-10A	toluene	U	FBL
IR69-GW14-10A	acetone	U	EBL

SVOA

The associated method and or QC blanks exhibited contamination as noted in the following table. Compounds for which there was no action required, are not included in the following table.

Blank ID	Compound	Concentration	Reporting Limit
IR69-EB01-030210-GW-SIM	fluoranthene	0.014J ug L	0.22ug L
	pyrene	0.018J	0.22

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Q Code
IR69-GW12-10A-SIM	fluoranthene	U at RL	EBL
IR69-GW12-10A-SIM	pyrene	U at RL	EBL

Metals

Contamination was noted in associated blanks and qualification was required in the associated samples. Required action is noted in the following tables.

Blank ID	Analyte	Concentration	Action Level	Q Flag	Q Code
CCB, 3/9-3/10 Run	copper	2.7B ug/L	RL	U	MBL
	magnesium	48.4B ug L	RL	U	MBL
ICB, 3/30 Run	beryllium	0.2B ug L	RL	U	MBL
	calcium	121.2B ug L	RL	U	MBL
CCB, 3/30 Run	magnesium	47.2B ug L	RL	U	MBL
FB01-030310	zinc	0.82B ug L	RL	U	FBL
EB01-030210-GW	zinc	21.4 ug L	RL up to 10X blank	J	EBL
EB01-022710-GW	zinc	1460 ug L	RL up to 10X blank	J	EBL

Associated samples and required qualifications are noted in the following table.

Sample ID	Analyte	Q Flag	Q Code
IR69-GW02DW-10A, IR69-GW09-10A, IR69-GW11-10A, IR69-GW13-10A, IR69-GW13IW-10A, IR69-GW14-10A	copper	U at RL	MBL
all field samples	magnesium	U at RL	MBL
IR69-GW12-10A	beryllium	U at RL	MBL
IR69-GW12-10A	calcium	U at RL	MBL
IR69-GW02DW-10A, IR69-GW09-10A, IR69-GW11-10A, IR69-GW12DW-10A, IR69-GW13-10A, IR69-GW13IW-10A, IR69-GW14-10A, IR69-GW14DW-10A, IR69-GW14IW-10A	zinc	U at RL	FBL
IR69-GW02-10A, IR69-GW12-10A	zinc	J	EBL

Laboratory Control Samples

OPP

The laboratory control sample associated with the samples in this SDG exhibited a low recovery for the compound demeton-s (14%). The compound is qualified as estimated J/UJ in all field and QC blank samples with a qualifier code of BSL. This compound should be considered significantly biased low in the samples.

Matrix Spikes

VOA

A matrix spike and matrix spike duplicate were submitted for sample IR69-GW02-10A: low recoveries were exhibited for cis-1, 2-dichloroethene at 60% and 20% (QC limit 70-125%): therefore results were qualified as estimated (JUJ) in the associated sample.

OPP

The MS/MSD pair of sample IR69-GW02-10A exhibited 0% recovery for the compound Demeton-s. This compound is rejected in the native sample only with a MSL qualifier code.

Metals

The matrix spike analyses exhibited non-compliant %Rs for one analyte. Specific action is noted in the following table.

MS/MSD	Analyte	Samples Affected	%R	Q Flag	Q Code
IR69-GW02-10A	selenium	all field samples	0.0	J UJ*	MSL

Please note that the results for selenium were not rejected because the post digestion spike was recovered well within the QC limits.

Matrix Duplicates

Metals

The associated matrix duplicate analyses exhibited a non-compliant RPD for one analyte. Specific action is noted in the following table.

MD	Analyte	Samples Affected	RPD	Q Flag	Q Code
IR69-GW02-10A	zinc	all field samples	49.8	J UJ	MDP

Serial Dilution

Metals

The serial dilution analysis exhibited a non-compliant %D for one analyte. Specific action is noted in the following table.

SD	Analyte	Samples Affected	%D	Q Flag	Q Code
IR69-GW02-10A	barium	all field samples	12	J UJ	SD

Identification/Quantitation

VOA

Sample IR69-GW02-10A, IR69-GW02DW-10A and IR69-GW13IW-10A required a dilution to obtain results within the calibration range. All E-flagged results are excluded in favor of the corresponding D-flagged results from the dilution analysis. All results except corresponding D-flagged results in the dilution analysis are excluded in favor of the results reported from the undiluted analysis.

SVOA

One of the LCS samples was not spiked; therefore all samples associated with this LCS were re-analyzed. The re-extraction was preformed out of holding time. Within the batch of samples associated with this LCS was a matrix spike and matrix spike duplicate. Recoveries for these samples were within criteria. Therefore the initial SIM analysis of IR69-EB01-030110-GW, IR69-EB01-030210-GW, IR69-GW02-10A, IR69-GW09-10A, IR69-GW13-10A, IR69-GW13IW-10A, IR69-GW02DW-10A and IR69-GW11-10A was used and the re-analysis was excluded.

Pesticides/PCBs

All positive results reported with a P flag to indicate column quantitation %Ds greater than 40% are qualified as estimated J with a qualifier code of 2C.

Metals

All results reported between the IDL and the RL (B flagged by laboratory) were qualified as estimated J. No qualification code was required.

A summary of qualifications required is provided on the following page. Please do not hesitate to contact DataQual ES with any questions regarding this validation report.

Sincerely,

Laura Maschhoff
President

Jacqueline Cleveland
Vice-President

Summary of Data Qualifications

VOA

Sample ID	Compound	Results	Q-Flag	Q Code
all samples	acetone 2-butanone	-	J R	ICL
IR69-GW12-10A, IR69-GW12DW-10A, IR69-GW14-10A, IR69-GW14IW-10A, IR69-GW14DW-10A, IR69-EB01-022710-GW, IR69-EB01-022810-GW, IR69-EB01-022810-SB, IR69-EB01-030310, IR69-TB01-030310, IR69-TB01-030110	dichlorodifluoromethane trichlorofluoromethane 1,1,2-trichloro-1,2,2-trifluoroethane 1,1,1-trichloroethane carbon tetrachloride bromodichloromethane	-	J UJ	CCH
IR69-GW09-10A	bromomethane methyl acetate 4-methyl-2-pentanone 2-hexanone	-	J UJ	CCL
IR69-GW09-10A	1,2,4-trichlorobenzene	-	U at RL	MBL
IR69-GW02-10A, IR69-GW02DW-10A, IR69-GW11-10A, IR69-GW14IW-10A	acetone	-	U at RL	TBI
IR69-GW02DW-10A	methylene chloride	-	U at RL	TBL
IR69-GW02-10A	benzene	-	U at RL	EBL
IR69-GW02-10A, IR69-GW02DW-10A, iR69-GW09-10A, IR69-GW13-10A	toluene	-	U at RL	EBL
IR69-GW11-10A	cis-1,2-dichloroethene	-	U at RL	TBL
IR69-GW14DW-10A	toluene	-	U	FBL
IR69-GW14-10A	acetone	-	U	EBL
IR69-GW02-10A	cis-1,2-dichloroethene	-	J UJ	MSL
IR69-GW02-10A, IR69-GW02DW-10A, IR69-GW13IW-10A	all E-flagged compounds	-	exclude	DL
IR69-GW02-10ADL, IR69-GW02DW-10ADL, IR69-GW13IW-10ADL	all except corresponding D-flagged compounds	-	exclude	DL

SVOA

Sample ID	Compound	Results	Q-Flag	Q Code
IR69-GW02-10A, IR69-GW02DW-10A, IR69-GW09-10A, IR69-GW11-10A, IR69-GW13-10A, IR69-GW13IW-10A, IR69-EB01-030110-GW	caprolactam	-	J UJ	CCH
IR69-GW12-10A-SIM	fluoranthene	-	U at RL	EBL
IR69-GW12-10A-SIM	pyrene	-	U at RL	EBL
IR69-EB01-030110-GW-SIMRE,IR69-EB01-030210-GW-SIMRE, IR69-GW02-10A-SIMRE, IR69-GW09-10A-SIMRE, IR69-GW13-10A-SIMRE, IR69-GW13IW-10A-SIMRE, IR69-GW11-10A-SIMRE, IR69-GW02DW-10A-SIMRE	all results	-	exclude	RE

Summary of Data Qualifications

Pesticides/PCBs

Sample ID	Compound	Results	Q-Flag	Q Code
all samples	all compounds	- P	J	2C

Organophosphorous Pesticides

Sample ID	Compound	Results	Q-Flag	Q Code
IR69-GW02-10A	demeton-s	-	R	MSL
all samples	demeton-s	- -	J UJ	BSL

Metals

Sample ID	Analyte	Results	Q-Flag	Q Code
IR69-GW02DW-10A, IR69-GW09-10A, IR69-GW11-10A, IR69-GW13-10A, IR69-GW13IW-10A, IR69-GW14-10A	copper	- B	U at RL	MBI
all field samples	magnesium	- B	U at RL	MBL
IR69-GW12-10A	beryllium	- B	U at RL	MBI
IR69-GW12-10A	calcium	- B	U at RL	MBL
IR69-GW02DW-10A, IR69-GW09-10A, IR69-GW11-10A, IR69-GW12DW-10A, IR69-GW13-10A, IR69-GW13IW-10A, IR69-GW14-10A, IR69-GW14DW-10A, IR69-GW14IW-10A	zinc	- B	U at RL	EBL
IR69-GW02-10A, IR69-GW12-10A	zinc	-	J	EBL
all field samples	selenium	- -	J UJ	MSL
all field samples	zinc	- -	J UJ	MDP
all field samples	barium	- -	J UJ	SD
all samples	all analytes	-B	J	

Glossary of Qualification Flags and Abbreviations

Qualification Flags (Q-Flags)

U	not detected above the reported sample quantitation limit
J	estimated value
UJ	reported quantitation limit is qualified as estimated
R	result is rejected; the presence or absence of the analyte cannot be verified
D	result value is based on dilution analysis result
NJ	analyte has been tentatively identified, estimated value
L	analyte present, biased low
UL	not detected, quantitation limit is probably higher
K	analyte present, biased high

Inorganic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 10X the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL and the result is raised to the RL and flagged U.
R or J.	The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator. (see NFG, Rev. date 10/04, p. 17 for extracted blanks (PB))

Organic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 5X (10X for common laboratory contaminants) the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is raised to the RL and flagged U.
U	The sample result for the blank contaminant is greater than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is flagged U at the reported value.

General Abbreviations

RL / MDL	reporting limit/method detection limit
CRQL	contract required quantitation limit
Q Code	qualifier code
+	positive result
-	non-detect result

QUALIFIER CODE REFERENCE

Qualifier	Description
TN	Tune
BSI	Blank Spike LCS - High Recovery
BSH	Blank Spike LCS - Low Recovery
BD	Blank Spike Blank Spike Duplicate (LCS LCSD) Precision
BRL	Below Reporting Limit
ISL	Internal Standard - Low Recovery
ISH	Internal Standard - High Recovery
MSL	Matrix Spike and or Matrix Spike Duplicate - Low Recovery
MSH	Matrix Spike and or Matrix Spike Duplicate - High Recovery
MI	Matrix interference obscuring the raw data
MDP	Matrix Spike Matrix Spike Duplicate Precision
2S	Second Source - Bad reproducibility between tandem detectors
SSL	Spiked Surrogate - Low Recovery
SSH	Spiked Surrogate - High Recovery
SD	Serial Dilution Reproducibility
ICL	Initial Calibration - Low Relative Response Factors (RRF)
ICH	Initial Calibration - High Relative Response Factors (RRF)
ICB	Initial Calibration - Bad Linearity or Curve Function
CCL	Continuing Calibration - Low Recovery or %Difference
CCH	Continuing Calibration - High Recovery or %Difference
LD	Lab Duplicate Reproducibility
HT	Holding Time
PD	Pesticide Degradation
2C	Second Column - Poor Dual Column Reproducibility
LR	Concentration Exceeds Linear Range
BI	Blank Contamination (MBL, FBL, FBI, TBL)
RE	Redundant Result - due to Re-analysis or Re-extraction
DI	Redundant Result - due to Dilution
FD	Field Duplicate
OI	Other - explained in data validation report
%SOI	High moisture content

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRB9 EB01-022710-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LLL 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-06

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-0671

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. _____ Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ UJ CCH
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	~~U~~ UJ CCH
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	~~U~~ UJ CCH
67-64-1	Acetone	6.3	J ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	11	
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	1.4	~~U~~ J ICL
67-66-3	Chloroform	0.27	J
71-55-6	1,1,1-Trichloroethane	0.50	~~U~~ UJ CCH
56-23-5	Carbon Tetrachloride	0.50	~~U~~ UJ CCH
71-43-2	Benzene	0.18	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	~~U~~ UJ CCH
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	2.9	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

LLL 072010

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-022710-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-06

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-0671

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. _____ Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.19	J
108-38-3	m,p-Xylene	0.66	J
95-47-6	o-Xylene	0.27	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.96	
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

TRIP EB01-022810-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 UVI 07/22/10

Matrix: (soil/water) WATER Lab Sample ID: 1003029-07

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-0771

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ UJ CCH
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	~~U~~ UJ CCH
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	~~U~~ UJ CCH
67-64-1	Acetone	5.2	J ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	14	
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ R ICL
67-66-3	Chloroform	1.2	
71-55-6	1,1,1-Trichloroethane	0.50	~~U~~ UJ CCH
56-23-5	Carbon Tetrachloride	0.50	~~U~~ UJ CCH
71-43-2	Benzene	0.17	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	~~U~~ UJ CCH
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	1.8	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

UVI 07/22/10

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-022810-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-07

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-0771

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. _____ Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.16	J
108-38-3	m,p-Xylene	0.54	J
95-47-6	o-Xylene	0.25	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.82	
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-022810-SB

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-08

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-0871

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. _____ Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ UJCCH
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	~~U~~ UJCCH
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	~~U~~ UJCCH
67-64-1	Acetone	6.3	J ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	19	
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ RICL
67-66-3	Chloroform	1.8	
71-55-6	1,1,1-Trichloroethane	0.50	~~U~~ UJCCH
56-23-5	Carbon Tetrachloride	0.50	~~U~~ UJCCH
71-43-2	Benzene	0.36	J
107-06-2	1,2-Dichloroethane	0.54	
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	~~U~~ UJCCH
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	1.7	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRW-EB01-022810-SB

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 WM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-08

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-0871

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. _____ Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.26	J
108-38-3	m,p-Xylene	0.84	J
95-47-6	o-Xylene	0.34	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.13	J
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	1.2	
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

WM 072010

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRM-EB01-030110-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 0120110

Matrix: (soil/water) WATER Lab Sample ID: 1003029-18

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-1871

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/06/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	5.8	J ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	6.5	
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.046	J
78-93-3	2-butanone	2.5	~~J~~ R-ICL
67-66-3	Chloroform	1.4	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.093	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.76	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

LM 0120110

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FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IA19-EB01-030110-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-18

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-1871

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/06/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.023	J
100-41-4	Ethylbenzene	0.087	J
108-38-3	m,p-Xylene	0.23	J
95-47-6	o-Xylene	0.13	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.38	J
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM 1 VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030210-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-19

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-1971

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/06/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	8.0	J ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	5.8	
156-60-5	trans-1,2 Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	1.8	~~J~~ J ICL
67-66-3	Chloroform	0.34	J
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.050	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	1.7	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

JRM EB01-030210-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-19

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-1971

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/06/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.18	J
100-41-4	Ethylbenzene	0.054	J
108-38-3	m,p-Xylene	0.20	J
95-47-6	o-Xylene	0.096	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.21	J
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

LM 072010

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRM- FB01-030310

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LMM 012010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-09

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-0971

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. _____ Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ UJCCH
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	~~U~~ UJCCH
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	~~U~~ UJCCH
67-64-1	Acetone	4.1	J ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	13	
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ J ICL
67-66-3	Chloroform	0.31	J
71-55-6	1,1,1-Trichloroethane	0.50	~~U~~ UJCCH
56-23-5	Carbon Tetrachloride	0.50	~~U~~ UJCCH
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	~~U~~ UJCCH
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	4.1	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

LMM 1-12-10

024

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRGG FB01-030310

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LMM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-09

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-0971

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. _____ Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.47	J
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

LMM 072010

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 MM 07/2010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-12

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-1271

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	20	
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.21	J
75-15-0	Carbon disulfide	0.041	J
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5 ~~2.0~~ ~~J~~ ~~U TPL~~ RICL	
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	23	
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	96	~~E~~ exclude, DL
78-93-3	2-butanone	2.5	~~U~~ RICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50 ~~0.043~~ ~~J~~ U EBL	
107-06-2	1,2-Dichloroethane	1.7	
79-01-6	Trichloroethene	2.3	
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50 ~~0.28~~ ~~J~~ U EBL	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	7.8	
127-18-4	Tetrachloroethene	0.19	J
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

1 Correction MM 07/2010

MM 07/2010

026

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-12

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-1271

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	9.8	
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02DL-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-12RE1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-12D71

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/08/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 3.6

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	1.8	U
74-87-3	Chloromethane	1.8	U
75-01-4	Vinyl Chloride	18	D
74-83-9	Bromomethane	1.8	U
75-00-3	Chloroethane	1.8	U
75-69-4	Trichlorofluoromethane	1.8	U
75-35-4	1,1-Dichloroethene	0.25	DJ
75-15-0	Carbon disulfide	0.077	DJ
76-13-1	1,1,2-trichloro-1,2,2-triflu	1.8	U
67-64-1	Acetone	3.3	DJB
79-20-9	Methyl acetate	1.8	U
75-09-2	Methylene Chloride	0.20	DJB
156-60-5	trans-1,2-Dichloroethene	24	D
1634-04-4	Methyl-tert-butyl ether	1.8	U
75-34-3	1,1-Dichloroethane	1.8	U
156-59-2	cis-1,2-Dichloroethene	110	~~D~~ J MSL
78-93-3	2-butanone	8.9	U
67-66-3	Chloroform	1.8	U
71-55-6	1,1,1-Trichloroethane	1.8	U
56-23-5	Carbon Tetrachloride	1.8	U
71-43-2	Benzene	1.8	U
107-06-2	1,2-Dichloroethane	1.6	DJ
79-01-6	Trichloroethene	2.4	D
78-87-5	1,2-Dichloropropane	1.8	U
75-27-4	Bromodichloromethane	1.8	U
10061-01-5	cis-1,3-Dichloropropene	1.8	U
108-10-1	4-Methyl-2-pentanone	8.9	U
108-88-3	Toluene	0.31	DJ
10061-02-6	trans-1,3-Dichloropropene	1.8	U
79-00-5	1,1,2-Trichloroethane	7.3	D
127-18-4	Tetrachloroethene	0.24	DJ
591-78-6	2-hexanone	8.9	U
124-48-1	Dibromochloromethane	1.8	U

exclude, DL

exclude, DL

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02DL-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-12RE1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-12D71

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/08/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 3.6

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	1.8	U
108-90-7	Chlorobenzene	1.8	U
100-41-4	Ethylbenzene	1.8	U
108-38-3	m,p-Xylene	3.6	U
95-47-6	o-Xylene	1.8	U
100-42-5	Styrene	1.8	U
75-25-2	Bromoform	1.8	U
98-82-8	Isopropyl Benzene	1.8	U
79-34-5	1,1,2,2-Tetrachloroethane	9.3	U
541-73-1	1,3-Dichlorobenzene	1.8	U
106-46-7	1,4-Dichlorobenzene	1.8	U
95-50-1	1,2-Dichlorobenzene	1.8	U
96-12-8	1,2-Dibromo-3-Chloropropane	1.8	U
120-82-1	1,2,4-Trichlorobenzene	1.8	U
1330-20-7	Xylene (total)	1.8	U
110-82-7	Cyclohexane	1.8	U
108-87-2	Methylcyclohexane	1.8	U

exclude, DL

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02DW-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 07 2010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-13

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-1371

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/06/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	80	~~E~~ exclude, DL
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.12	J
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5 ~~0.65~~	~~J~~ ~~UTBL~~ RICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.5 ~~0.083~~	~~J~~ UTBL
156-60-5	trans-1,2-Dichloroethene	11	
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	670	~~E~~ exclude, DL
78-93-3	2-butanone	2.5	~~U~~ RICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.41	J
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.5 ~~0.031~~	~~J~~ UETBL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

Correction LM 07 2010

LM 07 2010

030

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02DW-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-13

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-1371

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/06/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM 1 VOA

LM 072010

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02DWDL-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-13RE1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-13D271

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/08/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 25.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	13	U exclude, DL
74-87-3	Chloromethane	13	U exclude, DL
75-01-4	Vinyl Chloride	72	D
74-83-9	Bromomethane	13	U exclude, DL
75-00-3	Chloroethane	13	U
75-69-4	Trichlorofluoromethane	13	U
75-35-4	1,1-Dichloroethene	13	U
75-15-0	Carbon disulfide	13	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	13	U
67-64-1	Acetone	28	DJB
79-20-9	Methyl acetate	13	U
75-09-2	Methylene Chloride	0.80	DJB
156-60-5	trans-1,2-Dichloroethene	11	DJ
1634-04-4	Methyl-tert-butyl ether	13	U
75-34-3	1,1-Dichloroethane	13	U
156-59-2	cis-1,2-Dichloroethene	620	D
78-93-3	2-butanone	63	U exclude, DL
67-66-3	Chloroform	13	U
71-55-6	1,1,1-Trichloroethane	13	U
56-23-5	Carbon Tetrachloride	13	U
71-43-2	Benzene	13	U
107-06-2	1,2-Dichloroethane	13	U
79-01-6	Trichloroethene	13	U
78-87-5	1,2-Dichloropropane	13	U
75-27-4	Bromodichloromethane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
108-10-1	4-Methyl-2-pentanone	63	U
108-88-3	Toluene	13	U
10061-02-6	trans-1,3-Dichloropropene	13	U
79-00-5	1,1,2-Trichloroethane	13	U
127-18-4	Tetrachloroethene	13	U
591-78-6	2-hexanone	63	U
124-48-1	Dibromochloromethane	13	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02DWDL 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-13RE1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-13D271

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/08/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 25.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	13	U
108-90-7	Chlorobenzene	13	U
100-41-4	Ethylbenzene	13	U
108-38-3	m,p-Xylene	25	U
95-47-6	o-Xylene	13	U
100-42-5	Styrene	13	U
75-25-2	Bromoform	13	U
98-82-8	Isopropyl Benzene	13	U
79-34-5	1,1,2,2-Tetrachloroethane	13	U
541-73-1	1,3-Dichlorobenzene	13	U
106-46-7	1,4-Dichlorobenzene	13	U
95-50-1	1,2-Dichlorobenzene	13	U
96-12-8	1,2-Dibromo-3-Chloropropane	13	U
120-82-1	1,2,4-Trichlorobenzene	13	U
1330-20-7	Xylene (total)	13	U
110-82-7	Cyclohexane	13	U
108-87-2	Methylcyclohexane	13	U

exclude, RL

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

LM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-14

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-14R71

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/08/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	~~U~~ UJ CCL
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5	~~U~~ RICL
79-20-9	Methyl acetate	0.50	~~U~~ UJ CCL
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.56	
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	6.5	
78-93-3	2-butanone	2.5	~~U~~ RICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.30	J
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	~~U~~ UJ CCL
108-88-3	Toluene	0.50 ~~0.037~~	~~J~~ U EBL
10061 02 6	trans 1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	~~U~~ UJ CCL
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

LM 072010

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-14

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-14R71

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/08/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.52 ~~0.066~~	~~JB~~ U MBL
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-15

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-1571

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/06/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5 ~~1.1~~	~~J~~ ~~UTBL~~ RICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50 ~~0.062~~	~~J~~ UTBL
78-93-3	2-butanone	2.5	~~U~~ RICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-15

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-1571

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/06/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW12-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-01

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-0171

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. _____ Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ UJ CCH
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	~~U~~ UJ CCH
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	~~U~~ UJ CCH
67-64-1	Acetone	2.5	~~U~~ R ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.14	J
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.80	
78-93-3	2-butanone	2.5	~~U~~ R ICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	~~U~~ UJ CCH
56-23-5	Carbon Tetrachloride	0.50	~~U~~ UJ CCH
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.29	J
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	~~U~~ UJ CCH
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW12-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-01

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-0171

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. _____ Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW12DW-1CA

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 03/2010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-02

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-0271

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. _____ Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ UJ CCH
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	~~U~~ UJ CCH
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	~~U~~ UJ CCH
67-64-1	Acetone	2.5	~~U~~ R ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.45	J
78-93-3	2-butanone	2.5	~~U~~ R ICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	~~U~~ UJ CCH
56-23-5	Carbon Tetrachloride	0.50	~~U~~ UJ CCH
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	~~U~~ UJ CCH
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50	U
10061 02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

LM 03/2010

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW12DW-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-02

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-0271

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-16

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-1671

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/06/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.031	J
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5	~~U~~ R ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ R ICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50 ~~0.27~~	~~J~~ U EPL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM 1 VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-16

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-1671

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/06/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM 1 VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13IW-1DA

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LMM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-17

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-1771

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/06/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	2.2	
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5	~~U~~ R ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	68	~~E~~ exceeds, DL
78-93-3	2-butanone	0.31	~~U~~ J ICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

LMM 072010

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13IW-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-17

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-1771

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/06/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13IWDL 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-17RE1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-17D71

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/08/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 2.5

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	1.3	U exclude, DL
74-87-3	Chloromethane	1.3	U
75-01-4	Vinyl Chloride	1.9	D
74-83-9	Bromomethane	1.3	U
75-00-3	Chloroethane	1.3	U
75-69-4	Trichlorofluoromethane	1.3	U
75-35-4	1,1-Dichloroethene	1.3	U
75-15-0	Carbon disulfide	1.3	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	1.3	U
67-64-1	Acetone	6.3	U
79-20-9	Methyl acetate	1.3	U
75-09-2	Methylene Chloride	1.3	U
156-60-5	trans-1,2-Dichloroethene	1.3	U
1634-04-4	Methyl-tert-butyl ether	1.3	U
75-34-3	1,1-Dichloroethane	1.3	U
156-59-2	cis-1,2-Dichloroethene	67	D
78-93-3	2-butanone	6.3	U exclude, DL
67-66-3	Chloroform	1.3	U
71-55-6	1,1,1-Trichloroethane	1.3	U
56-23-5	Carbon Tetrachloride	1.3	U
71-43-2	Benzene	1.3	U
107-06-2	1,2-Dichloroethane	1.3	U
79-01-6	Trichloroethene	1.3	U
78-87-5	1,2-Dichloropropane	1.3	U
75-27-4	Bromodichloromethane	1.3	U
10061-01-5	cis-1,3-Dichloropropene	1.3	U
108-10-1	4-Methyl-2-pentanone	6.3	U
108-88-3	Toluene	1.3	U
10061-02-6	trans 1,3-Dichloropropene	1.3	U
79-00-5	1,1,2-Trichloroethane	1.3	U
127-18-4	Tetrachloroethene	1.3	U
591-78-6	2-hexanone	6.3	U
124-48-1	Dibromochloromethane	1.3	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13IWDL 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-17RE1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-17D71

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/08/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 2.5

Soil Extract Volume: ____ (uL) Soil Aliquot Volume: ____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	1.3	U
108-90-7	Chlorobenzene	1.3	U
100-41-4	Ethylbenzene	1.3	U
108-38-3	m,p-Xylene	2.5	U
95-47-6	o-Xylene	1.3	U
100-42-5	Styrene	1.3	U
75-25-2	Bromoform	1.3	U
98-82-8	Isopropyl Benzene	1.3	U
79-34-5	1,1,2,2-Tetrachloroethane	1.3	U
541-73-1	1,3-Dichlorobenzene	1.3	U
106-46-7	1,4-Dichlorobenzene	1.3	U
95-50-1	1,2-Dichlorobenzene	1.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	1.3	U
120-82-1	1,2,4-Trichlorobenzene	1.3	U
1330-20-7	Xylene (total)	1.3	U
110-82-7	Cyclohexane	1.3	U
108-87-2	Methylcyclohexane	1.3	U

exclude, DL

FORM I VOA

LM 072010

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW14-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-03

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-0371

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. _____ Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ UJ CCH
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	~~U~~ UJ CCH
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	~~U~~ UJ CCH
67-64-1	Acetone	3.2	~~UCH~~ RICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ RICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	~~U~~ UJ CCH
56-23-5	Carbon Tetrachloride	0.50	~~U~~ UJ CCH
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	~~U~~ UJ CCH
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

Correction 04/07/10

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW14-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-03

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-0371

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. _____ Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW14DW_10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 WM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-05

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-0571

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. _____ Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ UJ CCH
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	~~U~~ UJ CCH
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-trifluo	0.50	~~U~~ UJ CCH
67-64-1	Acetone	2.5	~~U~~ R ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ R ICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	~~U~~ UJ CCH
56-23-5	Carbon Tetrachloride	0.50	~~U~~ UJ CCH
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	~~U~~ UJ CCH
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.60	U PBL
10061-02-6	trans 1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

WM 072010

050

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW14DW-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-05

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-0571

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. _____ Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW14IW-1CH

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-04

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-0471

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. _____ Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ UJ CCH
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	~~U~~ UJ CCH
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	~~U~~ UJ CCH
67-64-1	Acetone	2.5 ~~1.9~~	~~J~~ U ~~CCH TBL~~ RICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5 ~~2.5~~	~~U~~ R ICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	~~U~~ UJ CCH
56-23-5	Carbon Tetrachloride	0.50	~~U~~ UJ CCH
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	~~U~~ UJ CCH
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

2 corrections
LMC 07/14/10

LM 07/20/10

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

1R69-GW14IW-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-04

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-0471

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. _____ Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-TB0
1-030110

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-11

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-1171

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. _____ Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ UJ CCH
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	~~U~~ UJ CCH
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	~~U~~ UJ CCH
67-64-1	Acetone	2.5	~~U~~ R ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ R ICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	~~U~~ UJ CCH
56-23-5	Carbon Tetrachloride	0.50	~~U~~ UJ CCH
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	~~U~~ UJ CCH
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

WW 0/12/10

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-TB0
1-030110

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-11

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-1171

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. _____ Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-TB0
1-030310

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-10

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-1071

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. _____ Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ UJ CCH
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	~~U~~ UJ CCH
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	~~U~~ UJ CCH
67-64-1	Acetone	2.4	~~U~~ J ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ R ICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	~~U~~ UJ CCH
56-23-5	Carbon Tetrachloride	0.50	~~U~~ UJ CCH
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	~~U~~ UJ CCH
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

056

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-TB0
1-030310

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-10

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-1071

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. _____ Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

057

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-TB0
1-030410

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-20

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-2071

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/06/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	0.71	~~J~~ J ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.035	J
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.060	J
78-93-3	2-butanone	2.5	~~U~~ J ICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

058

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-TB0
1-030410

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-20

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003029-2071

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/06/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

059

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02MS-1pA

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 WM 072010

Matrix: (soil/water) WATER Lab Sample ID: 0030526-MS2

Sample wt/vol: 25 (g/ml) ML Lab File ID: 0030526-MS271

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/06/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	6.0	
74-87-3	Chloromethane	5.2	
75-01-4	Vinyl Chloride	23	
74-83-9	Bromomethane	4.4	
75-00-3	Chloroethane	14	
75-69-4	Trichlorofluoromethane	6.3	
75-35-4	1,1-Dichloroethene	5.6	
75-15-0	Carbon disulfide	5.7	
76-13-1	1,1,2-trichloro-1,2,2-triflu	6.5	
67-64-1	Acetone	26	
79-20-9	Methyl acetate	5.8	
75-09-2	Methylene Chloride	5.3	
156-60-5	trans-1,2-Dichloroethene	28	
1634-04-4	Methyl-tert-butyl ether	4.9	
75-34-3	1,1-Dichloroethane	5.5	
156-59-2	cis-1,2-Dichloroethene	99	E
78-93-3	2-butanone	24	
67-66-3	Chloroform	6.0	
71-55-6	1,1,1-Trichloroethane	6.2	
56-23-5	Carbon Tetrachloride	6.4	
71-43-2	Benzene	5.5	
107-06-2	1,2-Dichloroethane	7.5	
79-01-6	Trichloroethene	7.7	
78-87-5	1,2-Dichloropropane	5.6	
75-27-4	Bromodichloromethane	5.8	
10061-01-5	cis-1,3-Dichloropropene	5.5	
108-10-1	4-Methyl-2-pentanone	24	
108-88-3	Toluene	5.4	
10061-02-6	trans-1,3-Dichloropropene	5.6	
79-00-5	1,1,2-Trichloroethane	13	
127-18-4	Tetrachloroethene	5.5	
591-78-6	2-hexanone	25	
124-48-1	Dibromochloromethane	5.2	

FORM I VOA

WM 072010

060

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02MS-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 0030526-MS2

Sample wt/vol: 25 (g/ml) ML Lab File ID: 0030526-MS271

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. Date Analyzed: 03/06/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	5.1	
108-90-7	Chlorobenzene	5.3	
100-41-4	Ethylbenzene	5.4	
108-38-3	m,p-Xylene	11	
95-47-6	o-Xylene	5.3	
100-42-5	Styrene	5.2	
75-25-2	Bromoform	5.1	
98-82-8	Isopropyl Benzene	5.6	
79-34-5	1,1,2,2-Tetrachloroethane	14	
541-73-1	1,3-Dichlorobenzene	5.4	
106-46-7	1,4-Dichlorobenzene	5.2	
95-50-1	1,2-Dichlorobenzene	5.1	
96-12-8	1,2-Dibromo-3-Chloropropane	5.1	
120-82-1	1,2,4-Trichlorobenzene	5.3	
1330-20-7	Xylene (total)	17	
110-82-7	Cyclohexane	5.9	
108-87-2	Methylcyclohexane	5.5	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02MSD-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 0030526-MSD2

Sample wt/vol: 25 (g/ml) ML Lab File ID: 0030526-MSD271

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/06/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	6.2	
74-87-3	Chloromethane	5.5	
75-01-4	Vinyl Chloride	24	
74-83-9	Bromomethane	4.1	
75-00-3	Chloroethane	18	
75-69-4	Trichlorofluoromethane	6.4	
75-35-4	1,1-Dichloroethene	5.8	
75-15-0	Carbon disulfide	5.9	
76-13-1	1,1,2-trichloro-1,2,2-triflu	6.6	
67-64-1	Acetone	25	
79-20-9	Methyl acetate	5.3	
75-09-2	Methylene Chloride	5.3	
156-60-5	trans-1,2-Dichloroethene	28	
1634-04-4	Methyl-tert-butyl ether	4.7	
75-34-3	1,1-Dichloroethane	5.5	
156-59-2	cis-1,2-Dichloroethene	97	E
78-93-3	2-butanone	22	
67-66-3	Chloroform	5.9	
71-55-6	1,1,1-Trichloroethane	6.2	
56-23-5	Carbon Tetrachloride	6.4	
71-43-2	Benzene	5.6	
107-06-2	1,2-Dichloroethane	7.2	
79-01-6	Trichloroethene	7.8	
78-87-5	1,2-Dichloropropane	5.3	
75-27-4	Bromodichloromethane	5.7	
10061-01-5	cis-1,3-Dichloropropene	5.3	
108-10-1	4-Methyl-2-pentanone	23	
108-88-3	Toluene	5.6	
10061-02-6	trans-1,3-Dichloropropene	5.4	
79-00-5	1,1,2-Trichloroethane	12	
127-18-4	Tetrachloroethene	5.6	
591-78-6	2-hexanone	23	
124-48-1	Dibromochloromethane	5.3	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02MSD -10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 0030526-MSD2

Sample wt/vol: 25 (g/ml) ML Lab File ID: 0030526-MSD271

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: not dec. _____ Date Analyzed: 03/06/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	5.1	
108-90-7	Chlorobenzene	5.4	
100-41-4	Ethylbenzene	5.5	
108-38-3	m,p-Xylene	11	
95-47-6	o-Xylene	5.4	
100-42-5	Styrene	5.2	
75-25-2	Bromoform	4.8	
98-82-8	Isopropyl Benzene	5.7	
79-34-5	1,1,2,2-Tetrachloroethane	14	
541-73-1	1,3-Dichlorobenzene	5.3	
106-46-7	1,4-Dichlorobenzene	5.4	
95-50-1	1,2-Dichlorobenzene	5.3	
96-12-8	1,2-Dibromo-3-Chloropropane	4.6	
120-82-1	1,2,4-Trichlorobenzene	5.4	
1330-20-7	Xylene (total)	17	
110-82-7	Cyclohexane	6.0	
108-87-2	Methylcyclohexane	5.6	

FORM I VOA

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

JK64 EB01-022710-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-06

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-06JA70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)____ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

TRB4- EB01-022710-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-06

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-06JA70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

JR64 EB01-022710-GW

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-06

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-06A60

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IPA9- EB01-022810-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-07

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003029-07A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.1	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.1	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.1	U
98-86-2	Acetophenone	5.1	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.1	U
67-72-1	Hexachloroethane	5.1	U
98-95-3	Nitrobenzene	5.1	U
78-59-1	Isophorone	5.1	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.1	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.1	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.1	U
105-60-2	Caprolactam	5.1	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.1	U
77-47-4	Hexachlorocyclopentadiene	5.1	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.1	U
91-58-7	2-Chloronaphthalene	5.1	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.1	U
606-20-2	2,6-Dinitrotoluene	5.1	U
208-96-8	Acenaphthylene	5.1	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.1	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRM EB01-022810-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-07

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003029-07A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.1	U
132-64-9	Dibenzofuran	5.1	U
84-66-2	Diethylphthalate	5.1	U
7005-72-3	4-Chlorophenyl-phenylether	5.1	U
86-73-7	Fluorene	5.1	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.1	U
101-55-3	4-Bromophenyl-phenylether	5.1	U
118-74-1	Hexachlorobenzene	5.1	U
1912-24-9	Atrazine	5.1	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.1	U
120-12-7	Anthracene	5.1	U
86-74-8	Carbazole	5.1	U
84-74-2	Di-n-butylphthalate	5.1	U
206-44-0	Fluoranthene	5.1	U
129-00-0	Pyrene	5.1	U
85-68-7	Butylbenzylphthalate	5.1	U
91-94-1	3,3'-Dichlorobenzidine	5.1	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.1	U
56-55-3	Benzo(a)anthracene	5.1	U
218-01-9	Chrysene	5.1	U
117-84-0	Di-n-octylphthalate	5.1	U
205-99-2	Benzo(b)fluoranthene	5.1	U
207-08-9	Benzo(k)fluoranthene	5.1	U
50-32-8	Benzo(a)pyrene	5.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.1	U
53-70-3	Dibenzo(a,h)anthracene	5.1	U
191-24-2	Benzo(g,h,i)perylene	5.1	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-022810-GW

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-07

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003029-07A60

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.035	J
91-57-6	2-Methylnaphthalene	0.21	U
208-96-8	Acenaphthylene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	U
206-44-0	Fluoranthene	0.21	U
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U
53-70-3	Dibenzo(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IN4- EB01-022810-SB

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-08

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003029-08JA70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.1	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.1	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.1	U
98-86-2	Acetophenone	5.1	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.1	U
67-72-1	Hexachloroethane	5.1	U
98-95-3	Nitrobenzene	5.1	U
78-59-1	Isophorone	5.1	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.1	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.1	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.1	U
105-60-2	Caprolactam	5.1	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.1	U
77-47-4	Hexachlorocyclopentadiene	5.1	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.1	U
91-58-7	2-Chloronaphthalene	5.1	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.1	U
606-20-2	2,6-Dinitrotoluene	5.1	U
208-96-8	Acenaphthylene	5.1	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.1	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69 EB01-022810-SB

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-08

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003029-08JA70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.1	U
132-64-9	Dibenzofuran	5.1	U
84-66-2	Diethylphthalate	5.1	U
7005-72-3	4-Chlorophenyl-phenylether	5.1	U
86-73-7	Fluorene	5.1	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.1	U
101-55-3	4-Bromophenyl-phenylether	5.1	U
118-74-1	Hexachlorobenzene	5.1	U
1912-24-9	Atrazine	5.1	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.1	U
120-12-7	Anthracene	5.1	U
86-74-8	Carbazole	5.1	U
84-74-2	Di-n-butylphthalate	5.1	U
206-44-0	Fluoranthene	5.1	U
129-00-0	Pyrene	5.1	U
85-68-7	Butylbenzylphthalate	5.1	U
91-94-1	3,3'-Dichlorobenzidine	5.1	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.1	U
56-55-3	Benzo(a)anthracene	5.1	U
218-01-9	Chrysene	5.1	U
117-84-0	Di-n-octylphthalate	5.1	U
205-99-2	Benzo(b)fluoranthene	5.1	U
207-08-9	Benzo(k)fluoranthene	5.1	U
50-32-8	Benzo(a)pyrene	5.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.1	U
53-70-3	Dibenzo(a,h)anthracene	5.1	U
191-24-2	Benzo(g,h,i)perylene	5.1	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69 EB01-022810-SB

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 022010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-08

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003029-08C60

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.038	J
91-57-6	2-Methylnaphthalene	0.21	U
208-96-8	Acenaphthylene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	U
206-44-0	Fluoranthene	0.21	U
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U
53-70-3	Dibenzo(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRM EB01-030110-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-18

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-18A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	~~U~~ UJ CCH
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030110-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-18

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-18A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRG4 EB01-030110-GW

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-18

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-18A60

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRGA- EB01-030
110-GWRE

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-18

Sample wt/vol: 500 (g/mL) ML Lab File ID: 1003029-18C60

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/31/10

Concentrated Extract Volume: 500(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

exclude, RE

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRM- EB01-030210-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-19

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003029-19JA70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/21/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.4	U
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.4	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.4	U
98-86-2	Acetophenone	5.4	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.4	U
67-72-1	Hexachloroethane	5.4	U
98-95-3	Nitrobenzene	5.4	U
78-59-1	Isophorone	5.4	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.4	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.4	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.4	U
105-60-2	Caprolactam	5.4	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.4	U
77-47-4	Hexachlorocyclopentadiene	5.4	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.4	U
91-58-7	2-Chloronaphthalene	5.4	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.4	U
606-20-2	2,6-Dinitrotoluene	5.4	U
208-96-8	Acenaphthylene	5.4	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.4	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030210-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-19

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003029-19JA70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/21/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.4	U
132-64-9	Dibenzofuran	5.4	U
84-66-2	Diethylphthalate	5.4	U
7005-72-3	4-Chlorophenyl-phenylether	5.4	U
86-73-7	Fluorene	5.4	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.4	U
101-55-3	4-Bromophenyl-phenylether	5.4	U
118-74-1	Hexachlorobenzene	5.4	U
1912-24-9	Atrazine	5.4	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.4	U
120-12-7	Anthracene	5.4	U
86-74-8	Carbazole	5.4	U
84-74-2	Di-n-butylphthalate	5.4	U
206-44-0	Fluoranthene	5.4	U
129-00-0	Pyrene	5.4	U
85-68-7	Butylbenzylphthalate	5.4	U
91-94-1	3,3'-Dichlorobenzidine	5.4	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.4	U
56-55-3	Benzo(a)anthracene	5.4	U
218-01-9	Chrysene	5.4	U
117-84-0	Di-n-octylphthalate	5.4	U
205-99-2	Benzo(b)fluoranthene	5.4	U
207-08-9	Benzo(k)fluoranthene	5.4	U
50-32-8	Benzo(a)pyrene	5.4	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.4	U
53-70-3	Dibenzo(a,h)anthracene	5.4	U
191-24-2	Benzo(g,h,i)perylene	5.4	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030210-GW

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-19

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003029-19A60

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.049	J
91-57-6	2-Methylnaphthalene	0.22	U
208-96-8	Acenaphthylene	0.014	J
83-32-9	Acenaphthene	0.22	U
86-73-7	Fluorene	0.22	U
85-01-8	Phenanthrene	0.22	U
120-12-7	Anthracene	0.22	U
206-44-0	Fluoranthene	0.014	J
129-00-0	Pyrene	0.018	J
56-55-3	Benzo(a)anthracene	0.22	U
218-01-9	Chrysene	0.22	U
205-99-2	Benzo(b)fluoranthene	0.22	U
207-08-9	Benzo(k)fluoranthene	0.22	U
50-32-8	Benzo(a)pyrene	0.22	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.22	U
53-70-3	Dibenzo(a,h)anthracene	0.22	U
191-24-2	Benzo(g,h,i)perylene	0.22	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030
210-GWRE

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-19

Sample wt/vol: 500 (g/mL) ML Lab File ID: 1003029-19C60

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/31/10

Concentrated Extract Volume: 500(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

excluded, RE

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FB01-030310

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-09

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-09A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FB01-030310

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-09

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-09A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	6.5	
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	1.8	J
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRG-FB01-030310

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-09

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-09C60

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-12

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-12A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	~~U~~ UJ CH
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02-101

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-12

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-12A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02-1C A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-12

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-12C60

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.016	J
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02RE-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-12

Sample wt/vol: 500 (g/mL) ML Lab File ID: 1003029-12JC60

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/31/10

Concentrated Extract Volume: 500(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

excluded, RE

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02DW-10.1

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-13

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-13A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	UJ CCH
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02DW - 10.4

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-13

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-13A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

TR69-GW02DW-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-13

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-13C60

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02DWRE 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-13

Sample wt/vol: 500 (g/mL) ML Lab File ID: 1003029-13JC60

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/31/10

Concentrated Extract Volume: 500(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50 32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

Exclude, AC

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-14

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-14A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	~~U~~ UJ CCH
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-14

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-14A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09-10

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-14

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-14C60

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

1R69-GW09RE-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-14

Sample wt/vol: 500 (g/mL) ML Lab File ID: 1003029-14A60

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/31/10

Concentrated Extract Volume: 500(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

exclude, PE

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-15

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-15A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	~~U~~ UJ CCH
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11-104

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-15

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-15A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-15

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-15C60

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11RE-10.4

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-15

Sample wt/vol: 500 (g/mL) ML Lab File ID: 1003029-15JC60

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/31/10

Concentrated Extract Volume: 500(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW12-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-01A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: decanted: (Y/N) Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW12-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-01A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW12-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-01JC60

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20 ~~0.011~~	~~J~~ U EBL
129-00-0	Pyrene	0.20 ~~0.015~~	~~J~~ U EBL.
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

LM 07/2010

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW12DW-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-02

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-02A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW12DW-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-02

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-02A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW12DW-1 0A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-02

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-02A60

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13 -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-16

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-16A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	~~U~~ UJ [illegible]
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-16

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-16A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-16

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-16A60

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13RE-16A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-16

Sample wt/vol: 500 (g/mL) ML Lab File ID: 1003029-16C60

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/31/10

Concentrated Extract Volume: 500(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

Include, RE

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13IW-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-17

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-17A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	~~U~~ UJ CLH
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13IW-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-17

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-17A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13IW-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-17

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-17A60

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13IWRE 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-17

Sample wt/vol: 500 (g/mL) ML Lab File ID: 1003029-17C60

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/31/10

Concentrated Extract Volume: 500(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

exclude, RE

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW14-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-03A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW14-104

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-03A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW14 -10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-03A60

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW14DW-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-05A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1' Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW14DW-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-05A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW14DW-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-05A60

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW14IW-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-04A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: decanted: (Y/N) Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW14IW-104

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-04A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132*64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW14IW-1PA

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-04A60

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02MS-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 0030601-MS1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0030601-MS1A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	19	
108-95-2	Phenol	14	
111-44-4	Bis(2-chloroethyl)ether	26	
95-57-8	2-Chlorophenol	27	
95-48-7	2-Methylphenol	27	
108-60-1	2,2'-oxybis(1-Chloropropane)	25	
98-86-2	Acetophenone	28	
106-44-5	4-Methylphenol	26	
621-64-7	N-Nitroso-di-N-propylamine	26	
67-72-1	Hexachloroethane	26	
98-95-3	Nitrobenzene	26	
78-59-1	Isophorone	27	
88-75-5	2-Nitrophenol	29	
105-67-9	2,4-Dimethylphenol	35	
111-91-1	Bis(2-chloroethoxy)methane	30	
120-83-2	2,4-Dichlorophenol	29	
91-20-3	Naphthalene	28	
106-47-8	4-Chloroaniline	34	
87-68-3	Hexachlorobutadiene	30	
105-60-2	Caprolactam	21	
59-50-7	4-Chloro-3-methylphenol	34	
91-57-6	2-Methylnaphthalene	28	
77-47-4	Hexachlorocyclopentadiene	20	
88-06-2	2,4,6-Trichlorophenol	30	
95-95-4	2,4,5-Trichlorophenol	34	
92-52-4	1,1'-Biphenyl	27	
91-58-7	2-Chloronaphthalene	28	
88-74-4	2-Nitroaniline	33	
131-11-3	Dimethylphthalate	32	
606-20-2	2,6-Dinitrotoluene	34	
208-96-8	Acenaphthylene	29	
99-09-2	3-Nitroaniline	36	
83-32-9	Acenaphthene	30	

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02MS-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 0030601-MS1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0030601-MS1A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	40	
100-02-7	4-Nitrophenol	19	
121-14-2	2,4-Dinitrotoluene	36	
132-64-9	Dibenzofuran	31	
84-66-2	Diethylphthalate	34	
7005-72-3	4-Chlorophenyl-phenylether	30	
86-73-7	Fluorene	32	
100-01-6	4-Nitroaniline	41	
534-52-1	4,6-Dinitro-2-methylphenol	36	
86-30-6	N-Nitrosodiphenylamine (1)	40	
101-55-3	4-Bromophenyl-phenylether	32	
118-74-1	Hexachlorobenzene	34	
1912-24-9	Atrazine	36	
87-86-5	Pentachlorophenol	38	
85-01-8	Phenanthrene	35	
120-12-7	Anthracene	36	
86-74-8	Carbazole	37	
84-74-2	Di-n-butylphthalate	37	
206-44-0	Fluoranthene	39	
129-00-0	Pyrene	34	
85-68-7	Butylbenzylphthalate	36	
91-94-1	3,3'-Dichlorobenzidine	44	
117-81-7	bis(2-ethylhexyl)Phthalate	36	
56-55-3	Benzo(a)anthracene	34	
218-01-9	Chrysene	36	
117-84-0	Di-n-octylphthalate	37	
205-99-2	Benzo(b)fluoranthene	32	
207-08-9	Benzo(k)fluoranthene	38	
50-32-8	Benzo(a)pyrene	34	
193-39-5	Indeno(1,2,3-cd)pyrene	33	
53-70-3	Dibenzo(a,h)anthracene	35	
191-24-2	Benzo(g,h,i)perylene	34	

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02MSD

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 0030601-MSD1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0030601-MSDA70

Level: (low/med) LOW Date Received: 03/03/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	17	
108-95-2	Phenol	17	
111-44-4	Bis(2-chloroethyl)ether	32	
95-57-8	2-Chlorophenol	33	
95-48-7	2-Methylphenol	35	
108-60-1	2,2'-oxybis(1-Chloropropane)	30	
98-86-2	Acetophenone	35	
106-44-5	4-Methylphenol	31	
621-64-7	N-Nitroso-di-N-propylamine	36	
67-72-1	Hexachloroethane	25	
98-95-3	Nitrobenzene	31	
78-59-1	Isophorone	34	
88-75-5	2-Nitrophenol	34	
105-67-9	2,4-Dimethylphenol	40	
111-91-1	Bis(2-chloroethoxy)methane	34	
120-83-2	2,4-Dichlorophenol	35	
91-20-3	Naphthalene	28	
106-47-8	4-Chloroaniline	40	
87-68-3	Hexachlorobutadiene	30	
105-60-2	Caprolactam	20	
59-50-7	4-Chloro-3-methylphenol	38	
91-57-6	2-Methylnaphthalene	28	
77-47-4	Hexachlorocyclopentadiene	24	
88-06-2	2,4,6-Trichlorophenol	36	
95-95-4	2,4,5-Trichlorophenol	41	
92-52-4	1,1'-Biphenyl	29	
91-58-7	2-Chloronaphthalene	31	
88-74-4	2-Nitroaniline	39	
131-11-3	Dimethylphthalate	36	
606-20-2	2,6-Dinitrotoluene	38	
208-96-8	Acenaphthylene	33	
99-09-2	3-Nitroaniline	40	
83-32-9	Acenaphthene	33	

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02MSD-1pA

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 0030601-MSD1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0030601-MSDA70

Level: (low/med) LOW Date Received: 03/03/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	46	
100-02-7	4-Nitrophenol	19	
121-14-2	2,4-Dinitrotoluene	39	
132-64-9	Dibenzofuran	34	
84-66-2	Diethylphthalate	37	
7005-72-3	4-Chlorophenyl-phenylether	33	
86-73-7	Fluorene	35	
100-01-6	4-Nitroaniline	42	
534-52-1	4,6-Dinitro-2-methylphenol	41	
86-30-6	N-Nitrosodiphenylamine (1)	45	
101-55-3	4-Bromophenyl-phenylether	37	
118-74-1	Hexachlorobenzene	36	
1912-24-9	Atrazine	37	
87-86-5	Pentachlorophenol	42	
85-01-8	Phenanthrene	36	
120-12-7	Anthracene	37	
86-74-8	Carbazole	39	
84-74-2	Di-n-butylphthalate	37	
206-44-0	Fluoranthene	39	
129-00-0	Pyrene	36	
85-68-7	Butylbenzylphthalate	38	
91-94-1	3,3'-Dichlorobenzidine	49	
117-81-7	bis(2-ethylhexyl)Phthalate	37	
56-55-3	Benzo(a)anthracene	38	
218-01-9	Chrysene	35	
117-84-0	Di-n-octylphthalate	36	
205-99-2	Benzo(b)fluoranthene	40	
207-08-9	Benzo(k)fluoranthene	34	
50-32-8	Benzo(a)pyrene	37	
193-39-5	Indeno(1,2,3-cd)pyrene	39	
53-70-3	Dibenzo(a,h)anthracene	37	
191-24-2	Benzo(g,h,i)perylene	37	

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02MS-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 0030601-MS2

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0030601-MS2C60

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N) ____ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.40	
91-57-6	2-Methylnaphthalene	0.47	
208-96-8	Acenaphthylene	0.39	
83-32-9	Acenaphthene	0.39	
86-73-7	Fluorene	0.42	
85-01-8	Phenanthrene	0.44	
120-12-7	Anthracene	0.49	
206-44-0	Fluoranthene	0.54	
129-00-0	Pyrene	0.50	
56-55-3	Benzo(a)anthracene	0.48	
218-01-9	Chrysene	0.47	
205-99-2	Benzo(b)fluoranthene	0.53	
207-08-9	Benzo(k)fluoranthene	0.46	
50-32-8	Benzo(a)pyrene	0.46	
193-39-5	Indeno(1,2,3-cd)pyrene	0.38	
53-70-3	Dibenzo(a,h)anthracene	0.36	
191-24-2	Benzo(g,h,i)perylene	0.39	

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02MSD-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 0030601-MSD2

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0030601-MSD2C60

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.41	
91-57-6	2-Methylnaphthalene	0.47	
208-96-8	Acenaphthylene	0.40	
83-32-9	Acenaphthene	0.40	
86-73-7	Fluorene	0.42	
85-01-8	Phenanthrene	0.43	
120-12-7	Anthracene	0.49	
206-44-0	Fluoranthene	0.51	
129-00-0	Pyrene	0.49	
56-55-3	Benzo(a)anthracene	0.49	
218-01-9	Chrysene	0.47	
205-99-2	Benzo(b)fluoranthene	0.51	
207-08-9	Benzo(k)fluoranthene	0.45	
50-32-8	Benzo(a)pyrene	0.47	
193-39-5	Indeno(1,2,3-cd)pyrene	0.41	
53-70-3	Dibenzo(a,h)anthracene	0.39	
191-24-2	Benzo(g,h,i)perylene	0.40	

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02REMS-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 0033033-MS1

Sample wt/vol: 500 (g/mL) ML Lab File ID: 0033033-MS1A60

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/31/10

Concentrated Extract Volume: 500(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.36	
91-57-6	2-Methylnaphthalene	0.43	
208-96-8	Acenaphthylene	0.36	
83-32-9	Acenaphthene	0.36	
86-73-7	Fluorene	0.37	
85-01-8	Phenanthrene	0.41	
120-12-7	Anthracene	0.43	
206-44-0	Fluoranthene	0.43	
129-00-0	Pyrene	0.41	
56-55-3	Benzo(a)anthracene	0.42	
218-01-9	Chrysene	0.44	
205-99-2	Benzo(b)fluoranthene	0.46	
207-08-9	Benzo(k)fluoranthene	0.47	
50-32-8	Benzo(a)pyrene	0.41	
193-39-5	Indeno(1,2,3-cd)pyrene	0.40	
53-70-3	Dibenzo(a,h)anthracene	0.41	
191-24-2	Benzo(g,h,i)perylene	0.42	

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02REMSD-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 0033033-MSD1

Sample wt/vol: 500 (g/mL) ML Lab File ID: 0033033-MSD1A60

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/31/10

Concentrated Extract Volume: 500(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.30	
91-57-6	2-Methylnaphthalene	0.34	
208-96-8	Acenaphthylene	0.30	
83-32-9	Acenaphthene	0.30	
86-73-7	Fluorene	0.32	
85-01-8	Phenanthrene	0.37	
120-12-7	Anthracene	0.38	
206-44-0	Fluoranthene	0.36	
129-00-0	Pyrene	0.35	
56-55-3	Benzo(a)anthracene	0.37	
218-01-9	Chrysene	0.39	
205-99-2	Benzo(b)fluoranthene	0.39	
207-08-9	Benzo(k)fluoranthene	0.40	
50-32-8	Benzo(a)pyrene	0.37	
193-39-5	Indeno(1,2,3-cd)pyrene	0.36	
53-70-3	Dibenzo(a,h)anthracene	0.37	
191-24-2	Benzo(g,h,i)perylene	0.37	

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1269 EB01-022710-GW-10A JC 73010

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-06

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/05/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

JC 73010

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1R69- EB01-022810-GW ~~10A~~ JAC 73010

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-07

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/05/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

JAC 73016

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1RG EB01-022810-SB ~~10A~~

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/05/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.054	~~JP~~ J 2C
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

JPC 73010

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1269-EB01-030110-GW-~~10A~~

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

JAC 7/2010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-18

Sample wt/vol: 950.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/05/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/05/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.053	U
319-85-7	beta-BHC	0.053	U
319-84-6	alpha-BHC	0.053	U
319-86-8	delta-BHC	0.053	U
58-89-9	gamma-BHC (Lindane)	0.053	U
72-54-8	4,4'-DDD	0.11	U
72-55-9	4,4'-DDE	0.11	U
50-29-3	4,4' DDT	0.11	U
60-57-1	Dieldrin	0.11	U
959-98-8	Endosulfan I	0.053	U
33213-65-9	Endosulfan II	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
72-20-8	Endrin	0.11	U
7421-93-4	Endrin Aldehyde	0.11	U
76-44-8	Heptachlor	0.053	U
1024-57-3	Heptachlor Epoxide	0.053	U
72-43-5	Methoxychlor	0.53	U
8001-35-2	Toxaphene	2.6	U
12674-11-2	Aroclor-1016	0.98	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.98	U
53469-21-9	Aroclor-1242	0.66	U
12672-29-6	Aroclor-1248	0.66	U
11097-69-1	Aroclor-1254	0.66	U
11096-82-5	Aroclor-1260	0.98	U
53494-70-5	Endrin Ketone	0.11	U
5103-74-2	gamma-Chlordane	0.053	U
5103-71-9	alpha-Chlordane	0.053	U

FORM I PEST

JAC 7/2010

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1R9 EB01-030210-GW ~~10A~~

JAC 4/2010

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-19

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/05/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/05/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
309-00-2	Aldrin	0.050	U	
319-85-7	beta-BHC	0.050	U	
319-84-6	alpha-BHC	0.050	U	
319-86-8	delta-BHC	0.027	~~JP~~ J	2C
58-89-9	gamma-BHC (Lindane)	0.050	U	
72-54-8	4,4'-DDD	0.10	U	
72-55-9	4,4'-DDE	0.10	U	
50-29-3	4,4'-DDT	0.10	U	
60-57-1	Dieldrin	0.032	~~JP~~ J	2C
959-98-8	Endosulfan I	0.050	U	
33213-65-9	Endosulfan II	0.10	U	
1031-07-8	Endosulfan sulfate	0.10	U	
72-20-8	Endrin	0.10	U	
7421-93-4	Endrin Aldehyde	0.10	U	
76-44-8	Heptachlor	0.050	U	
1024-57-3	Heptachlor Epoxide	0.050	U	
72-43-5	Methoxychlor	0.50	U	
8001-35-2	Toxaphene	2.5	U	
12674-11-2	Aroclor-1016	0.93	U	
11104-28-2	Aroclor-1221	1.3	U	
11141-16-5	Aroclor-1232	0.93	U	
53469-21-9	Aroclor-1242	0.63	U	
12672-29-6	Aroclor-1248	0.63	U	
11097-69-1	Aroclor-1254	0.63	U	
11096-82-5	Aroclor-1260	0.93	U	
53494-70-5	Endrin Ketone	0.10	U	
5103-74-2	gamma-Chlordane	0.050	U	
5103-71-9	alpha-Chlordane	0.050	U	

JAC 7/2010

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

169-FB01-030310

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-09

Sample wt/vol: 975.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/05/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.051	U
319-85-7	beta-BHC	0.051	U
319-84-6	alpha-BHC	0.051	U
319-86-8	delta-BHC	0.051	U
58-89-9	gamma-BHC (Lindane)	0.051	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.051	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.051	U
1024-57-3	Heptachlor Epoxide	0.051	U
72-43-5	Methoxychlor	0.51	U
8001-35-2	Toxaphene	2.6	U
12674-11-2	Aroclor-1016	0.95	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.95	U
53469-21-9	Aroclor-1242	0.64	U
12672-29-6	Aroclor-1248	0.64	U
11097-69-1	Aroclor-1254	0.64	U
11096-82-5	Aroclor-1260	0.95	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.051	U
5103-71-9	alpha-Chlordane	0.051	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW02-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

JAC 7/20/10

Matrix: (soil/water) WATER Lab Sample ID: 1003029-12

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/05/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/05/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.012	~~JP~~ J 2C
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

JAC 7/20/10

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW02DW-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-13

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/05/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/05/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW09-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-14

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/05/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/05/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW11-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

JAC 72010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-15

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ___

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/05/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/05/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

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FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW12-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/05/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW12DW-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-02

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/05/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW13-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-16

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/05/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/05/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW13IW-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-17

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/05/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/05/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW14-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/05/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1R69-GW14DW-10A

gac 7/2010

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/05/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

gac 7/2010

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW14IW-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/05/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW02MS -10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 0030516-MS1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/05/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/05/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.13	
319-85-7	beta-BHC	0.12	
319-84-6	alpha-BHC	0.14	
319-86-8	delta-BHC	0.15	
58-89-9	gamma-BHC (Lindane)	0.12	
72-54-8	4,4'-DDD	0.35	
72-55-9	4,4'-DDE	0.33	
50-29-3	4,4'-DDT	0.31	
60-57-1	Dieldrin	0.35	
959-98-8	Endosulfan I	0.12	
33213-65-9	Endosulfan II	0.32	
1031-07-8	Endosulfan sulfate	0.31	
72-20-8	Endrin	0.33	
7421-93-4	Endrin Aldehyde	0.24	
76-44-8	Heptachlor	0.14	
1024-57-3	Heptachlor Epoxide	0.14	
72-43-5	Methoxychlor	0.37	J
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.35	
5103-74-2	gamma-Chlordane	0.14	
5103-71-9	alpha-Chlordane	0.15	

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW02MSD

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 0030516-MSD1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/05/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/05/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.045	J
319-85-7	beta-BHC	0.035	J
319-84-6	alpha-BHC	0.036	J
319-86-8	delta-BHC	0.040	J
58-89-9	gamma-BHC (Lindane)	0.034	J
72-54-8	4,4'-DDD	0.095	J
72-55-9	4,4'-DDE	0.095	J
50-29-3	4,4'-DDT	0.087	J
60-57-1	Dieldrin	0.099	J
959-98-8	Endosulfan I	0.036	J
33213-65-9	Endosulfan II	0.093	J
1031-07-8	Endosulfan sulfate	0.092	J
72-20-8	Endrin	0.092	J
7421-93-4	Endrin Aldehyde	0.075	J
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.10	~~P~~
72-43-5	Methoxychlor	0.11	J
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	
5103-74-2	gamma-Chlordane	0.041	J
5103-71-9	alpha-Chlordane	0.043	J

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW02PCBMS -10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 0030516-MS2

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/05/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/05/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	5.5	
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	5.4	
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW02PCBMSD -10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 0030516-MSD2

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/05/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/05/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.080	~~P~~
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	5.0	
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	4.6	
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW02REMSD -10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

JAC 7/20/10

Matrix: (soil/water) WATER Lab Sample ID: 0032314-MSD3

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/05/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/~~05~~23/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/~~24~~31/10

JAC 7/20/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.16	
319-85-7	beta-BHC	0.16	
319-84-6	alpha-BHC	0.18	
319-86-8	delta-BHC	0.20	
58-89-9	gamma-BHC (Lindane)	0.18	
72-54-8	4,4'-DDD	0.46	
72-55-9	4,4'-DDE	0.43	
50-29-3	4,4'-DDT	0.41	
60-57-1	Dieldrin	0.47	
959-98-8	Endosulfan I	0.16	
33213-65-9	Endosulfan II	0.41	
1031-07-8	Endosulfan sulfate	0.43	
72-20-8	Endrin	0.43	
7421-93-4	Endrin Aldehyde	0.29	
76-44-8	Heptachlor	0.18	
1024-57-3	Heptachlor Epoxide	0.18	
72-43-5	Methoxychlor	0.47	J
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.44	
5103-74-2	gamma-Chlordane	0.17	
5103-71-9	alpha-Chlordane	0.19	

FORM I PEST

JAC 7/30/10

FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55553-1

SDG No.: CLJ55553-1

Client Sample ID: IR69-GW14-10A | Lab Sample ID: 680-55553-1

Matrix: Water | Lab File ID: ec12049.d

Analysis Method: 8141A | Date Collected: 02/28/2010 11:30

Extraction Method: 3520C | Date Extracted: 03/05/2010 14:15

Sample wt/vol: 500(mL) | Date Analyzed: 03/13/2010 08:30

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163281 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	1.0	U	1.0	0.50
35400-43-2	Bolstar	1.0	U	1.0	0.50
2921-88-2	Chlorpyrifos	1.0	U	1.0	0.50
56-72-4	Coumaphos	1.0	U	1.0	0.50
298-03-3	Demeton-O	2.5	U	2.5	1.3
126-75-0	Demeton-S	2.5	~~U~~ UJ BSL	2.5	1.3
333-41-5	Diazinon	1.0	U	1.0	0.50
62-73-7	Dichlorvos	2.0	U	2.0	1.0
60-51-5	Dimethoate	2.0	U	2.0	1.0
298-04-4	Disulfoton	2.0	U	2.0	1.0
2104-64-5	EPN	1.0	U	1.0	0.50
13194-48-4	Ethoprop	0.50	U	0.50	0.25
52-85-7	Famphur	2.0	U	2.0	1.0
115-90-2	Fensulfothion	5.0	U	5.0	2.5
55-38-9	Fenthion	1.0	U	1.0	0.50
121-75-5	Malathion	1.0	U	1.0	0.50
150-50-5	Merphos	1.5	U	1.5	0.75
298-00-0	Methyl parathion	0.50	U	0.50	0.25
7786-34-7	Mevinphos	2.0	U	2.0	1.0
6923-22-4	Monochrotophos	10	U	10	5.0
300-76-5	Naled	5.0	U	5.0	2.5
56-38-2	Parathion	1.0	U	1.0	0.50
298-02-2	Phorate	1.0	U	1.0	0.50
299-84-3	Ronnel	1.0	U	1.0	0.50
22248-79-9	Stirophos	1.0	U	1.0	0.50
3689-24-5	Sulfotepp	0.50	U	0.50	0.25
297-97-2	Thionazin	1.0	U	1.0	0.50
34643-46-4	Tokuthion	1.0	U	1.0	0.50
327-98-0	Trichloronate	1.0	U	1.0	0.50

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	77	26-134	

JAC 7/30/10

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FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55553-1

SDG No.: CLJ55553-1

Client Sample ID: IR69-GW141W-10A | Lab Sample ID: 680-55553-2

Matrix: Water | Lab File ID: cn12050.d

Analysis Method: 8141A | Date Collected: 02/28/2010 10:45

Extraction Method: 3520C | Date Extracted: 03/05/2010 14:15

Sample wt/vol: 1060(mL) | Date Analyzed: 03/13/2010 08:15

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163281 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	2.4	U	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ UJ BSL	2.4	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
52-85-7	Famphur	1.9	U	1.9	0.94
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monocrotophos	9.4	U	9.4	4.7
300-76-5	Naled	4.7	U	4.7	2.4
56-38-2	Parathion	0.94	U	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U	0.47	0.24
297-97-2	Thionazin	0.94	U	0.94	0.47
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	83	26-134	

JAC 7/30/10

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FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55553-1

SDG No.: CLJ55553-1

Client Sample ID: IR69-GW14DW-10A | Lab Sample ID: 680-55553-3

Matrix: Water | Lab File ID: cc17040.d

Analysis Method: 8141A | Date Collected: 02/28/2010 11:55

Extraction Method: 3520C | Date Extracted: 03/05/2010 14:15

Sample wt/vol: 1060(mL) | Date Analyzed: 03/19/2010 03:10

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup: Y/N N

Analysis Batch No.: 163436 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	.47
35400-43-2	Bolstar	0.94	U	0.94	.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	.47
56-72-4	Coumaphos	0.94	U	0.94	.47
298-03-3	Demeton-O	0.94	U	0.94	1.2
126-75-0	Demeton-S	0.94	~~U~~ UJ BSL	0.94	1.2
333-41-5	Diazinon	0.94	U	0.94	.47
62-73-7	Dichlorvos	1.9	U	1.9	.94
60-51-5	Dimethoate	1.9	U	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U	0.94	.47
13194-48-4	Ethoprop	0.47	U	0.47	.24
52-85-7	Famphur	1.9	U	1.9	.94
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	.47
121-75-5	Malathion	0.94	U	0.94	.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monochrotophos	9.4	U	9.4	4.7
300-76-5	Naled	4.7	U	4.7	2.4
56-38-2	Parathion	0.94	U	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	/ ~~UJ~~ U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U	0.47	0.24
297-97-2	Thionazin	0.94	U	0.94	0.47
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47

XICOFF JAC 72310

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	93	36-134	

JAC 7/30/10

FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55553-1

SDG No.: CLJ55553-1

Client Sample ID: IR69-EB01-022710-GW | Lab Sample ID: 680-55553-4

Matrix: Water | Lab File ID: [illegible]41.d

Analysis Method: 8141A | Date Collected: 02/27/2010 14:00

Extraction Method: 3520C | Date Extracted: 03/05/2010 14:15

Sample wt/vol: 1050(mL) | Date Analyzed: 03/18/2010 03:35

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-CLP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup: (Y/N) N

Analysis Batch No.: 163436 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-ethyl	[illegible]	[illegible]	[illegible]	.48
35400-43-2	Bolstar	[illegible]	[illegible]	[illegible]	0.48
2921-88-2	Chlorpyrifos	[illegible]	[illegible]	[illegible]	0.48
56-72-4	Coumaphos	[illegible]	U	[illegible]	0.48
298-03-3	Demeton-O	[illegible]	U	[illegible]	1.2
126-75-0	Demeton-S	[illegible]	U	[illegible]	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
52-85-7	Famphur	1.9	U	1.9	0.95
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	4.8	U	4.8	4.8
300-76-5	Naled	4.8	U	4.8	2.4
56-38-2	Parathion	0.95	U	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U	0.48	0.24
297-97-2	Thionazin	0.95	U	0.95	0.48
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	88	26-134	

WJ BSL

JAC 7/8/2010

FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55553-1

SDG No.: CLJ55553-1

Client Sample ID: IR69-EB01-022810-GW | Lab Sample ID: 680-55553-5

Matrix: Water | Lab File ID: [illegible]017342.d

Analysis Method: 8141A | Date Collected: 02/28/2010 17:00

Extraction Method: 3520C | Date Extracted: 03/05/2010 14:15

Sample wt/vol: 1050(mL) | Date Analyzed: 03/18/2010 04: [illegible]

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Ptx-CPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup: (Y/N) N

Analysis Batch No.: 163436 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ UJ BSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
52-85-7	Famphur	1.9	U	1.9	0.95
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	.48
121-75-5	Malathion	0.95	U	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U	9.5	4.8
300-76-5	Naled	4.8	U	4.8	2.4
56-38-2	Parathion	0.95	U	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U	0.48	0.24
297-97-2	Thionazin	0.95	U	0.95	0.48
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	107	26-134	

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FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah Job No.: 680-55553-1

SDG No.: CLJ55553-1

Client Sample ID: IR69-EB01-022810-SB Lab Sample ID: 680-55553-6

Matrix: Water Lab File ID: cc17043.d

Analysis Method: 8141A Date Collected: 02/28/2010 17:00

Extraction Method: 3520C Date Extracted: 03/05/2010 14:15

Sample wt/vol: 1060(mL) Date Analyzed: 03/18/2010 04:25

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 2(uL) GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 163436 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	2.4	U	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ UJ BGL	2.4	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
52-85-7	Famphur	1.9	U	1.9	0.94
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monochrotophos	9.4	U	9.4	4.7
300-76-5	Naled	4.7	U	4.7	2.4
56-38-2	Parathion	0.94	U	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U	0.47	0.24
297-97-2	Thionazin	0.94	U	0.94	0.47
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	105	26-134	

JAC 7/30/10

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FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah Job No.: 680-55553-1

SDG No.: CLJ55553-1

Client Sample ID: IR69-FB01-030310 Lab Sample ID: 680-55553-7

Matrix: Water Lab File ID: [illegible]

Analysis Method: 8141A Date Collected: 03/03/2010 09:30

Extraction Method: 3520C Date Extracted: [illegible] 14:15

Sample wt/vol: 500(mL) Date Analyzed: [illegible]/2010 04:50

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 2(uL) GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: GPC Cleanup: (Y/N) N

Analysis Batch No.: 163436 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	[illegible]	[illegible]	[illegible]	[illegible]
35400-43-2	Bolstar	[illegible]	U	[illegible]	[illegible]
2921-88-2	Chlorpyrifos	[illegible]	[illegible]	[illegible]	[illegible]
56-72-4	Coumaphos	[illegible]	U	[illegible]	0.50
298-03-3	Demeton-O	[illegible]	[illegible]	[illegible]	[illegible]
126-75-0	Demeton-S	[illegible]	~~U~~ NJ BSL	[illegible]	[illegible]
333-41-5	Diazinon	[illegible]	[illegible]	[illegible]	[illegible]
62-73-7	Dichlorvos	[illegible]	U	[illegible]	1.0
60-51-5	Dimethoate	[illegible]	U	[illegible]	1.0
298-04-4	Disulfoton	[illegible]	U	[illegible]	1.0
2104-64-5	EPN	[illegible]	U	[illegible]	[illegible]
13194-48-4	Ethoprop	0.50	U	0.50	0.25
52-85-7	Famphur	[illegible]	U	[illegible]	1.0
115-90-2	Fensulfothion	[illegible]	U	[illegible]	2.5
55-38-9	Fenthion	[illegible]	[illegible]	[illegible]	[illegible]
121-75-5	Malathion	[illegible]	U	[illegible]	[illegible]
150-50-5	Merphos	[illegible]	U	[illegible]	[illegible]
298-00-0	Methyl parathion	0.50	U	0.50	0.25
7786-34-7	Mevinphos	2.0	U	2.0	1.0
6923-22-4	Monocrotophos	10	U	10	5.0
300-76-5	Naled	5.0	U	5.0	2.5
56-38-2	Parathion	1.0	U	1.0	0.50
298-02-2	Phorate	1.0	U	1.0	0.50
299-84-3	Ronnel	1.0	U	1.0	0.50
22248-79-9	Stirophos	1.0	U	1.0	0.50
3689-24-5	Sulfotepp	0.50	U	0.50	0.25
297-97-2	Thionazin	1.0	U	1.0	0.50
34643-46-4	Tokuthion	1.0	U	1.0	0.50
327-98-0	Trichloronate	1.0	U	1.0	0.50

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	88	26-134	

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FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah — Job No.: 680-55553-1

SDG No.: CLJ55553-1

Client Sample ID: IR69-GW12-10A — Lab Sample ID: 680-55553-10

Matrix: Water — Lab File ID: oo17045.d

Analysis Method: 8141A — Date Collected: 02/27/2010 14:25

Extraction Method: 3520C — Date Extracted: 03/05/2010 14:15

Sample wt/vol: 500(mL) — Date Analyzed: 03/18/2010 05:15

Con. Extract Vol.: 5(mL) — Dilution Factor: 1

Injection Volume: 2(uL) — GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: — GPC Cleanup: (Y/N) N

Analysis Batch No.: 163436 — Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	[illegible]	U	[illegible]	[illegible]
35400-43-2	Bolstar	[illegible]	U	[illegible]	[illegible]
2921-88-2	Chlorpyrifos	[illegible]	U	[illegible]	[illegible]
56-72-4	Coumaphos	[illegible]	U	[illegible]	1.50
298-03-3	Demeton-O	[illegible]	U	[illegible]	1.3
126-75-0	Demeton-S	[illegible]	U	[illegible]	1.3
333-41-5	Diazinon	[illegible]	U	[illegible]	[illegible]
62-73-7	Dichlorvos	[illegible]	U	[illegible]	1.0
60-51-5	Dimethoate	[illegible]	U	[illegible]	1.0
298-04-4	Disulfoton	[illegible]	U	[illegible]	1.0
2104-64-5	EPN	[illegible]	U	[illegible]	0.50
13194-48-4	Ethoprop	[illegible]	U	[illegible]	[illegible]
52-85-7	Famphur	[illegible]	U	[illegible]	1.0
115-90-2	Fensulfothion	[illegible]	U	[illegible]	2.5
55-38-9	Fenthion	[illegible]	U	[illegible]	1.50
121-75-5	Malathion	[illegible]	U	[illegible]	0.50
150-50-5	Merphos	[illegible]	U	1.5	[illegible]
298-00-0	Methyl parathion	0.50	U	0.50	0.25
7786-34-7	Mevinphos	[illegible]	U	[illegible]	1.0
6923-22-4	Monocrotophos	[illegible]	U	[illegible]	[illegible]
300-76-5	Naled	[illegible]	U	[illegible]	2.5
56-38-2	Parathion	[illegible]	U	[illegible]	1.50
298-02-2	Phorate	1.0	U	1.0	0.50
299-84-3	Ronnel	1.0	U	1.0	0.50
22248-79-9	Stirophos	1.0	U	1.0	0.50
3689-24-5	Sulfotepp	0.50	U	0.50	0.25
297-97-2	Thionazin	1.0	U	1.0	0.50
34643-46-4	Tokuthion	1.0	U	1.0	0.50
327-98-0	Trichloronate	1.0	U	1.0	0.50

UJ BSL

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	112	26-134	

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FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah Job No.: 680-55553-1

SDG No.: CLJ55553-1

Client Sample ID: IR69-GW12DW-10A Lab Sample ID: 680-55553-11

Matrix: Water Lab File ID: cc17046.d

Analysis Method: 8141A Date Collected: 02/27/2010 14:35

Extraction Method: 3520C Date Extracted: 03/05/2010 14:15

Sample wt/vol: 1060(mL) Date Analyzed: 03/18/2010 05:40

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 2(uL) GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: GPC Cleanup: (Y/N) N

Analysis Batch No.: 163436 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	1.4	U	1.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ UJ BSL	2.4	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
52-85-7	Famphur	1.9	U	1.9	0.94
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monochrotophos	9.4	U	9.4	4.7
300-76-5	Naled	4.7	U	4.7	2.4
56-38-2	Parathion	0.94	U	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U	0.47	0.24
297-97-2	Thionazin	0.94	U	0.94	0.47
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	98	36-134	

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FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55553-1

SDG No.: CLJ55553-1

Client Sample ID: TR69-GW11-10A | Lab Sample ID: 680-55594-1

Matrix: Water | Lab File ID: ec12037.d

Analysis Method: 8141A | Date Collected: 03/01/2010 10:35

Extraction Method: 3520C | Date Extracted: 03/05/2010 14:15

Sample wt/vol: 1060(mL) | Date Analyzed: 03/13/2010 03:30

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163281 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	2.4	U	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ UJ BSL	2.4	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
52-85-7	Famphur	1.9	U	1.9	0.94
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monocrotophos	9.4	U	9.4	4.7
300-76-5	Naled	4.7	U	4.7	2.4
56-38-2	Parathion	0.94	U	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U	0.47	0.24
297-97-2	Thionazin	0.94	U	0.94	0.47
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	93	26-134	

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FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55553-1

SDG No.: CLJ55553-1

Client Sample ID: IR69-GW13-10A | Lab Sample ID: 680-55594-2

Matrix: Water | Lab File ID: cs12338.D

Analysis Method: 8141A | Date Collected: 03/01/2010 14:45

Extraction Method: 3520C | Date Extracted: 03/05/2010 14:18

Sample wt/vol: 1060(mL) | Date Analyzed: 03/13/2010 03:55

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-CPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163281 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	[illegible]	U	[illegible]	[illegible]
35400-43-2	Bolstar	[illegible]	U	[illegible]	[illegible]
2921-88-2	Chlorpyrifos	[illegible]	U	[illegible]	[illegible]
56-72-4	Coumaphos	[illegible]	U	[illegible]	[illegible]
298-03-3	Demeton	[illegible]	U	[illegible]	[illegible]
126-75-0	Demeton-S	[illegible]	U	[illegible]	[illegible]
333-41-5	Diazinon	[illegible]	U	[illegible]	[illegible]
62-73-7	Dichlorvos	[illegible]	U	[illegible]	[illegible]
60-51-5	Dimethoate	[illegible]	U	[illegible]	[illegible]
298-04-4	Disulfoton	[illegible]	U	[illegible]	[illegible]
2104-64-5	EPN	[illegible]	U	[illegible]	[illegible]
13194-48-4	Ethoprop	[illegible]	U	[illegible]	[illegible]
52-85-7	Famphur	[illegible]	U	[illegible]	[illegible]
115-90-2	Fensulfothion	[illegible]	U	[illegible]	[illegible]
55-38-9	Fenthion	[illegible]	U	[illegible]	[illegible]
121-75-5	Malathion	[illegible]	U	[illegible]	[illegible]
150-50-5	Merphos	[illegible]	U	[illegible]	[illegible]
298-00-0	Methyl parathion	[illegible]	U	[illegible]	[illegible]
7786-34-7	Mevinphos	[illegible]	U	[illegible]	[illegible]
6923-22-4	Monocrotophos	[illegible]	U	[illegible]	[illegible]
300-76-5	Naled	[illegible]	U	[illegible]	[illegible]
56-38-2	Parathion	[illegible]	U	[illegible]	[illegible]
298-02-2	Phorate	[illegible]	U	[illegible]	[illegible]
299-84-3	Ronnel	[illegible]	U	[illegible]	[illegible]
22248-79-9	Stirophos	[illegible]	U	[illegible]	[illegible]
3689-24-5	Sulfotepp	[illegible]	U	[illegible]	[illegible]
297-97-2	Thionazin	[illegible]	U	[illegible]	[illegible]
34643-46-4	Tokuthion	[illegible]	U	[illegible]	[illegible]
327-98-0	Trichloronate	[illegible]	U	[illegible]	[illegible]

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	[illegible]	26-134	

UJ BSL

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FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55553-1

SDG No.: CLC55553-1

Client Sample ID: IR69-GW13IW-10A | Lab Sample ID: 680-55594-3

Matrix: Water | Lab File ID: 0810039.d

Analysis Method: 8141A | Date Collected: 03/01/2010 15:20

Extraction Method: 3520C | Date Extracted: 03/05/2010 14:15

Sample wt/vol: 1050(mL) | Date Analyzed: 03/13/2010 04:20

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-CLP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup: (Y/N) N

Analysis Batch No.: 163281 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.48	U	0.48	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ UJ BGL	2.4	1.2
333-41-5	Diazinon	0.48	U	0.48	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
52-85-7	Famphur	1.9	U	1.9	0.95
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	.95
6923-22-4	Monochrotophos	9.5	U	9.5	4.8
300-76-5	Naled	4.8	U	4.8	2.4
56-38-2	Parathion	0.95	U	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirofos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U	0.48	0.24
297-97-2	Thionazin	0.95	U	0.95	0.48
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	94	26-134	

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FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah Job No.: 680-55553-1

SDG No.: CLJ55553-1

Client Sample ID: IR69-EB01-030110-GW Lab Sample ID: 680-55594-4

Matrix: Water Lab File ID: ccl204 .d

Analysis Method: 8141A Date Collected: 03/01/2010 14:00

Extraction Method: 3520C Date Extracted: 03/05/2010 14:15

Sample wt/vol: 1030(mL) Date Analyzed: 03/13/2010 04:45

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 2(uL) GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: GPC Cleanup: (Y/N) N

Analysis Batch No.: 163281 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	C	RL	MDL
86-50-0	Azinphos-methyl	[illegible]	U	[illegible]	.49
35400-43-2	Bolstar	[illegible]	U	[illegible]	.49
2921-88-2	Chlorpyrifos	[illegible]	U	[illegible]	0.49
56-72-4	Coumaphos	[illegible]	U	[illegible]	0.49
298-03-3	Demeton-O	[illegible]	U	[illegible]	1.3
126-75-0	Demeton-S	[illegible]	~~U~~ UJ BSL	[illegible]	1.3
333-41-5	Diazinon	[illegible]	U	[illegible]	0.49
62-73-7	Dichlorvos	[illegible]	U	[illegible]	0.97
60-51-5	Dimethoate	[illegible]	U	[illegible]	0.97
298-04-4	Disulfoton	[illegible]	U	[illegible]	0.97
2104-64-5	EPN	[illegible]	U	[illegible]	0.49
13194-48-4	Ethoprop	[illegible]	U	[illegible]	0.24
52-85-7	Famphur	[illegible]	U	[illegible]	0.97
115-90-2	Fensulfothion	[illegible]	U	[illegible]	2.4
55-38-9	Fenthion	[illegible]	U	[illegible]	0.49
121-75-5	Malathion	[illegible]	U	[illegible]	0.49
150-50-5	Merphos	[illegible]	U	[illegible]	0.73
298-00-0	Methyl parathion	[illegible]	U	[illegible]	0.24
7786-34-7	Mevinphos	[illegible]	U	[illegible]	0.97
6923-22-4	Monocrotophos	[illegible]	U	[illegible]	4.9
300-76-5	Naled	[illegible]	U	[illegible]	2.4
56-38-2	Parathion	[illegible]	U	[illegible]	0.49
298-02-2	Phorate	0.97	U	0.97	0.49
299-84-3	Ronnel	0.97	U	0.97	0.49
22248-79-9	Stirophos	0.97	U	0.97	0.49
3689-24-5	Sulfotepp	0.49	U	0.49	0.24
297-97-2	Thionazin	0.97	U	0.97	0.49
34643-46-4	Tokuthion	0.97	U	0.97	0.49
327-98-0	Trichloronate	0.97	U	0.97	0.49

CAS NO.	SURROGATE	% REC	LIMITS	Q
115-86-6	Triphenylphosphate	79	26-134	

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FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55553-1

SDG No.: CLJ55553-1

Client Sample ID: IR69-EB01-030210-GW | Lab Sample ID: 680-55594-5

Matrix: Water | Lab File ID: cc12041.d

Analysis Method: 8141A | Date Collected: 03/02/2010 16:00

Extraction Method: 3520C | Date Extracted: 03/05/2010 14:15

Sample wt/vol: 1050(mL) | Date Analyzed: 03/13/2010 05:10

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-CLP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup: (Y/N) N

Analysis Batch No.: 163281 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	[illegible]	U	[illegible]	[illegible]
35400-43-2	Bolstar	[illegible]	U	[illegible]	0.48
2921-88-2	Chlorpyrifos	[illegible]	U	[illegible]	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	1.2	U	1.2	1.2
126-75-0	Demeton-S	1.2	U → UJ BSL	1.2	1.2
333-41-5	Diazinon	0.48	U	0.48	0.48
62-73-7	Dichlorvos	0.95	U	0.95	0.95
60-51-5	Dimethoate	0.95	U	0.95	0.95
298-04-4	Disulfoton	0.95	U	0.95	0.95
2104-64-5	EPN	0.95	U	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
52-85-7	Famphur	0.95	U	0.95	0.95
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	0.95	U	0.95	0.95
6923-22-4	Monocrotophos	4.8	U	4.8	4.8
300-76-5	Naled	4.8	U	4.8	2.4
56-38-2	Parathion	0.95	U	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U	0.48	0.24
297-97-2	Thionazin	0.95	U	0.95	0.48
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	81	26-134	

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FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55553-1

SDG No.: CLJ55553-1

Client Sample ID: IP69-GW69-10A | Lab Sample ID: 680-55584-6

Matrix: Water | Lab File ID: [illegible]12042.d

Analysis Method: 8141A | Date Collected: 03/01/2010 11:35

Extraction Method: 3520C | Date Extracted: 03/05/2010 14:15

Sample wt/vol: 1050(mL) | Date Analyzed: 03/15/2010 05:35

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-5PP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup: (Y/N) N

Analysis Batch No.: 163281 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	PL	MDL
86-50-0	Azinphos-methyl	[illegible]	U	[illegible]	0.48
35400-43-2	Bolstar	[illegible]	U	[illegible]	0.48
2921-88-2	Chlorpyrifos	[illegible]	U	[illegible]	0.48
56-72-4	Coumaphos	[illegible]	U	[illegible]	0.48
298-03-3	Demeton-O	[illegible]	U	[illegible]	1.2
126-75-0	Demeton-S	[illegible]	~~U~~ UJ BSL	[illegible]	1.2
333-41-5	Diazinon	[illegible]	U	[illegible]	0.48
62-73-7	Dichlorvos	[illegible]	U	[illegible]	0.95
60-51-5	Dimethoate	[illegible]	U	[illegible]	0.95
298-04-4	Disulfoton	[illegible]	U	[illegible]	0.95
2104-64-5	EPN	0.48	U	0.48	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
52-85-7	Famphur	1.9	U	1.9	0.95
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.48	U	0.48	0.48
121-75-5	Malathion	0.48	U	0.48	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monocrotophos	9.5	U	9.5	4.8
300-76-5	Naled	4.8	U	4.8	2.4
56-38-2	Parathion	[illegible]	U	[illegible]	0.48
298-02-2	Phorate	0.48	U	0.48	0.48
299-84-3	Ronnel	0.48	U	0.48	0.48
22248-79-9	Stirophos	0.48	U	0.48	0.48
3689-24-5	Sulfotepp	0.48	U	0.48	0.24
297-97-2	Thionazin	0.48	U	0.48	0.48
34643-46-4	Tokuthion	0.48	U	0.48	0.48
327-98-0	Trichloronate	0.48	U	0.48	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	96	26-134	

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FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55553-1

SDG No.: CLJ55553-1

Client Sample ID: IR69-GW02-10A | Lab Sample ID: 680-55594-7

Matrix: Water | Lab File ID: cc12043.d

Analysis Method: 8141A | Date Collected: 03/02/2010 11:00

Extraction Method: 3520C | Date Extracted: 03/05/2010 14:15

Sample wt/vol: 1050(mL) | Date Analyzed: 03/13/2010 06:[illegible]

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163281 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	PQL	MDL
86-50-0	Azinphos-ethyl	0.95	U	0.48	0.48
35400-43-2	Bolstar	0.48	U	0.48	0.48
2921-88-2	Chlorpyrifos	0.48	U	0.48	0.48
56-72-4	Coumaphos	0.95	U	0.48	0.48
298-03-3	Demeton-O	1.4	U	1.4	1.2
126-75-0	Demeton-S	1.4	~~U~~ RMSL	1.4	1.2
333-41-5	Diazinon	0.95	U	0.48	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U	0.48	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
52-85-7	Famphur	1.9	U	1.9	0.95
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.48	0.48
121-75-5	Malathion	0.95	U	0.48	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monocrotophos	9.5	U	4.8	4.8
300-76-5	Naled	4.8	U	4.8	2.4
56-38-2	Parathion	0.95	U	0.48	0.48
298-02-2	Phorate	0.95	U	0.48	0.48
299-84-3	Ronnel	0.95	U	0.48	0.48
22248-79-9	Stirophos	0.95	U	0.48	0.48
3689-24-5	Sulfotepp	0.48	U	0.48	0.24
297-97-2	Thionazin	0.95	U	0.48	0.48
34643-46-4	Tokuthion	0.95	U	0.48	0.48
327-98-0	Trichloronate	0.95	U	0.48	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	86	26-134	

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FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55553-1

SDG No.: CLJ55553-1

Client Sample ID: IR69-GW02DW-10A | Lab Sample ID: 680-55594-8

Matrix: Water | Lab File ID: 0012048.d

Analysis Method: 8141A | Date Collected: 03/12/2010 12:30

Extraction Method: 3520C | Date Extracted: 03/05/2010 14:15

Sample wt/vol: 1060(mL) | Date Analyzed: 03/13/2010 08:35

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup: (Y/N) N

Analysis Batch No.: 163281 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	1.9	U	1.9	1.2
126-75-0	Demeton-S	1.9	U	1.9	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
52-85-7	Famphur	1.9	U	1.9	0.94
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monochrotophos	9.4	U	9.4	4.7
300-76-5	Naled	4.7	U	4.7	2.4
56-38-2	Parathion	0.94	U	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U	0.47	0.24
297-97-2	Thionazin	0.94	U	0.94	0.47
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	82	26-134	

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FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55553-1

SDG No.: CLJ55553-1

Client Sample ID: IR69-GW02-10A MS | Lab Sample ID: 680-55594-7 MS

Matrix: Water | Lab File ID: [illegible]2044.d

Analysis Method: 8141A | Date Collected: 03/02/2010 11:00

Extraction Method: [illegible] | Date Extracted: [illegible] 14:1[illegible]

Sample wt/vol: [illegible] mL | Date Analyzed: [illegible] 06:[illegible]

Con. Extract Vol.: [illegible]mL | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup: (Y/N) N

Analysis Batch No.: 163281 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	[illegible]		1.0	0.50
35400-43-2	Bolstar	3.56		1.0	0.50
2921-88-2	Chlorpyrifos	3.55		1.0	0.50
56-72-4	Coumaphos	3.37		1.0	0.50
298-03-3	Demeton-O	4.01		2.5	1.3
126-75-0	Demeton-S	2.5	U	2.5	1.3
333-41-5	Diazinon	3.42		1.0	0.50
62-73-7	Dichlorvos	3.66		2.0	1.0
298-04-4	Disulfoton	3.33		2.0	1.0
13194-48-4	Ethoprop	3.84		0.50	0.25
115-90-2	Fensulfothion	4.86	J	5.0	2.5
55-38-9	Fenthion	3.37		1.0	0.50
150-50-5	Merphos	3.52		1.5	0.75
298-00-0	Methyl parathion	3.21		0.50	0.25
7786-34-7	Mevinphos	2.98		2.0	1.0
300-76-5	Naled	3.44		5.0	2.5
298-02-2	Phorate	2.65		1.0	0.50
299-84-3	Ronnel	3.35		1.0	0.50
22248-79-9	Stirophos	3.53		1.0	0.50
34643-46-4	Tokuthion	3.49		1.0	0.50
327-98-0	Trichloronate	3.44		1.0	0.50

CAS NO.	SURROGATE	REC	LIMITS	Q
115-86-6	Triphenylphosphate	84	26-134	

[illegible] 3/10

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FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah

Job No.: 680-55553-1

SDG No.: CLJ55553-1

Client Sample ID: IR69-GW02-11A MS

Lab Sample ID: 680-55594-7 MS

Matrix: Water

Lab File ID: [illegible]

Analysis Method: 8141A

Date Collected: [illegible]

Extraction Method: 3520C

Date Extracted: [illegible]

Sample wt/vol: 500(mL)

Date Analyzed: [illegible]

Con. Extract Vol.: 5(mL)

Dilution Factor: 1

Injection Volume: 2(uL)

GC Column: Rtx-OPP 2 ID: [illegible](mm)

% Moisture:

GPC Cleanup:(Y/N) N

Analysis Batch No.: 163281

Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
60-51-5	Dimethoate	[illegible]		[illegible]	1.0
2104-64-5	EPN	3.52		1.0	0.50
52-85-7	Famphur	[illegible]		[illegible]	1.0
121-75-5	Malathion	3.32		1.0	0.50
6923-22-4	Monocrotophos	15.3		[illegible]	5.0
56-38-2	Parathion	3.55		1.0	0.50
3689-24-5	Sulfotepp	3.44		0.[illegible]	0.25
297-97-2	Thionazin	3.30		1.0	0.50

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	85	[illegible]-134	

JJC 7/30/10

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FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah — Job No.: 680-55553-1

SDG No.: CLJ55553-1

Client Sample ID: IR69-GW02-10A MSD — Lab Sample ID: 680-55594-7 MSD

Matrix: Water — Lab File ID: [illegible]

Analysis Method: 8141A — Date Collected: [illegible]

Extraction Method: [illegible] — Date Extracted: [illegible]

Sample wt/vol: [illegible] mL — Date Analyzed: [illegible]

Con. Extract Vol.: 5 mL — Dilution Factor: 1

Injection Volume: 2 uL — GC Column: Rtx-CLP 2 — ID: 0.32 (mm)

% Moisture: — GPC Cleanup: (Y/N) N

Analysis Batch No.: [illegible] — Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	2.[illegible]		[illegible]	[illegible]
35400-43-2	Bolstar	3.53		1.[illegible]	0.50
2921-88-2	Chlorpyrifos	3.44		1.[illegible]	0.50
56-72-4	Coumaphos	2.[illegible]		1.[illegible]	0.50
298-03-3	Demeton-O	2.74	J	[illegible]	1.3
126-75-0	Demeton-S	[illegible]	J	[illegible]	1.3
333-41-5	Diazinon	3.26		1.0	0.50
62-73-7	Dichlorvos	3.82		2.0	1.0
298-04-4	Disulfoton	3.17		2.0	1.0
13194-48-4	Ethoprop	3.31		0.[illegible]	0.25
115-90-2	Fensulfothion	4.36	J	5.0	2.5
55-38-9	Fenthion	3.44		1.0	0.50
150-50-5	Merphos	3.35		1.5	0.75
298-00-0	Methyl parathion	2.92		0.[illegible]	0.25
7786-34-7	Mevinphos	1.83		[illegible]	1.0
300-76-5	Naled	2.[illegible]	J	5.0	2.5
298-02-2	Phorate	2.43		1.0	0.50
299-84-3	Ronnel	3.37		1.0	0.50
22248-79-9	Stirophos	3.30		1.0	0.50
34643-46-4	Tokuthion	3.21		1.0	0.50
327-98-0	Trichloronate	2.92		1.0	0.50

CAS NO.	SURROGATE	REC	LIMITS	Q
115-86-6	Triphenylphosphate	[illegible]	[illegible]-134	

JAC 7/30/10

FORM I 8141A

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06/15/2010

FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55553-1

SDG No.: CLJ55553-1

Client Sample ID: 1R69-GW02-10A MSD | Lab Sample ID: 680-55594-7 MSD

Matrix: Water | Lab File ID: [illegible]

Analysis Method: 8141A | Date Collected: [illegible]

Extraction Method: 3520C | Date Extracted: [illegible]

Sample wt/vol: 500(mL) | Date Analyzed: [illegible]

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-CLP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup: Y/N N

Analysis Batch No.: 163281 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
60-51-5	Dimethoate	[illegible]		[illegible]	1.0
2104-64-5	EPN	3.71		1.0	.50
52-85-7	Famphur	[illegible]		[illegible]	1.0
121-75-5	Malathion	3.35		[illegible]	0.50
6923-22-4	Monochrotophos	[illegible]		10	5.0
56-38-2	Parathion	[illegible]		1.0	0.50
3689-24-5	Sulfotepp	3.16		0.[illegible]	0.25
297-97-2	Thionazin	[illegible]		1.[illegible]	0.50

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	89	[illegible]6-134	

JAC 7/2/10

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SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IRG- EB01-022710-GW

JAC 71910

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix (soil/water): WATER Lab Sample ID: 1003029-06

Level (low/med): LOW Date Received: 3/4/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U	~~B~~	P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	5.0	U	~~N~~	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	10800	~~B~~	~~D~~ J	P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	1460		~~E~~	P

JAC 73010

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS
-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1R69 - EB01-022810-GW

JAC 7/10

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix (soil/water): WATER Lab Sample ID: 1003029-07

Level (low/med): LOW Date Received: 3/4/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U	~~E~~	P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	1.7	B		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	5.0	U	~~N~~	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	5000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	3.0	~~B~~	~~J~~ J	P

JAC 7/30/10

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

189-EB01-022810-SB

JAC 7/9/10

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix (soil/water): WATER Lab Sample ID: 1003029-08

Level (low/med): LOW Date Received: 3/4/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U	~~E~~	P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	2.6	~~B~~	J	P
7439-89-6	Iron	21.5	~~B~~	J	P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	5.0	U	~~N~~	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	5000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	1.9	~~B~~	~~J~~ J	P

JAC 7/30/10

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1B1-EB01-030110-GW

JAC 71910

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix (soil/water): WATER Lab Sample ID: 1003029-18

Level (low/med): LOW Date Received: 3/5/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U	~~B~~	P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	1.8	~~B~~	J	P
7439-89-6	Iron	20.6	~~B~~	J	P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	5.0	U	~~N~~	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	345	~~B~~	J	P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	11.8	~~B~~	~~*~~ J	P

JAC 73010

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

189- EB01-030210-GW

JAC 7/9/10

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix (soil/water): WATER Lab Sample ID: 1003029-19

Level (low/med): LOW Date Received: 3/5/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U	~~E~~	P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	139	~~B~~	J	P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	1.6	~~B~~	J	P
7439-89-6	Iron	22.7	~~B~~	J	P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	5.0	U	~~N~~	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	5000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	21.4		~~E~~	P

JAC 7/30/10

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1R69- FB01-030310

JAC 7/9/10

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix (soil/water): WATER Lab Sample ID: 1003029-09

Level (low/med): LOW Date Received: 3/4/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U	~~B~~	P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	5.0	U	~~N~~	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	5000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	0.82	~~B~~	~~J~~ J	P

JAC 7/30/10

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW02-10A

JAC 7/9/10

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix (soil/water): WATER Lab Sample ID: 1003029-12

Level (low/med): LOW Date Received: 3/5/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	515			P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	21.6	~~B~~	~~E~~ J	P	SD
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	7900			P	
7440-47-3	Chromium	1.8	~~B~~	J	P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	4200			P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~677~~	~~B~~	U	P	MBL
7439-96-5	Manganese	152			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	1.4	~~B~~	J	P	
7440-09-7	Potassium	150	~~B~~	J	P	
7782-49-2	Selenium	3.8	~~B~~ ~~N~~	J	P	MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	21400			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	26.0			P	
7440-66-6	Zinc	35.8		J	P	MDL EBL

X1 JAC 7/9/10

JAC 7/9/10

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW02DW-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix (soil/water): WATER Lab Sample ID: 1003029-13

Level (low/med): LOW Date Received: 3/5/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200	U		P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	36.7	~~B~~	~~E~~ J	P	SD
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	67600			P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0 ~~2.0~~	~~B~~	U	P	MBL
7439-89-6	Iron	3360			P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~2280~~	~~B~~	U	P	MBL
7439-96-5	Manganese	80.9			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	1460	~~B~~	J	P	
7782-49-2	Selenium	5.0	~~U~~	~~J~~ UJ	P	MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	24300			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	20 ~~18.4~~	~~B~~	~~J~~ UJ	P	~~MDP~~ MBL

xcorr JAC 7/9/10 7/30/10

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW09 - 10A

JAC 7/9/10

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix (soil/water): WATER Lab Sample ID: 1003029-14

Level (low/med): LOW Date Received: 3/5/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	1770			P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	43.9	~~B~~	~~E~~ J	P	SD
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	5230			P	
7440-47-3	Chromium	3.1	~~B~~	J	P	
7440-48-4	Cobalt	1.8	~~B~~	J	P	
7440-50-8	Copper	5.0 ~~3.2~~	~~B~~	U	P	MBL
7439-89-6	Iron	1740			P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~2230~~	~~B~~	U	P	MBL
7439-96-5	Manganese	41.6			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	2.4	~~B~~	J	P	
7440-09-7	Potassium	784	~~B~~	J	P	
7782-49-2	Selenium	3.9	~~B~~	~~X~~ J	P	MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	14400			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	2.1	~~B~~	J	P	
7440-66-6	Zinc	20 ~~9.0~~	~~B~~	~~+~~ UJ	P	~~MOP~~ FBL

X1 JAC 7/9/10

JAC 7/20/10

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW11-10A

JAC 7/9/10

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix (soil/water): WATER Lab Sample ID: 1003029-15

Level (low/med): LOW Date Received: 3/5/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	765			P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	33.3	~~B~~	~~E~~ J	P	SD
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	1080	~~B~~	J	P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0 ~~3.3~~	~~B~~	U	P	MBL
7439-89-6	Iron	217			P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~1410~~	~~B~~	U	P	MBL
7439-96-5	Manganese	5.0	~~B~~	J	P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	326	~~B~~	J	P	
7782-49-2	Selenium	5.0	~~U~~	~~J~~ UJ	P	MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	11200			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	20 ~~4.9~~	~~B~~	~~J~~ UJ	P	~~MDP~~ FBL

XICorr JAC 7/30/10

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW12 -10A

JAC 71910

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix (soil/water): WATER Lab Sample ID: 1003029-01

Level (low/med): LOW Date Received: 3/4/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	800			P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	22.0	~~B~~	~~E~~ J	P	SD
7440-41-7	Beryllium	5.0 ~~0.67~~	~~B~~	U	P	MBL
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	5000 ~~1710~~	~~B~~	U	P	MBL
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	5120			P	
7439-92-1	Lead	3.1			P	
7439-95-4	Magnesium	5000 ~~1210~~	~~B~~	U	P	MBL
7439-96-5	Manganese	18.7			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	363	~~B~~	J	P	
7782-49-2	Selenium	5.0	~~U~~	~~U~~ UJ	P	MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	8620			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	1.7	~~B~~	J	P	
7440-66-6	Zinc	75.9		~~J~~ J	P	~~MDP~~ EBL

x1 JAC 71910

JAC 73010

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW12DW-10A

JAC 7/9/10

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix (soil/water): WATER Lab Sample ID: 1003029-02

Level (low/med): LOW Date Received: 3/4/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200	U		P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	2.3	~~B~~ ~~E~~ J		P	SD
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	62400			P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	3290			P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~1980~~	~~B~~	U	P	MBL
7439-96-5	Manganese	91.1			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	1060	~~B~~	J	P	
7782-49-2	Selenium	3.9	~~B~~ ~~N~~	J	P	MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	9970			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	20 ~~4.3~~	~~B~~ ~~+~~	UJ	P	FBL

JAC 7/30/10

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW13-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix (soil/water): WATER Lab Sample ID: 1003029-16

Level (low/med): LOW Date Received: 3/5/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	1130			P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	6.9	~~B~~	~~B~~ J	P	SD
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	942	~~B~~	J	P	
7440-47-3	Chromium	1.1	~~B~~	J	P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0 ~~2.2~~	~~B~~	U	P	MBL
7439-89-6	Iron	1470			P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~586~~	~~B~~	U	P	MBL
7439-96-5	Manganese	9.9	~~B~~	J	P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	47.6	~~B~~	J	P	
7782-49-2	Selenium	5.0	~~U~~	~~*~~ UJ	P	MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	6970			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	1.8	~~B~~	J	P	
7440-66-6	Zinc	20 ~~12.7~~	~~B~~	~~*~~ UJ	P	FBL

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW13IW-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix (soil/water): WATER Lab Sample ID: 1003029-17

Level (low/med): LOW Date Received: 3/5/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200	U		P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	24.5	~~B~~	~~E~~ J	P	SD
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	68800			P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0 ~~2.6~~	~~B~~	U	P	MBL
7439-89-6	Iron	3350			P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~2120~~	~~B~~	U	P	MBL
7439-96-5	Manganese	102			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	1240	~~B~~	J	P	
7782-49-2	Selenium	5.0	~~U~~	~~*~~ UJ	P	MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	17700			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	20 ~~1.9~~	~~B~~	~~*~~ UJ	P	FBL

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW14-10A

JAC 7/9/10

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix (soil/water): WATER Lab Sample ID: 1003029-03

Level (low/med): LOW Date Received: 3/4/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	348			P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	10.5	~~B~~	~~E~~ J	P	SD
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	4080	~~B~~	J	P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0 ~~1.8~~	~~B~~	U	P	MBL
7439-89-6	Iron	287			P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~657~~	~~B~~	U	P	MBL
7439-96-5	Manganese	16.3			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	159	~~B~~	J	P	
7782-49-2	Selenium	5.0	~~U~~	~~*~~ UJ	P	MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	7220			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	20 ~~6.4~~	~~B~~	~~*~~ UJ	P	FBL

JAC 7/30/10

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW14DW-10A

JMC 7910

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix (soil/water): WATER Lab Sample ID: 1003029-05

Level (low/med): LOW Date Received: 3/4/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200	U		P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	4.7	~~B~~	~~E~~ J	P	SD
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	74300			P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	3520			P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~2140~~	~~B~~	U	P	MBL
7439-96-5	Manganese	133			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	914	~~B~~	J	P	
7782-49-2	Selenium	5.0	~~U~~	~~N~~ J	P	MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	11900			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	20 ~~6.1~~	~~B~~	~~*~~ UJ	P	FBL

JMC 73010

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW14IW-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix (soil/water): WATER Lab Sample ID: 1003029-04

Level (low/med): LOW Date Received: 3/4/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	93.8	~~B~~	J	P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	23.9	~~B~~	~~J~~ J	P	SD
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	44100			P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	2430			P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~2400~~	~~B~~	U	P	MBL
7439-96-5	Manganese	74.0			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	1220	~~B~~	J	P	
7782-49-2	Selenium	5.0	~~U~~	~~*~~ UJ	P	MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	12200			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	20 ~~16.0~~	~~B~~	~~*~~ UJ	P	FBL

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

21867-A1

Page 1 of 2

CHAIN OF CUSTODY

CompuChem
a division of Liberty Analytical Corp.

501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd. Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Jessica High

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune, Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?
Are aqueous samples field filtered for metals? Y or N: Yes
Are high concentrations expected? Y or N? If yes, which ID(s)? No

Requested Analysis (include method and bottle type)

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MeOH	Other	8260B: VOCs GW: 3-40mL HCl VOAs Soil: 2 NaHSO4 Hat. 1 MeOH VOA, 1 2oz jar	RSK175: MSE 2-40mL HCl VOAs	TOC: 2-40mL H2SO4 VOAs	6010B: TOTAL METALS (WISPD mL HNO3 poly Soil: Soil jar	8270/8270-SIM: SVOCs/PAHs GW-1L Ambers Soil (8oz jar)	3550B/8081A: OC Pesticides GW: 2-1L Ambers Soil (8oz jar)	8082: PCBs GW: 2 1L Ambers Soil (8oz jar)	CN/S&AK: 1-250mL poly, unpres.	Sulfide: 1-500mL Zn Acetate GW Not poly	6010B: DISSOLVED METALS FIELD FILTERED 1-500mL HNO3 poly	pH / Sample Info (Lab Use)
1003029-01	IR69-GW12-10A	2/27/10	1425	GW	3	3						X										
-02	IR69-GW12DW-10A	2/27/10	1435	GW	3	3						X										
-03	IR69-GW14-10A	2/28/10	1130	GW	3	3						X										
-04	IR69-GW14IW-10A	2/28/10	1245	GW	3	3						X										
-05	IR69-GW14DW-10A	2/28/10	1155	GW	3	3						X										
1003030-01	IR69-SS02-10A	2/28/10	0900	Soil	4							X										
	IR69-SS02-10A-MS	2/28/10	0900	Soil	4					1	3	X										
	IR69-SS02-10A-SD	2/28/10	0900	Soil	4					1	3	X										
1003030-01	IR69-SB02-08-10-10A	2/28/10	1030	Soil	4					1	3	X										
	IR69-SB02-08-10-10A-MS	2/28/10	1030	Soil	4					1	3	X										

Lab Use Only

Sample Unpacked By:
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Sample Custody

Relinquished by:	Date/Time: 3/3/10 1400	Received by:	Date/Time: 3/3/10 1400
Relinquished by:	Date/Time: 3/4/10 1020	Received by:	Date/Time: 3/4/10 1020

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 0.8 °C

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer

SN0010

21867-A3

Page 2 of 2

CHAIN OF CUSTODY

CompuChem
a division of Liberty Analytical Corp.

501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd. Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Jessica High

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune, Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?
Are aqueous samples field filtered for metals? Y or N: Yes
Are high concentrations expected? Y or N? If yes, which ID(s)? No

Requested Analysis (include method and bottle type)

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MeOH	Other	8260B: VOCs GW: 3-40mL HCl VOAs Soil: 2-4oz. Jar, 1-40mL MeOH VOA, 1-2oz jar	RSK175: MGE 2-40mL HCl VOAs	TOC: 2-40mL H2SO4 VOAs	6010B: METALS (GW: 500mL HNO3 poly Soil: 8oz jar)	8270C/8270C-SIM: SVOCs/PAHs GW: 2-1L Ambers Soil (8oz jar)	8081B/8081A: OC Pesticides GW: 2-1L Ambers Soil (8oz jar)	8082: PCBs GW: 2-1L Ambers Soil (8oz jar)	CWNS & AIK: 1-250mL poly, unpres.	Sulfide: 1-500mL 2NaOH poly	6010B: DISSOLVED METALS FIELD FILTERED 1-500mL HNO3 poly
1003031-01	IR69-SB02-08-10-10A-SD	2/28/10	1030	Soil	4					1	3	X									
1003029-10	TRIP BLANK	2/16/10	–	water	3	3						X	IR69-TB02								
1003029-06	IR69-EB(022710)-GW	2/27/10	1400	water	3	3						X									
-07	IR69-EB(022810)-GW	2/28/10	1700	water	3	3						X									
-08	IR69-EB(022810)-SB	2/28/10	1730	water	3	3						X									

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

pH / Sample Info (Lab Use)

Chance to: IR69-TB01-030310

Lab Use Only

Sample Unpacked By: Jennifer Dell
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Sample Custody

Relinquished by: [signature]	Date/Time: 3/3/10 1400	Received by: [signature]	Date/Time: 3/3/10 1400
Relinquished by: [signature]	Date/Time: 3/4/10 1020	Received by: Jennifer Dell	Date/Time: 3/4/10 1020

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 0.8 °C

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CHAIN OF CUSTODY

501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd. Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Jessica High

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune, Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?
Are aqueous samples field filtered for metals? Y or N: Yes
Are high concentrations expected? Y or N? If yes, which ID(s)?: No

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	Number of Preserved Bottles: HCl	NaOH	HNO3	H2SO4	MeOH	Other	8260B: VOCs GW: 3-40mL HCl VOAs Soil: 2 Nalgene Jars, 1 MeOH VOA, 1 Zip-lock	RSK175: MEE 2-40mL HCl VOAs	TOC: 2-40mL H2SO4 VOAs	6010B: TAL METALS (Aqueous: 1 500mL poly, Soil: 1 8oz jar)	8270C/8270C-SIM: SVOCs/PAHs GW: 2-1L Ambers Soil (8oz jar)	8082: PCBs GW: 2-1L Ambers Soil (8oz jar)	CN/NS & AIX: 1-250mL poly, unpres.	Sulfide: 1-500mL Zn acetate w/ NaOH poly	6010B: DISSOLVED METALS FIELD FILTERED 1-500mL HNO3 poly	pH / Sample Info (Lab Use): TOC	TAL MTL	Sulfide	D. MTL
1003024-01 1003026-01	IR69-GW12-10A	2/27/10	1425	GW	14/16	2	1	2/3	2	1	6		x	x	x	x	x	x	x	x	x	<2	<2	>9	<2

2-250mL HNO3 JO 3/4/10

Lab Use Only

Sample Unpacked By: Jennifer Dow
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

~~Residual Chlorine Present?~~
Yes ___ No ✓

Sample Custody

Relinquished by:	Date/Time: 3/3/10 1400	Received by:	Date/Time: 3/3/10 1400
Relinquished by:	Date/Time: 3/4/10 1020	Received by: Jennifer Dow	Date/Time: 3/4/10 1020
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On ice? Y or N	Cooler Temp: 1.2 °C

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd. Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Jessica High

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune, Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?
Are aqueous samples field filtered for metals? Y or N: Yes
Are high concentrations expected? Y or N? If yes, which ID(s)? No

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MeOH	Other	8260B: VOCs GW: 3-40mL HCl VOAs Soil: 2-NaHSO4 Vials, 1-MeOH Vial, 1-2oz jar	RSK175: MEE 2-40mL HCl VOAs	TOC: 2-40mL H2SO4 VOAs	6010B: TOTAL METALS GW: 500mL HNO3 poly Soil: soil jar	8270C/8270C-SIM: SVOCs/PAHs GW: 1L Ambers Soil: 8oz jar	3550B/8081B: OC Pesticides GW: 2-1L Ambers Soil: 8oz jar	8082: PCBs GW: 2-1L Ambers Soil: 8oz jar	CN/NS & Alk: 1-250mL poly, unpres.	Sulfide: 1-500mL ZnAc GW NaOH poly	6010B: DISSOLVED METALS FIELD FILTERED 1-500mL HNO3 poly	pH / Sample Info (Lab Use) TOC	TAL MTL	Sulfide
1003029-02	IR69-GW12DW-10A	2/27/10	1435	GW	13	5	1	1	2	1	6		x	x	x	x	x	x	x	x		<2	<2	>9

Lab Use Only

Sample Unpacked By: Jennifer Doles
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:
Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Residual Chlorine Present?
Yes ____ No ✓

Sample Custody

Relinquished by:	Date/Time: 3/3/10 1400	Received by:	Date/Time: 3/3/10 1400
Relinquished by:	Date/Time: 3/4/10 1020	Received by: Jennifer Doles	Date/Time: 3/4/10 1020
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 0.2 °C

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd. Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Jessica High

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune, Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?
Are aqueous samples field filtered for metals? Y or N: Yes
Are high concentrations expected? Y or N? If yes, which ID(s)? No

Requested Analysis (include method and bottle type)

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MeOH	Other	8260B: VOCs GW: 3-40mL HCl VOAs Soil: 2 NaHSO4, 1 MeOH, 1 HCl VOA, 1 2oz jar	RSK175: MEE 2-40mL HCl VOAs	TOC: 2-40mL H2SO4 VOAs	6010B: TOTAL METALS GW: 500mL HNO3 poly Soil: 8oz jar	8270/8270C-SIM: SVOCs/PAHs GW: 1L Ambers Soil: 8oz jar	3550B/8081B: OC Pesticides GW: 2-1L Ambers Soil: 8oz jar	8082: PCBs GW: 2 1L Ambers Soil (8oz jar)	CN/NS & AIX: 1-250mL poly, unpres.	Sulfide: 1-500mL Zn Acetate or NaOH poly	6010B: DISSOLVED METALS FIELD FILTERED 1-500mL HNO3 poly	pH / Sample Info (Lab Use) TOC	TALMTL	Sulfide	
1003029-03	IR69-GW14-10A	2/28/10	1130	GW	13	2	1	2	2	1	6		x	x	x	x	x	x	x	x		<2	<2	>9	

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

Lab Use Only

Sample Unpacked By: Jennifer Dow
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Residual Chlorine Present? Yes ___ No ✓

Sample Custody

Relinquished by: Jeff Smith	Date/Time: 3/3/10 1400	Received by: Vered Amy Cid	Date/Time: 3/3/10 1400
Relinquished by: Vered Amy Cid	Date/Time: 3/4/10 1020	Received by: Jennifer Dow	Date/Time: 3/4/10 1020

Subcontract? Y or N If yes, where?
Custody Seal(s) intact? Y or N On Ice? Y or N
Cooler Temp: 0.1 °C

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CHAIN OF CUSTODY

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd. Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Jessica High

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune, Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?
Are aqueous samples field filtered for metals? Y or N: Yes
Are high concentrations expected? Y or N? If yes, which ID(s)?: No

Requested Analysis (include method and bottle type)

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MeOH	Other	8260B: VOCs GW: 3-40mL HCl VOAs Soil: 2 NaHSO4, 1 Nat, 1 Nat VOA, 1 2oz jar	RSK175: MGE 2-40mL HCl VOAs	TOC: 2-40mL H2SO4 VOAs	6010B: TAL METALS (Dissolved) RWISPD mL HNO3 poly Soil: Soil jar	8270C/8270C-SIM: SVOCs/PAHs GW: 1L Ambers Soil (8 oz jar)	8081B/8081A: OC Pesticides GW: 2 1-L Ambers Soil (8 oz jar)	8082: PCBs GW: 2 1L Ambers Soil (8 oz jar)	CN NS & AK: 1-250mL poly, unpres.	Sulfide: 1-500mL 2 mL 6N NaOH poly	6010B: DISSOLVED METALS FIELD FILTERED 1-500mL HNO3 poly	pH / Sample Info (Lab Use) TOC	TAL MTL	Sulfide		
1003029-04	IR69-GW14IW-10A	2/28/10	1245	GW	13	5	1	1	2	1	6		x	x	x	x	x	x	x	x		<2	<2	>9		

Lab Use Only

Sample Unpacked By: Jennifer Bond
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Residual Chlorine Present?
Yes _____ No ✓

Sample Custody

Relinquished by:	Date/Time: 3/3/10	Received by:	Date/Time: 3/3/10 1400
Relinquished by:	Date/Time: 3/4/10 1020	Received by: Jennifer Bond	Date/Time: 3/4/10 1020
Subcontract? Y or N If yes, where?		Custody Seal(s) intact? Y or N / On Ice? Y or N	Cooler Temp: 0.3 °C

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CHAIN OF CUSTODY

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd. Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Jessica High

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune, Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?:
Are aqueous samples field filtered for metals? Y or N: Yes
Are high concentrations expected? Y or N? If yes, which ID(s)?: No

Requested Analysis (include method and bottle type)

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	82608: VOCs GW: 3-40mL HCl VOAs Soil: 2 Nalgene Wide Mouth VOA, 1 2oz jar	RSKMS: MSE 2-40mL HCl VOAs	TOC: 2-40mL H2SO4 VOAs	6010B: ~~TOTAL METALS~~ ~~Dissolved~~ GW: 500mL HNO3 poly Soil: 8oz jar	8270/8270-SIM: SVOCs 1PAHs GW-1L Ambers Soil (8oz jar)	3550B/8081A: OC Pesticides GW: 2-1L Ambers Soil (8oz jar)	8082: PCBs GW: 2 1L Ambers Soil (8oz jar)	CN, NH3 & ALK: 1-250mL poly, unpres.	Sulfide: 1-500mL Zn Acetate GW NaOH poly	6010B: DISSOLVED METALS FIELD FILTERED 1-500mL HNO3 poly	pH / Sample Info (Lab Use) TOC	TALMTC	Sulfide		
1003029-05	IR69-GW14DW-10A	2/28/10	1155	GW	13	2	1	1	2	1	6		x	x	x	x	x	x	x	x		<2	<2	>9		

Lab Use Only

Sample Unpacked By: Jennifer Doles
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Residual Chlorine Present?
Yes ____ No ✓

Sample Custody

Relinquished by:	Date/Time: 3/3/10 1400	Received by: Vera Ann Cin	Date/Time: 3/3/10 1400
Relinquished by: Vera Ann Cin	Date/Time: 3/4/10 1020	Received by: Jennifer Doles	Date/Time: 3/4/10 1020
Subcontact? Y or N If yes, where?		Custody Seal(s) intact? Y or N	On Ice? Y or N — Cooler Temp: 1.0 °C

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd. Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Jessica High

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune, Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?
Are aqueous samples field filtered for metals? Y or N: Yes
Are high concentrations expected? Y or N? If yes, which ID(s)? No

Requested Analysis (include method and bottle type)

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	8260B: VOCs GW: 3-40mL HCl VOAs Soil: 2 Nalgene 4oz, 1 MeOH VOA, 1 2oz jar	8270 SIM: MSE 2-40mL HCl VOAs	TOC: 2-40mL H2SO4 VOAs	6010B: TOTAL METALS RWS 500mL HNO3 poly Soil: 8oz jar	8270/8270C-SIM; SVOCs/PAHs GW: 1L Ambers Soil (8oz jar)	8081B/8081A; OC Pesticides GW: 2-1L Ambers Soil (8oz jar)	8082: PCBs GW: 2 1L Ambers Soil (8oz jar)	CANS & AK: 1-250mL poly, unpres	Sulfide: 1-500mL ZnAcetate NaOH poly	6010B: DISSOLVED METALS FIELD FILTERED 1-500mL HNO3 poly	pH / Sample Info (Lab Use) TOC	TAL MTL	Sulfide	D. MTL
1003029-02 1003032-02	IR69-EB(022710)-GW	2/27/10	1400	GW	~~14~~ 15	2	1	~~2~~ 3	2	1	6		x	x	x	x	x	x	x	x	x	<2	<2	>9	<2

2-250mL HNO3 3/4/10

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

Lab Use Only

Sample Unpacked By: Jennifer Jones
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Residual Chlorine Present?
Yes ____ No ✓

Sample Custody

Relinquished by:	Date/Time: 3/3/10 1400	Received by:	Date/Time: 3/3/10 1400
Relinquished by:	Date/Time: 3/4/10 1020	Received by: Jennifer Jones	Date/Time: 3/4/10 1020
Subcontact? Y or N If yes, where?		Custody Seal(s) intact? Y or N On Ice? Y or N	Cooler Temp: 1.9 °C

Samples stored 60 days after date report mailed at no extra charge.

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd, Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Jessica High

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune, Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?
Are aqueous samples field filtered for metals? Y or N: Yes
Are high concentrations expected? Y or N? If yes, which ID(s)? No

Requested Analysis (include method and bottle type)

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MeOH	Other	8260B: VOCs GW: 3-40mL HCl VOAs Soil: 2 Na bisulfate, 1 MeOH VOA, 1 2oz jar	RSK175: MSE 2-40mL HCl VOAs	TOC: 2-40mL H2SO4 VOAs	6010B: TOTAL METALS GW: 500mL HNO3 poly Soil: 8oz jar	8270C/8270C-SIM: SVOCs/PAHs GW: 1L Ambers Soil: 8oz jar	8081B: OC Pesticides GW: 2-1L Ambers Soil: 8oz jar	8082: PCBs GW: 2 1L Ambers Soil: 8oz jar	CN/NS & AK: 1-250mL poly, unpres.	Sulfide: 1-500mL Zn acetate NaOH poly	6010B: DISSOLVED METALS FIELD FILTERED 1-500mL HNO3 poly	pH / Sample Info (Lab Use) TOC	TOTAL METALS	Sulfide
1003029-07	IR69-EB(022810)-GW	2/28/10	1700	GW		2	1	2	2	1	6		x	x	x	x	x	x	x	x		<2	<2	>9

Matrices
GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab Use Only

Sample Unpacked By: Jennifer Dale
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Residual Chlorine Present?
Yes No ✓

Sample Custody

Relinquished by:	Date/Time: 3/3/10 1400	Received by: Verdy Angel Cruz	Date/Time: 3/3/10 1400
Relinquished by:	Date/Time: 3/4/10 1020	Received by: Jennifer Dale	Date/Time: 3/4/10 1020
Subcontact? Y or N If yes, where?		Custody Seal(s) intact? Y or N	On Ice? Y or N — Cooler Temp: 0.1 °C

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd. Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Jessica High

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune, Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?
Are aqueous samples field filtered for metals? Y or N: Yes
Are high concentrations expected? Y or N? If yes, which IDs?: No

Requested Analysis (include method and bottle type)

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; FB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MeOH	Other	82608: VOCs GW: 3-40mL HCl VOAs Soil: 2 NaHSO4, 1 MeOH VOA, 1 2oz jar	RSK175: MSE 2-40mL HCl VOAs	TOC: 2-40mL H2SO4 VOAs	6010B: TOTAL METALS ~~Aqueous~~ RWS 200mL HNO3 poly Soil: soil jar	8270C/8270C-SIM: SVOCs/PAHs GW: 1L Ambers Soil (8oz jar)	8081B/8081A: OC Pesticides GW: 2-1L Ambers Soil (8oz jar)	8082: PCBs GW: 2 1L Ambers Soil (8oz jar)	CN/NH3 & AIK: 1-250mL poly, unpres.	Sulfide: 1-500mL Zn Acetate GW NaOH poly	6010B: DISSOLVED METALS FIELD FILTERED 1-500mL HNO3 poly	pH / Sample Info (Lab Use)
1003029-08	IR69-EB(022810)-SB	2/28/10	1730	GW	7			1			6				X	X	X	X				TAL MTL <2

Lab Use Only

Sample Unpacked By: Jennifer Doll
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

~~Residual Chlorine Present?~~ Yes ___ No ✓

Sample Custody

Relinquished by:	Date/Time: 3/3/10 1400	Received by:	Date/Time: 3/3/10 1400
Relinquished by:	Date/Time: 3/4/10 1020	Received by:	Date/Time: 3/4/10 0020
Subcontract? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 0.3 °C

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CHAIN OF CUSTODY

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd. Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Jessica High

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune, Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?
Are aqueous samples field filtered for metals? Y or N: Yes
Are high concentrations expected? Y or N? If yes, which ID(s)? No

Requested Analysis (include method and bottle type)

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MeOH	Other	8260B: VOCs GW: 3-40mL HCl VOAs Soil: 2 NaHSO4, 1 MeOH, 1 Vial, 1 2oz jar	PSTMS: MEE 2-40mL HCl VOAs	TOC: 2-40mL H2SO4 VOAs	6010B: TOTAL METALS RWISP 1 mL HNO3 poly Soil: soil jar	8270C/8270C-SIM: SVOCs/PAHs GW: 2-1L Ambers Soil (8oz jar)	8081B/8081A: OC Pesticides GW: 2-1L Ambers Soil (8oz jar)	8082: PCBs GW: 2 1L Ambers Soil (8oz jar)	CANS & AIR: 1-250mL poly, unpres.	Sulfide: 1-500mL 2mL 6N NaOH poly	6010B: DISSOLVED METALS FIELD FILTERED 1-500mL HNO3 poly	pH / Sample Info (Lab Use) TOC	TAL MT	Sulfide
1003029-09	IR69-FB-030310	3/03/10	0830	water	16	5	1	1	2	1	6	X	X	X	X	X	X	X	X	X		<2	<2	>9
1003029-11	TRIP BLANK	3/01/10	-	water	3	3						X			IR69-TB030110							/	/	/
													NOW		IR69-~~TB02-030310~~ TB01 030110									

Lab Use Only

Sample Unpacked By: Jennifer
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Residual Chlorine Present?
Yes ____ No ✓

Sample Custody

Relinquished by:	Date/Time: 3/3/10 1800	Received by: Verd Ann Cig	Date/Time: 3/3/10 1800
Relinquished by: Verd Ann Cig	Date/Time: 3/4/10 1020	Received by: Jennifer	Date/Time: 3/4/10 1020
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 1.2 °C

Samples stored 60 days after date report mailed at no extra charge.

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Sample ID Cross Reference

LAB WO	Project	Sample #	Field ID	Sample Date	Receive Date	DueDate	Chain of Custody ID
1003029	CTO-081 SITE 69/289017.SA.DM/N624	1003029-01	IR69-GW12	02/27/2010	03/04/2010	03/30/2010	IR69-GW12-10A
1003029	CTO-081 SITE 69/289017.SA.DM/N624	1003029-02	IR69-GW12DW	02/27/2010	03/04/2010	03/30/2010	IR69-GW12DW-10A
1003029	CTO-081 SITE 69/289017.SA.DM/N624	1003029-03	IR69-GW14	02/28/2010	03/04/2010	03/30/2010	IR69-GW14-10A
1003029	CTO-081 SITE 69/289017.SA.DM/N624	1003029-04	IR69-GW14IW	02/28/2010	03/04/2010	03/30/2010	IR69-GW14IW-10A
1003029	CTO-081 SITE 69/289017.SA.DM/N624	1003029-05	IR69-GW14DW	02/28/2010	03/04/2010	03/30/2010	IR69-GW14DW-10A
1003029	CTO-081 SITE 69/289017.SA.DM/N624	1003029-06	EB01-022710-GW	02/27/2010	03/04/2010	03/30/2010	IR69-EB01-022710-GW
1003029	CTO-081 SITE 69/289017.SA.DM/N624	1003029-07	EB01-022810-GW	02/28/2010	03/04/2010	03/30/2010	IR69-EB01-022810-GW
1003029	CTO-081 SITE 69/289017.SA.DM/N624	1003029-08	EB01-022810-SB	02/28/2010	03/04/2010	03/30/2010	IR69-EB01-022810-SB
1003029	CTO-081 SITE 69/289017.SA.DM/N624	1003029-09	FB01-030310	03/03/2010	03/04/2010	03/30/2010	IR69-FB01-030310
1003029	CTO-081 SITE 69/289017.SA.DM/N624	1003029-10	IR69-TB01-030310	03/03/2010	03/04/2010	03/30/2010	
1003029	CTO-081 SITE 69/289017.SA.DM/N624	1003029-11	IR69-TB01-030110	03/01/2010	03/04/2010	03/30/2010	
1003029	CTO-081 SITE 69/289017.SA.DM/N624	1003029-12	IR69-GW02	03/02/2010	03/05/2010	03/30/2010	IR69-GW02-10A
1003029	CTO-081 SITE 69/289017.SA.DM/N624	1003029-13	IR69-GW02DW	03/02/2010	03/05/2010	03/30/2010	IR69-GW02DW-10A
1003029	CTO-081 SITE 69/289017.SA.DM/N624	1003029-14	IR69-GW09	03/01/2010	03/05/2010	03/30/2010	IR69-GW09DW-10A
1003029	CTO-081 SITE 69/289017.SA.DM/N624	1003029-15	IR69-GW11	03/01/2010	03/05/2010	03/30/2010	IR69-GW11-10A
1003029	CTO-081 SITE 69/289017.SA.DM/N624	1003029-16	IR69-GW13	03/01/2010	03/05/2010	03/30/2010	IR69-GW13-10A
1003029	CTO-081 SITE 69/289017.SA.DM/N624	1003029-17	IR69-GW13IW	03/01/2010	03/05/2010	03/30/2010	IR69-GW13IW-10A

LAB WO	Project	Sample #	Field ID	Sample Date	Receive Date	DueDate	Chain of Custody ID
1003029	CTO-081 SITE 69/289017.SA.DM/N624	1003029-18	EB01-030110-GW	03/01/2010	03/05/2010	03/30/2010	IR69-EB01-030110-GW
1003029	CTO-081 SITE 69/289017.SA.DM/N624	1003029-19	EB01-030210-GW	03/02/2010	03/05/2010	03/30/2010	IR69-EB01-030210-GW
1003029	CTO-081 SITE 69/289017.SA.DM/N624	1003029-20	IR69-TB01-030410	03/04/2010	03/05/2010	03/30/2010	

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213 204

Courier:
Airbill No.:
Sampling Complete? Y or N

Client/Reporting Information	Project Information
Company Name: CH2M Hill	Project Name: CTO-081
Address: 11301 Carmel Commons Blvd Ste 304	Sampling Location: MCB Camley Site 69
City: Charlotte State: NC Zip: 28226	Turnaround time: Standard
Project Contact: GWEN BUCKLEY	Batch QC or Project Specific? If Specific, which Sample ID? Batch
Phone #: 757-671-6292	Are aqueous samples field filtered for metals? Y or (N)
Sampler's Name: Nikki Monroe / Ronny Field	Are high concentrations expected? Y or (N)? If yes, which ID(s)?

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No (Lab Use)	Field ID 030410	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	8260B		pH / Sample Info (Lab Use)
1003029-20	~~IR69-TB-021010~~ ~~TRIP BLANK~~	~~03/10/10~~	~~NA~~ 1700	RI	3	3						X	IR69-TB01-030410	
1003029-12	IR69-GW02-10A	3/2/10	1100	GW	3	3						X		
	IR69-GW02-10A-MS	3/2/10	1100	GW	3	3						X		
	IR69-GW02-10A-SD	3/2/10	1100	GW	3	3						X		
1003029-14	IR69-GW02-10A	3/1/10	1035	GW	3	3						X		
-16	IR69-GW13-10A	3/1/10	1445	GW	3	3						X		
-17	IR69-GW13IW-10A	3/1/10	1520	GW	3	3						X		
-15	IR69-GW11-10A	3/1/10	1035	GW	3	3						X		
-13	IR69-GW02DW-10A	3/2/10	1230	GW	3	3						X		
-18	IR69-EB(030110)-RW	3/1/10	1400	RI	3	3						X		

Lab Use Only

Sample Unpacked By: Jennifer Doe
Sample Order Entry By:
Samples Received in Good Condition? (Y) or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or (NA)
625 & Phenol samples checked for chlorine? Y or (NA)
608 samples checked for pH between 5.0-9.0? Y or (NA)

Comments

Sample Custody

Relinquished by:	Date/Time: 3/4/10 1230	Received by:	Date/Time: 3/4/10 1230
Relinquished by:	Date/Time: 3/5/10 1400	Received by: Jennifer Doe	Date/Time: 3/5/10 1235
Subcontact? Y or (N) If yes, where?		Custody Seal(s) intact? (Y) or N	On Ice (Y) or N — Cooler Temp: 1.2 °C

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03-05-10 KM - First delivery

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Page 2 of 2

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: [illegible]

Project Information

Project Name: CTO-087
Sampling Location: MCB Camp Lej IR69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N If yes, which ID(s)?

Requested Analysis (include method and bottle type)

8260B

Matrices

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

pH / Sample Info (Lab Use)

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	8260B
100329-19	IR69-EB-030210-GW	3/2/10	1600	RI	3	3						X

Lab Use Only

Sample Unpacked By: [illegible]
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Sample Custody

Relinquished by: [illegible] Date/Time: 3/5/10 1400 Received by: Jennifer Dover Date/Time: 3/5/10 1235
Relinquished by: Date/Time: Received by: Date/Time:
Subcontact? Y or N If yes, where? Custody Seal(s) intact? Y or N On Ice? Y or N Cooler Temp: 1.2 °C

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63-05 KM-Client Delivery

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Courier:
Airbill No.:
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: ~~Jeffrey Hill~~ Nikki Monroe

Project Information

Project Name: CTO-081
Sampling Location: MCB Camlej, Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N: No
Are high concentrations expected? Y or N? If yes, which ID(s)?:

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

Residual Chlorine Present? Yes ____ No ✓

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH (Zn Ac)	HNO3	H2SO4	MEOH	Other none	8260B	8270C/8270C-SIM (2-1L ambers)	RSK175 MEE (2-40mL VOAs, HCl)	3550B/8081A (2-1L ambers)	8082 (2-1L ambers)	TOC (2-40mL VOAs H2SO4)	CNWS+AIK (1-250mL poly, none)	Sulfide (1-500mL poly, NaOH, ZnAc)	6010B/TAL Metals (1-500mL poly HNO3)		pH / Sample Info (Lab Use): TOC	Sulfide	Tal Metals
1003029-12	IR69-GW02-10A	3/2/10	1100	GW	13	2	1	1	2		7		X	X	X	X	X	X	X	X		<2	~~X~~ See Sulfide	<2

Lab Use Only

Sample Unpacked By: Jennifer Bove
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:
Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Sample Custody

Relinquished by: [illegible]	Date/Time: 3-4-10 12:35	Received by: Jeffrey Hill	Date/Time: ~~3/5/10 1400~~ 3/4/10 1235
Relinquished by: [illegible]	Date/Time: ~~3/4/10 1235~~	Received by:	Date/Time: 3/8/10
Subcontact? Y or N If yes, where? Jeffrey Hill 3/5/10 1400	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 0.2 °C

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0305 via Client delivery

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Page 1 of 1 752

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Nikki Monroe

Project Information

Project Name: CTO-081
Sampling Location: MCBCamlej Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or (N)
Are high concentrations expected? Y or (N)? If yes, which ID(s)?

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

Residual Chlorine Present? Yes ____ No ✓

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	~~2N NaOH~~ NaOH	HNO3	H2SO4	MEOH	Other none	8270C/8270C-SIM / 2-1L ambers	3500B/8081A / 2-1L ambers	8082 / 2 1-Ambers	RSK175 MEE / 2-40mL vials HCl	TOC / 2-40mL vials H2SO4	CNWS&AEC / 1-250mL poly unpreserved	Sulfide / 1-500mL poly 2N acetate 6N NaOH	6010B TAL Metals / 1-500mL HNO3			pH / Sample Info (Lab Use): TOC	Sulfate	Sulfides		
1003029-12	JR69-GW02-10A-MS	3/2/10	1100	GW	13	2	1	1	2	0	7	X	X	X	X	X	X	X	X			<2	>9	<2		

Lab Use Only

Sample Unpacked By: Jennifer Dover
Sample Order Entry By: [illegible]
Samples Received in Good Condition? (Y) or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or (NA)
625 & Phenol samples checked for chlorine? Y or (NA)
608 samples checked for pH between 5.0-9.0? Y or (NA)

Comments

Sample Custody

Relinquished by: [illegible] 3/2/10	Date/Time: 3-4-10 1235	Received by: Jeffrey Hyde	Date/Time: 3/4/10 1235
Relinquished by: [illegible]	Date/Time: ~~3/4/10 1235~~	Received by: Jennifer Dover	Date/Time: 3/5/10 1235
Subcontract? Y or N If yes, where? [illegible]	3/5/10 1400	Custody Seal(s) intact? (Y) or N	On Ice? (Y) or N — Cooler Temp: 1.0 °C

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KM 03-05-10 Cly Delivery

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckles
Phone #: 757-671-6292
Sampler's Name: Nikki Monroe

Project Information

Project Name: CTO-081
Sampling Location: MCB Camley IR69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Residual Chlorine Present? Yes ____ No ✓

Requested Analysis (include method and bottle type)

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other none	8270C/8270C-SIM / 2-1L ambers	3510B/8081A / 2-1L ambers	8082 / 2-1L ambers	EO175 MEE / 2-40ml VOAs HCl	TOC / 2-40ml VOAs H2SO4	CNN S&Acid / 1-250 ml poly unpres.	Sulfide / 1-500 ml poly 2 drops 6N NaOH	6010B TAL Metals / 1-500ml poly HNO3			pH / Sample Info (Lab Use): TOC	Sulfide	Tal Metals		
1003029-12	IR69-GW02-10A-SD	3/2/10	1100	GW	13	2	1	1	2	0	~~1~~ 7	X	X	X	X	X	X	X	X			<2	>9	<2		

Lab Use Only

Sample Unpacked By: K. Manning
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or N/A
625 & Phenol samples checked for chlorine? Y or N/A
608 samples checked for pH between 5.0-9.0? Y or N/A

Comments

Sample Custody

Relinquished by: [illegible] 3/3/10	Date/Time: 3-4-10 1235	Received by: [illegible]	Date/Time: 3/4/10 1235
Relinquished by: [illegible]	Date/Time: ~~3/4/10 1235~~	Received by: K. Manning	Date/Time: 3/5/10 1235
Subcontact? Y or N If yes, where? [illegible]	3/5/10 1400	Custody Seal(s) intact? Y or N	On Ice? Y or N — Cooler Temp: 1.2 °C

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KM 03-5-10 Client Delivery

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Page 1 of 1 21754

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Ronny Fields

Project Information

Project Name: CTO-081
Sampling Location: MCB Camlej Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or (N)
Are high concentrations expected? Y or (N) If yes, which ID(s)?

Residual Chlorine Present? Yes ____ No ✓

Requested Analysis (include method and bottle type)

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH (Zn Ac)	HNO3	H2SO4	MEOH	Other (none)	8270C/8270C_SIM 2-1Lambers	3550B/8081A 2-1Lambers	8082 2-1Lambers	RSK-175 MEE 2-40mL VOAs HCl	TOC 2-40mL VOAs H2SO4	CN/S&AK 1-250mL poly NaOH	Sulfide 1-500mL poly Zn Ac, NaOH	6010B TAL Metals 1-500mL poly HNO3			pH / Sample Info (Lab Use): TOC	Sulfide	TAL Metals		
1003029-13	JP69-GW02DW-104	3/2/10	1230	GW	13	2	1	1	2	0	7	X	X	X	X	X	X	X	X			<2	>9	<2		

Lab Use Only

Sample Unpacked By: [signature]
Sample Order Entry By: [signature]
Samples Received in Good Condition? (Y) or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or (NA)
625 & Phenol samples checked for chlorine? Y or (NA)
608 samples checked for pH between 5.0-9.0? Y or (NA)

Comments

Sample Custody

Relinquished by: [signature]	Date/Time: 3/4/10 1230	Received by: [signature]	Date/Time: 3/4/10 1230
Relinquished by: [signature]	Date/Time: 3/5/10 1400	Received by: [signature]	Date/Time: 3/5/10 1235
Subcontact? Y or N If yes, where?		Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 6.1 °C

Samples stored 60 days after date report mailed at no extra charge.

KM - 03-05-1 Client Delivery

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219

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Nikki Monroe

Project Information

Project Name: CTO-81
Sampling Location: MCB Camlej Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID? Batch
Are aqueous samples field filtered for metals? Y or N
"-FF" on ID → for dissolved metals
Are high concentrations expected? Y or N If yes, which ID(s)?

Residual Chlorine Present? Yes ____ No ✓

Requested Analysis (include method and bottle type)

CompuChem No (Lab Use)	Field ID	Date	Time	Matrix	# of bottles	HCl	NaOH (Zn Acetate)	HNO3	H2SO4	MEOH	Other none	8270C/8270C-SIM / 2-1L ambers	3550B/8081A / 2-1L ambers	8082 / 2-1L ambers	RSK175 MEE / 2-40ml vials HCl	TOC / 2-40ml vials H2SO4	CN/S8-ALL / 1-250ml poly none	Sulfide / 1-500ml poly Zn acetate & NaOH	6010B/TAL Metals / 1-500ml poly HNO3	6010B/DISSOLVED METALS "-FF" / 1-500ml poly HNO3		pH / Sample Info (Lab Use): TOC	Sulfide	Tal Metals	Diss. Metals
1003029-14	IP69-GW09-10A	3/1/10	1035	GW	14	2	1	2	2	0	7	X	X	X	X	X	X	X	X	X		<2	>9	<2	<2
DISS. → 1003032-03																									

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

Lab Use Only

Sample Unpacked By: K. Manning
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:
Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Sample Custody

Relinquished by:	Date/Time: 3-4-10 1235	Received by:	Date/Time: 3/4/10 1235
Relinquished by:	Date/Time: 3/5/10 1400	Received by: K. Manning	Date/Time: 3/5/10 1235
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 01 °C

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KM 03-5-10 Client Delivery

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Phone: 919-379-4100 Fax 919-379-4040

Courier:
Airbill No.:
Sampling Complete? Y or N

Client/Reporting Information

Company Name: OHEM HILL
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Ronny Fields

Project Information

Project Name: CTO-81
Sampling Location: MCB Camp Lej Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N: DISSOLVED METALS FIELD FILTERED: "LFF" on ID
Are high concentrations expected? Y or N? If yes, which ID(s)?

Residual Chlorine Present? Yes ____ No ✓

Requested Analysis (include method and bottle type): 8270C/8270C-SIM (2-1L amber); 3510B/8081A (2-1L amber); 8082 (2-1L amber); 1SVOCS MEE (2-40mL vials HCl); TOC (2-40mL vials H2SO4); CN NS & AK (1-250mL poly none); Sulfide (1-500mL poly unfiltered UNaOH); 6010B TM Metals (1-500mL poly HNO3); 6010B DISSOLVED METALS "LFF" on ID (1-500mL filtered HNO3)

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No (Lab Use)	Field ID	Date	Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	8270C/8270C-SIM	3510B/8081A	8082	1SVOCS MEE	TOC	CN NS & AK	Sulfide	6010B TM Metals	6010B DISSOLVED METALS "LFF" on ID		pH / Sample Info (Lab Use): Sulfide	TOC	Diss. Metals	Tot. Metals
1003029-15	DR69-GW11-10A	3/1/10	1035	GW	14	2	1	2	2	0	7	X	X	X	X	X	X	X	X	X		>9	<2	<2	<2
	DISS. → 1003029-04 3/8/10																								

Lab Use Only

Sample Unpacked By: Jennifer Doll
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Sample Custody

Relinquished by: [illegible]	Date/Time: 3/4/10 1230	Received by: [illegible]	Date/Time: 3/4/10 1230
Relinquished by: [illegible]	Date/Time: 3/5/10 1400	Received by: Jennifer Doll	Date/Time: 3/5/10 1235
Subcontract? Y or N If yes, where?		Custody Seal(s) intact? Y or N	On Ice? Y or N — Cooler Temp: 0.3 °C

KM 0510 Client Delivery

Samples stored 60 days after date report mailed at no extra charge.

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3010

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CHAIN OF CUSTODY

501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd #304
City: Charlotte State: NC Zip: 28226
Project Contact: Ruben Buckley
Phone #: 757-671-6292
Sampler's Name: Nikki Monroe

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? (Y) or N — Dissolved metals ID labeled "-FF" — In field Filtered
Are high concentrations expected? Y or (N) If yes, which ID(s)?

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

Residual Chlorine Present? Yes ____ No ✓

CompuChem No (Lab Use)	Field ID	Collection Date	Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other None	8270C/8270C-SIM (2-1L ambers)	3550B/8081A (2-1L ambers)	8082 (2-1L ambers)	RSK175 MEE (2-40mL VOAs HCl)	TOC (2-40mL VOAs H2SO4)	CN/SO4/Hal (1-250mL poly none)	Sulfide (1-500mL poly Zn acetate & NaOH)	6010B Total Metals (1-500mL poly HNO3)	6010B Dissolved Metals "-FF" on ID (1-500mL poly HNO3 In field filtered)		pH / Sample Info (Lab Use) TOC	Sulfide	Tal Metals	Diss. Metals
10B029-16	JT69-GW13-10A	3/1/10	1445	GW	14	2	1	2	2	0	7											<2	>9	<2	<2
	DISS → 10B032-05																								

Lab Use Only

Sample Unpacked By: [signature]
Sample Order Entry By: [signature]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Sample Custody

Relinquished by: [signature] 3/3/10	Date/Time: 3-4-10 1235	Received by: [signature]	Date/Time: 3/4/10 1235
Relinquished by: [signature]	Date/Time: 3/5/10 1400	Received by: [signature]	Date/Time: 3/5/10 1235
Subcontract? Y or N If yes, where?		Custody Seal(s) intact? (Y) or N	On Ice? (Y) or N — Cooler Temp: 0.2 °C

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KU 03-05-10 Client Delivery

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222

213

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CHAIN OF CUSTODY

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Cary, NC 27513
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Page 1 of 1 — 21760

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information	Project Information
Company Name: CH2M HILL	Project Name: CTO-081
Address: 11301 Carmel Commons Blvd Ste 304	Sampling Location: MCB Camp Lej Site 69
City: Charlotte State: NC Zip: 28226	Turnaround time: Standard
Project Contact: Gwen Buckley	Batch QC or Project Specific? If Specific, which Sample ID? Batch
Phone #: 757-671-6292	Are aqueous samples field filtered for metals? Y or (N)
Sampler's Name: Ronny Fields	Are high concentrations expected? Y or (N) If yes, which ID(s)?

Residual Chlorine Present? Yes ____ No ✓

Requested Analysis (include method and bottle type): 8270C/8270C-SIM / 2-1L amber; 3550B/8081A / 2-1L amber; 8082 / 2-1L amber; BSLMEE / 2-40mL vials HCl; TOC / 2-40mL vials H2SO4; CN/S & Alk / 1-250mL poly; Sulfide / 1-500mL poly Zn acetate NaOH; 6010B TM Metals / 1-500mL poly HNO3

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No (Lab Use)	Field ID	Date	Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	8270C/8270C-SIM	3550B/8081A	8082	BSLMEE	TOC	CN/S & Alk	Sulfide	6010B TM Metals			pH / Sample Info (Lab Use): TOC	Sulfide	Tal Metals	Diss. Metals
1003029-17	IR69-GW13IW-10A	3/1/10	1520	GW	13	2	1	1	2	0	7	X	X	X	X	X	X	X	X			<2	>9	<2	<2

Lab Use Only

Sample Unpacked By: Jennifer Dove
Sample Order Entry By: [illegible]
Samples Received in Good Condition? (Y) or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or (NA)
625 & Phenol samples checked for chlorine? Y or (NA)
608 samples checked for pH between 5.0-9.0? Y or (NA)

Comments

Sample Custody

Relinquished by: [illegible] 3/3/10	Date/Time: 3/4/10 1230	Received by: [illegible]	Date/Time: 3/4/10 1230
Relinquished by: [illegible]	Date/Time: 3/5/10 1400	Received by: Jennifer Dove	Date/Time: 3/5/10 1235
Subcontact? (Y) or N If yes, where?	Custody Seal(s) intact? (Y) or N	On ice? (Y) or N	Cooler Temp: 1.2 °C

Samples stored 60 days after date report mailed at no extra charge.

KM 03-05-10 Client Delivery

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223

214

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Jessica High

Project Information

Project Name: CTO-081
Sampling Location: MCB Camlej Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N: "-FF" for field filtered m dissolved metals
Are high concentrations expected? Y or N If yes, which ID(s)?

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI Rinsate; WP - Wipe; O - Other

Residual Chlorine Present? Yes ____ No ✓

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other none	8270C/8270C-SIM 2-1Lambers	3500B/8081 2-1Lambers	8082 2-1Lambert	RSK175 MEE 2-40mL VOAs HCl	TOC 2-40mL VOAs H2SO4	CN/S & ATK 1-250mL poly none	Sulfide 1-500mL poly 2mL 1N NaOH	6010B TAL Metals 1-500mL poly HNO3	6010B DISSOLVED METALS 1-500mL poly HNO3 "-FF" on ID		pH / Sample Info (Lab Use): TOC	Sulfide	Dis. Metals	Tot. Metals
1003029-18	IR69-EB(030110)-GW	3/1/10	1400	GW	14	2	1	2	2	0	7	X	X	X	X	X	X	X	X	X		<2	>9	<2	<2
	DISS → 1003U32-06																								

Lab Use Only

Sample Unpacked By: Jennifer Dore
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Sample Custody

Relinquished by: [signature]	Date/Time: 3/5/10 1400	Received by: Verd Anna Cirl	Date/Time: 3/5/10 0930
Relinquished by: Verd Anna Cirl	Date/Time: 3/5/10 1230	Received by: Jennifer Dore	Date/Time: 3/5/10 1235

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 0.3 °C

Samples stor[illegible] <0 days after date report mailed at no extra charge.

KM 03-05 Client Delivery

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CHAIN OF CUSTODY

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Page 1 of 1 — 21762

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information	Project Information
Company Name: CH2M Hill	Project Name: CTO-081
Address: 11301 Carmel Commons Blvd Ste 304	Sampling Location: MCB Camley Site 69
City: Charlotte State: NC Zip: 28226	Turnaround time: Standard
Project Contact: Gwen Buckley	Batch QC or Project Specific? If Specific, which Sample ID? Batch
Phone #: 757-671-6292	Are aqueous samples field filtered for metals? Y or N
Sampler's Name: Jessica Hill	Are high concentrations expected? Y or N? If yes, which ID(s)?

Residual Chlorine Present? Yes ____ No ✓

Requested Analysis (include method and bottle type): 8270C/8270C-SIM / 2-1L ambers; 3550B/8081A / 2-1L ambers; 8082 / 2-1L ambers; RSK175 MEE / 2-40mL vials HCl; TOC / 2-40mL vials H2SO4; CN/NS & AK / 1-250mL poly none; Sulfide / 1-500mL poly zinc NaOH; 6010B TAL Metals / 1-500mL poly HNO3

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No (Lab Use)	Field ID	Date	Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	8270C/8270C-SIM	3550B/8081A	8082	RSK175 MEE	TOC	CN/NS & AK	Sulfide	6010B TAL Metals			pH / Sample Info (Lab Use) TOC	Sulfide	Tal Metals
1003029-19	TP69-EB100210-GW	3/2/10	1600	GW	13	2	1	1	2	0	7	X	X	X	X	X	X	X	X			<2	>9	<2

Lab Use Only

Sample Unpacked By: Jennifer Dore
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Sample Custody

Relinquished by: [signature]	Date/Time: 3/5/10 1400	Received by: [signature]	Date/Time: 3/5/10 0930
Relinquished by: [signature]	Date/Time: 3/5/10 1230	Received by: Jennifer Dore	Date/Time: 3/5/10 1235

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 0.4 °C

Samples st... 60 days after date report mailed at no extra charge.

KU 03-05 Client Delivery

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2010

215 224

MEMORANDUM **CH2MHILL**

Corrections to COCs

TO: Whom It May Concern

COPIES: File
Data Package

FROM: Gwen Buckley
Environmental Information Specialist
CH2M HILL

DATE: March 8, 2010

This memo is to document corrections made to the Logins and COCs for CTO-81 Site 69 at MCB Camp Lejeune.

*Address to ship final report to is not what is listed on the COC. Please use:
5700 Cleveland St
Suite 101
Virginia Beach, VA 23462

*Analysis listed on logins is incorrect:
- Field crew lists "CNNS" on COCs. Please only perform Chloride and Sulfate.

*The below table are items that were incorrect on the COC and need to be corrected upon logging into your system:

Incorrect ID	Correct ID	Incorrect Collection Date	Correct Collection Date	COC
Trip Blank	IR69-TB01-030310	2/16/2010	3/3/2010	21867-A3
IR69-EB(022710)-GW	IR69-EB01-022710-GW		2/27/2010	21867-A3 and 21867-A9
IR69-EB(022810)-GW	IR69-EB01-022810-GW		2/28/2010	21867-A3 and 21867-A10
IR69-EB(022810)-SB	IR69-EB01-022810-SB		2/28/2010	21867-A3 and 21867-A11
TRIP BLANK	IR69-TB01-030110		3/1/2010	21867-A12
IR69-TB-021610	IR69-TB01-030410	2/16/2010	3/4/2010	21761
IR69-EB(030110)-GW	IR69-EB01-030110-GW		3/1/2010	21761 and 21763
IR69-EB-030210-GW	IR69-EB01-030210-GW		3/2/2010	18665 and 21762

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Sample	Incorrect Method	Correct Method
Aqueous IDW	Lloyd Kahn	SW846 9060 quad with average

*Please be sure all MS/MSDs follow CH nomenclature on final report (-MS and -SD)

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ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

PROJECT REFERENCE: CTO-081	PROJECT NO: 374082.FI.FI.69	PROJECT LOCATION: MCB Camp Lejeune
TESTAMERICA (LAB) PROJECT MANAGER: Abbie Yont	P.O. NUMBER	CONTRACT NO
CLIENT (SITE) PM: Gwen Buckley	CLIENT PHONE: 757-671-6292	CLIENT FAX: 704-544-4041
CLIENT NAME: CH2M HILL	CLIENT EMAIL: Gwen.Buckley@CH2M.com	
CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226		
COMPANY CONTRACTING THIS WORK (if applicable):		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ○
DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: None

REQUIRED ANALYSES: Method 8141A: OP Pesticides

NUMBER OF CONTAINERS SUBMITTED = ~~16~~ 6

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	Method 8141A: OP Pesticides	REMARKS
2/28/2010	11:30	IR69-GW14-10A	G	X				X	
2/28/2010	12:45	IR69-GW14IW-10A	G	X				X	
2/28/2010	11:55	IR69-GW14DW-10A	G	X				X	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3/1/10	1400						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/4/10	0916	YES ○ NO ○		680-55553	0.8

FCU052:01.02.08:2

03/31/2010

218

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

219

PROJECT REFERENCE: CTO-001	PROJECT NO.: 374082.FI.FI.69	PROJECT LOCATION: MCB Camp Lejeune
TESTAMERICA (LAB) PROJECT MANAGER: Abbie Yont	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Gwen Buckley	CLIENT PHONE: 757-671-6292	CLIENT FAX: 704-544-4041
CLIENT NAME: CH2M HILL	CLIENT EMAIL: Gwen.Buckley@CH2M.com	
CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE 1 OF

STANDARD REPORT DELIVERY ○
DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: None

REQUIRED ANALYSES: Method 8141A OP Pesticides

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	Method 8141A OP Pesticides	REMARKS
			NUMBER OF CONTAINERS SUBMITTED = 8						
2/27/2010	14:00	IR69-EB(022710)-GW	G	X				X	
2/28/2010	17:00	IR69-EB(022810)-GW	G	X				X	
2/28/2010	17:30	IR69-EB(022810)-SB	G	X				X	
3/3/2010	8:30	IR69-FB-030310	G	X				X	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3/3/10	1400						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/4/10	0916	YES ○ NO ○		680-55553	1.6

03/31/2010

FCU052:01.02.08:2

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

220

PROJECT REFERENCE: CTO-081	PROJECT NO.: 374092.FLFL69	PROJECT LOCATION: MCB Camp Lejeune
TESTAMERICA (LAB) PROJECT MANAGER: Abbie Yont	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Gwen Buckley	CLIENT PHONE: 757-671-6292	CLIENT FAX: 704-544-4041
CLIENT NAME: CH2M HILL	CLIENT EMAIL: Gwen.Buckley@CH2M.com	
CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226		
COMPANY CONTRACTING THIS WORK (if applicable):		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ○ DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○ DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: None

REQUIRED ANALYSES: Method 8141A: OP Pesticides

NUMBER OF CONTAINERS SUBMITTED = ~~16~~ 10

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	Method 8141A: OP Pesticides	REMARKS
2/28/2010	9:00	IR69-SS02-10A	C		X			X	
2/28/2010	9:00	IR69-SS02-10A-MS	C		X			X	
2/28/2010	9:00	IR69-SS02-10A-SD	C		X			X	
2/28/2010	10:30	IR69-SB02-08-10-10A	C		X			X	
2/28/2010	10:30	IR69-SB02-08-10-10A-MS	C		X			X	
2/28/2010	10:30	IR69-SB02-08-10-10A-SD	C		X			X	
2/27/2010	14:25	IR69-GW12-10A	G	X				X	
2/27/2010	14:35	IR69-GW12DW-10A	G	X				X	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3/1/10	1400						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/4/10	0916	YES ○ NO ○		680-55553	1-2

FCU052:01.02.08:2

03/31/2010

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
6102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

221

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION
CTO-081	374082.FI.FI.69	MCB Camp Lejeune

TESTAMERICA (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
Abbie Yon!		

CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
Gwen Buckley	757-871-6292	704-544-4041

CLIENT NAME	CLIENT EMAIL
CH2M HILL	Gwen.Buckley@CH2M.com

CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226

COMPANY CONTRACTING THIS WORK (if applicable):

PAGE 1 OF

STANDARD REPORT DELIVERY ○
DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: None

REQUIRED ANALYSES: Method 8141A: OP Pesticides

NUMBER OF CONTAINERS SUBMITTED = 6

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	Method 8141A: OP Pesticides	REMARKS
3/1/2010	10:35	IR69-GW11-10A	G	X				X	
3/1/2010	14:45	IR69-GW13-10A	G	X				X	
3/1/2010	15:20	IR69-GW13IW-10A	G	X				X	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3-4-10	1235	[signature]	3/4/10	1235	[signature]	3/5/10	1400

RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
[signature]	3/4/10	1235	[signature]	3/4/10	1235			

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/5/10	0921	YES ○ NO ○		680-55594	0.8/0.6/1.0

FCU052:01.02.08:2

03/31/2010

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

222

PROJECT REFERENCE: CTO-081	PROJECT NO.: 374082 FI FI.69	PROJECT LOCATION: MCB Camp Lejeune
TESTAMERICA (LAB) PROJECT MANAGER: Abbie Yont	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Gwen Buckley	CLIENT PHONE: 757-671-6292	CLIENT FAX: 704-544-4041
CLIENT NAME: CH2M HILL	CLIENT EMAIL: Gwen.Buckley@CH2M.com	
CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226		
COMPANY CONTRACTING THIS WORK (if applicable):		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ○
DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 3

REQUIRED ANALYSES: Method 8141A: OP Pesticides — None

NUMBER OF CONTAINERS SUBMITTED = 6

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX TYPE: COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	Method 8141A: OP Pesticides	REMARKS
3/1/2010	14:00	IR69-EB(030110)-GW	G	X				X	Rinsate Blank
3/2/2010	16:00	IR69-EB-030210-GW	G	X				X	Rinsate Blank
3/1/2010	10:35	IR69-GW09-10A	G	X				X	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3-4-10	1235	[signature]	3/4/10	1400			
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**
[signature]	3/4/10	1235						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/5/10	0921	YES ○ NO ○		620-55594	

FCU052:01.02.08:2

03/31/2010

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

223

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION
CTO-081	374082.FI.F169	MCB Camp Lejeune
TESTAMERICA (LAB) PROJECT MANAGER: Abbie Yont	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Gwen Buckley	CLIENT PHONE: 757-671-6292	CLIENT FAX: 704-544-4041
CLIENT NAME: CH2M HILL	CLIENT EMAIL: Gwen.Buckley@CH2M.com	

CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226

COMPANY CONTRACTING THIS WORK (if applicable):

PAGE 1 OF =

STANDARD REPORT DELIVERY ○ DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○ DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: None

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX TYPE: COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	REQUIRED ANALYSES: Method 8141A: OP Pesticides										REMARKS
								NUMBER OF CONTAINERS SUBMITTED = 8										
3/2/2010	11:00	IR69-GW02-10A	G	X				X										
3/2/2010	11:00	IR69-GW02-10A-MS	G	X				X										
3/2/2010	11:00	IR69-GW02-10A-SD	G	X				X										
3/2/2010	12:30	IR69-GW02DW-10A	G	X				X										

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3-4-10	1235	[signature]	3/4/10	1235	[signature]	3/5/10	1400
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**
[signature]	3/4/10	1235	[signature]	3/4/10	1235			

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/5/10	0921	YES ○ NO ○		680-55594	

FCU052:01.02.08:2

Data Completeness

The data package was received complete and intact. Resubmissions were not required. (SW846 Method 8260B)

Laboratory: CompuChem

Holding Times

Sampling Date: 2-16, 27-28, 3-3-10
Received Date: 3-04-5-10
Analysis Dates: 3-5-8-10

Cooler Temp: 0.1-1.9°C

All prep and analysis holding time requirements were met.

Calibrations

Mass assignments were verified by the injection of BFB.

The initial and continuing calibrations required qualifications due to high %D values and low RRFs; see attached FormVI and VIIs.

Internal Standards

All criteria met.

Blank Summary

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying criteria.
- Qualification/Action codes where applied as stated in table below:

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Storage, Field, Trip, Instrument	Detects	Not detected	No qualifications
	< CRQL*	< CRQL*	Report CRQL value with a U
		> CRQL*	Use professional judgment
	> CRQL*	< CRQL*	Report CRQL value with a U
		> CRQL* and < blank concentration	Report the concentration for the sample with a U, or qualify the data as unusable R
		> CRQL* and > blank concentration	Use professional judgment
	> CRQL*	< CRQL*	Report CRQL value with a U
		> CRQL*	Use professional judgment
	Gross contamination	Detects	Qualify results as unusable R

*2x the CRQL for methylene chloride, 2-butanone and acetone

Method blank contamination was exhibited- qualifications were required. The associated field QC for this data package was: IR69-TB01-030310 and IR69-TB01-030410- trip blanks; IR69-EB01-022710-GW, IR69-EB01-022810-GW, IR69-EB-030110-GW and IR69-EB01-030210-GW-equipment blanks; IR69-FB01-030310 - field blank.

Blank Contamination and Qualification Summaries

Blank ID	Compound	Concentration	Reporting Limit
VBLKGN	1,2,4-trichlorobenzene	0.076J ug/L	0.5 ug/L
IR69-TB01-030310	acetone	2.4J ug/L	2.5 ug/L
IR69-TB01-030410	acetone	0.71J	2.5
	methylene chloride	0.035J	0.5
	cis-1,2-dichloroethene	0.060J	0.5
IR69-EB01-022710-GW	acetone	6.3	2.5
	methylene chloride	11	0.5
	2-butanone	1.4J	2.5
	chloroform	0.27J	0.5
	benzene	0.18J	0.5
	toluene	2.9	0.5
	ethylbenzene	0.19J	0.5
	m,p-xylene	0.66J	0.5
	o-xylene	0.27J	0.5
	xylene (total)	0.96	0.5
IR69-EB01-022810-GW	acetone	5.2	2.5
	methylene chloride	14	0.5
	chloroform	1.2	0.5
	benzene	0.17J	0.5
	toluene	1.8	0.5
	ethylbenzene	0.16J	0.5
	m,p-xylene	0.54J	0.5
	o-xylene	0.25J	0.5
	xylene (total)	0.82	0.5
IR69-EB01-030110-GW	acetone	5.8	2.5
	methylene chloride	6.5	0.5
	cis-1,2-dichloroethene	0.046J	0.5
	chloroform	1.4	0.5
	benzene	0.093J	0.5
	toluene	0.76	0.5
	chlorobenzene	0.023J	0.5
	ethylbenzene	0.087J	0.5
	m,p-xylene	0.23J	0.5
	o-xylene	0.13J	0.5
	xylene (total)	0.38J	0.5
IR69-EB01-030210-GW	acetone	8	2.5
	methylene chloride	5.8	0.5
	2-butanone	1.8J	2.5
	chloroform	0.34J	0.5

	benzene	0.050J	0.5
	toluene	1.7	0.5
	chlorobenzene	0.18J	0.5
	ethylbenzene	0.054J	0.5
	m,p-xylene	0.2J	0.5
	o-xylene	0.096J	0.5
	xylene (total)	0.21J	0.5
IR69-FB01-030310	acetone	4.1	2.5
	methylene chloride	13	0.5
	chloroform	0.31J	0.5
	toluene	4.1	0.5
	chlorobenzene	0.47J	0.5

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Qual Code
IR69-GW09-10A	1,2,4-trichlorobenzene	U at RL	MBL
IR69-GW02-10A, IR69-GW02DW-10A, IR69-GW11-10A, IR69-GW14IW-10A	acetone	U at RL	TBL
IR69-GW02DW-10A	methylene chloride	U at RL	TBL
IR69-GW02-10A	benzene	U at RL	EBL
IR69-GW02-10A, IR69-GW02DW-10A, IR69-GW09-10A, IR69-GW13-10A	toluene	U at RL	EBL
IR69-GW11-10A	cis-1,2-dichloroethene	U at RL	TBL
IR69-GW14DW-10A	toluene	U	FBL
IR69-GW14-10A	acetone	U	EBL

Surrogates

All criteria were met.

Laboratory Control Sample

No qualifications were required.

Matrix Spike/Spike Duplicate Samples

An MS/MSD was submitted for sample IR69-GW02-10A; low recoveries were exhibited for the MS and MSD for cis-1,2-dichloroethene at 60% and 20% (QC limit 70-125%); therefore results were qualified as estimated (J) in the associated sample.

Field Duplicate Sample

A field duplicate was not submitted for this data package.

Specific Comments:

All sample results were reported within the calibration range of the instruments. Dilutions were required for sample IR69-GW02-10A, IR69-GW02DW-10A and IR69-GW13IW-10A to obtain results within the calibration range.

Detection limits were acceptable. Raw data and calculations were verified.

We have limited the supporting documentation, found with these worksheets, to those forms that indicate qualifications were required.

Validator Signature: L Masciotta **Date:** 7/14/10

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Lab File ID: 0C03007-TUN171 BFB Injection Date: 03/04/10

Instrument ID: 5972HP71 BFB Injection Time: 0207

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	26.9
75	30.0 - 60.0% of mass 95	54.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.2
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	73.7
175	5.0 - 9.0% of mass 174	6.0 (8.2)1
176	95.0 - 101.0% of mass 174	72.7 (98.6)1
177	5.0 - 9.0% of mass 176	4.8 (6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD001	0C03007-CAL	0C03007-CAL271	03/04/10	0250
02	VSTD0.5	0C03007-CAL	0C03007-CAL171	03/04/10	0319
03	VSTD040	0C03007-CAL	0C03007-CAL671	03/04/10	0415
04	VSTD020	0C03007-CAL	0C03007-CAL571	03/04/10	0443
05	VSTD010	0C03007-CAL	0C03007-CAL471	03/04/10	0511
06	VSTD005	0C03007-CAL	0C03007-CAL3R7	03/04/10	0702
07					
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22					

FORM V VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Instrument ID: 5972HP71 Calibration Date(s): 03/04/10 03/04/10

Column: SPB-624 ID: 0.32 (mm) Calibration Time(s): 0250 0702

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2	MAX %RSD OR R^2
Dichlorodifluoromethane	AVRG		0.62169984	4.224	15.000
Chloromethane	AVRG		0.32662219	5.847	15.000
Vinyl Chloride	AVRG		0.30819191	8.323	30.000
Bromomethane	AVRG		0.23597812	3.487	15.000
Chloroethane	AVRG		0.15966091	5.526	15.000
Trichlorofluoromethane	AVRG		0.88932622	4.513	15.000
1,1-Dichloroethene	AVRG		0.26273238	3.326	30.000
Carbon disulfide	AVRG		0.87497307	3.149	15.000
1,1,2-trichloro-1,2,2-triflu	AVRG		0.24451160	5.144	15.000
Acetone	AVRG		0.03927131	6.759	15.000
Methyl acetate	AVRG		0.10516967	8.257	15.000
Methylene Chloride	AVRG		0.23944139	6.700	15.000
trans-1,2-Dichloroethene	AVRG		0.28282314	4.135	15.000
Methyl-tert-butyl ether	AVRG		0.51413834	4.604	15.000
1,1-Dichloroethane	AVRG		0.54722323	3.731	15.000
cis-1,2-Dichloroethene	AVRG		0.28226378	2.984	15.000
2-butanone	AVRG		0.04417753	9.867	15.000
loroform	AVRG		0.68264709	2.377	30.000
,1,1-Trichloroethane	AVRG		0.77105461	3.567	15.000
Carbon Tetrachloride	AVRG		0.66557429	4.738	15.000
Benzene	AVRG		0.87889452	2.036	15.000
1,2-Dichloroethane	AVRG		0.49848827	3.751	15.000
Trichloroethene	AVRG		0.28595877	3.438	15.000
1,2-Dichloropropane	AVRG		0.21146988	7.732	30.000
Bromodichloromethane	AVRG		0.47941991	2.382	15.000
cis-1,3-Dichloropropene	AVRG		0.37541518	1.064	15.000
4-Methyl-2-pentanone	AVRG		0.16236624	2.942	15.000
Toluene	AVRG		0.90996627	2.569	30.000
trans-1,3-Dichloropropene	AVRG		0.53121144	1.405	15.000
1,1,2-Trichloroethane	AVRG		0.22062042	4.279	15.000
Tetrachloroethene	AVRG		0.40580292	3.676	15.000
2-hexanone	AVRG		0.12147678	5.464	15.000
Dibromochloromethane	AVRG		0.35862364	2.425	15.000
1,2-Dibromoethane	AVRG		0.25421669	2.498	15.000
Chlorobenzene	AVRG		0.97170394	3.315	15.000
Ethylbenzene	AVRG		0.53260652	4.380	30.000
m,p-Xylene	AVRG		0.66897466	3.932	15.000
o-Xylene	AVRG		0.63456813	3.176	15.000
Styrene	AVRG		1.02958400	3.311	15.000
Bromoform	AVRG		0.21800649	2.048	15.000
Isopropyl Benzene	AVRG		2.00307067	6.521	15.000
1,1,2,2-Tetrachloroethane	AVRG		0.42820843	2.428	15.000
1,3-Dichlorobenzene	AVRG		1.45300956	5.094	15.000
1,4-Dichlorobenzene	AVRG		1.46423878	3.166	15.000

FORM VI VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Lab File ID: 0C04006-TUN171 BFB Injection Date: 03/04/10

Instrument ID: 5972HP71 BFB Injection Time: 2242

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	28.6
75	30.0 - 60.0% of mass 95	57.9
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	71.4
175	5.0 - 9.0% of mass 174	5.6 (7.8)1
176	95.0 - 101.0% of mass 174	71.3 (99.8)1
177	5.0 - 9.0% of mass 176	4.9 (6.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005	0C04006-CCV	0C04006-CCV171	03/04/10	2309
02	VBLKRM	0030413-BLK	0030413-BLK1R7	03/05/10	0005
03	VRMLCS	0030413-BS1	0030413-BS171	03/05/10	0033
04	VRMLCSD	0030413-BSD	0030413-BSD171	03/05/10	0101
05	IR69-GW12	1003029-01	1003029-0171	03/05/10	0319
06	IR69-GW12DW	1003029-02	1003029-0271	03/05/10	0347
07	IR69-GW14	1003029-03	1003029-0371	03/05/10	0415
08	IR69-GW14IW	1003029-04	1003029-0471	03/05/10	0443
09	IR69-GW14DW	1003029-05	1003029-0571	03/05/10	0510
10	EB01-022710-GW	1003029-06	1003029-0671	03/05/10	0538
11	EB01-022810-GW	1003029-07	1003029-0771	03/05/10	0606
12	EB01-022810-SB	1003029-08	1003029-0871	03/05/10	0634
13	FB01-030310	1003029-09	1003029-0971	03/05/10	0701
14	IR69-TB01-030310	1003029-10	1003029-1071	03/05/10	0729
15	IR69-TB01-030110	1003029-11	1003029-1171	03/05/10	0757
16					
17					
18					
19					
20					
21					
22					

FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Instrument ID: 5972HP71 Calibration Date: 03/04/10 Time: 2309

Lab File ID: 0C04006-CCV171 Init. Calib. Date(s): 03/04/10 03/04/10

Init. Calib. Times: 0250 0702

GC Column: SPB-624 ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF5 or AMOUNT	CCAL RRF5	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dichlorodifluoromethane	0.6257000	0.7141806	0.7141806	0.001	14.14	90.00	AVRG
Chloromethane	0.3335500	0.3577625	0.3577625	0.1	7.26	90.00	AVRG
Vinyl Chloride	0.3147200	0.3299050	0.3299050	0.001	4.82	20.00	AVRG
Bromomethane	0.2358300	0.2348612	0.2348612	0.001	-0.41	90.00	AVRG
Chloroethane	0.1621700	0.1732267	0.1732267	0.001	6.82	90.00	AVRG
Trichlorofluoromethane	0.8952100	1.0122106	1.0122106	0.001	13.07	90.00	AVRG
1,1-Dichloroethene	0.2655900	0.2664160	0.2664160	0.001	0.31	20.00	AVRG
Carbon disulfide	0.8832200	0.8971110	0.8971110	0.001	1.57	90.00	AVRG
1,1,2-trichloro-1,2,2-triflu	0.2456800	0.2704256	0.2704256	0.001	10.07	90.00	AVRG
Acetone	0.0397100	0.0398665	0.0398665	0.001	0.39	90.00	AVRG
Methyl acetate	0.1060000	0.1120786	0.1120786	0.001	5.73	90.00	AVRG
Methylene Chloride	0.2435400	0.2449841	0.2449841	0.001	0.59	90.00	AVRG
trans-1,2-Dichloroethene	0.2862700	0.2903034	0.2903034	0.001	1.41	90.00	AVRG
Methyl-tert-butyl ether	0.5156300	0.5561144	0.5561144	0.001	7.85	90.00	AVRG
1-Dichloroethane	0.5543200	0.5724256	0.5724256	0.1	3.27	90.00	AVRG
s-1,2-Dichloroethene	0.2853900	0.2900899	0.2900899	0.001	1.65	90.00	AVRG
2-butanone	0.0443400	0.0463720	0.0463720	0.001	4.58	90.00	AVRG
Chloroform	0.6850900	0.7526711	0.7526711	0.001	9.86	20.00	AVRG
1,1,1-Trichloroethane	0.7715900	0.8611750	0.8611750	0.001	11.61	90.00	AVRG
Carbon Tetrachloride	0.6651300	0.7427855	0.7427855	0.001	11.68	90.00	AVRG
Benzene	0.8843900	0.9190175	0.9190175	0.001	3.92	90.00	AVRG
1,2-Dichloroethane	0.4988600	0.5705711	0.5705711	0.001	14.37	90.00	AVRG
Trichloroethene	0.2864700	0.2893465	0.2893465	0.001	1.00	90.00	AVRG
1,2-Dichloropropane	0.2157800	0.2254146	0.2254146	0.001	4.46	20.00	AVRG
Bromodichloromethane	0.4783900	0.5338403	0.5338403	0.001	11.59	90.00	AVRG
cis-1,3-Dichloropropene	0.3740300	0.3986809	0.3986809	0.001	6.59	90.00	AVRG
4-Methyl-2-pentanone	0.1615300	0.1652284	0.1652284	0.001	2.29	90.00	AVRG
Toluene	0.9177900	0.8623617	0.8623617	0.001	-6.04	20.00	AVRG
trans-1,3-Dichloropropene	0.5308900	0.5554637	0.5554637	0.001	4.63	90.00	AVRG
1,1,2-Trichloroethane	0.2215500	0.2222883	0.2222883	0.001	0.33	90.00	AVRG
Tetrachloroethene	0.4085500	0.3802900	0.3802900	0.001	6.92	90.00	AVRG
2-hexanone	0.1214700	0.1235598	0.1235598	0.001	1.72	90.00	AVRG
Dibromochloromethane	0.3675000	0.3765944	0.3765944	0.001	2.47	90.00	AVRG
1,2-Dibromoethane	0.2532000	0.2578323	0.2578323	0.001	1.83	90.00	AVRG
Chlorobenzene	0.9805400	0.9659181	0.9659181	0.3	-1.49	90.00	AVRG
Ethylbenzene	0.5362900	0.5199903	0.5199903	0.001	-3.04	20.00	AVRG
m,p-Xylene	0.6729300	0.6616140	0.6616140	0.001	1.68	90.00	AVRG
o-Xylene	0.6391800	0.6330856	0.6330856	0.001	-0.95	90.00	AVRG
Styrene	1.0336600	1.0078499	1.0078499	0.001	-2.50	90.00	AVRG
Bromoform	0.2165400	0.2262965	0.2262965	0.1	4.50	90.00	AVRG
Isopropyl Benzene	1.9996200	2.0009075	2.0009075	0.001	0.06	90.00	AVRG
1,1,2,2-Tetrachloroethane	0.4302100	0.4425539	0.4425539	0.3	2.87	90.00	AVRG

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Lab File ID: 0C05011-TUN171 BFB Injection Date: 03/05/10

Instrument ID: 5972HP71 BFB Injection Time: 2201

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	27.8
75	30.0 - 60.0% of mass 95	57.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.3
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	71.0
175	5.0 - 9.0% of mass 174	5.5 (7.7)1
176	95.0 - 101.0% of mass 174	70.1 (98.7)1
177	5.0 - 9.0% of mass 176	4.7 (6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005	0C05011-CCV	0C05011-CCV171	03/05/10	2219
02	VBLKRO	0030526-BLK	0030526-BLK171	03/05/10	2247
03	VROLCS	0030526-BS1	0030526-BS171	03/05/10	2314
04	IR69-GW02	1003029-12	1003029-1271	03/05/10	2342
05	IR69-GW02MS	0030526-MS2	0030526-MS271	03/06/10	0010
06	IR69-GW02MSD	0030526-MSD	0030526-MSD271	03/06/10	0038
07	IR69-TB01-030410	1003029-20	1003029-2071	03/06/10	0105
08	IR69-GW02DW	1003029-13	1003029-1371	03/06/10	0133
09	IR69-GW11	1003029-15	1003029-1571	03/06/10	0229
10	IR69-GW13	1003029-16	1003029-1671	03/06/10	0256
11	IR69-GW13IW	1003029-17	1003029-1771	03/06/10	0324
12	EB01-030110-GW	1003029-18	1003029-1871	03/06/10	0352
13	EB01-030210-GW	1003029-19	1003029-1971	03/06/10	0420
14					
15					
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22					

FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Instrument ID: 5972HP71 Calibration Date: 03/05/10 Time: 2219

Lab File ID: 0C05011-CCV171 Init. Calib. Date(s): 03/04/10 03/04/10

Init. Calib. Times: 0250 0702

GC Column: SPB-624 ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF5 or AMOUNT	CCAL RRF5	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dichlorodifluoromethane	0.6257000	0.8394812	0.8394812	0.001	34.17	90.00	AVRG
Chloromethane	0.3335500	0.3956924	0.3956924	0.1	18.63	90.00	AVRG
Vinyl Chloride	0.3147200	0.3640068	0.3640068	0.001	15.66	20.00	AVRG
Bromomethane	0.2358300	0.2678698	0.2678698	0.001	13.58	90.00	AVRG
Chloroethane	0.1621700	0.1878839	0.1878839	0.001	15.86	90.00	AVRG
Trichlorofluoromethane	0.8952100	1.1890985	1.1890985	0.001	32.83	90.00	AVRG
1,1-Dichloroethene	0.2655900	0.2920315	0.2920315	0.001	9.96	20.00	AVRG
Carbon disulfide	0.8832200	1.0020212	1.0020212	0.001	13.45	90.00	AVRG
1,1,2-trichloro-1,2,2-triflu	0.2456800	0.3193317	0.3193317	0.001	29.98	90.00	AVRG
Acetone	0.0397100	0.0401886	0.0401886	0.001	1.20	90.00	AVRG
Methyl acetate	0.1060000	0.1135305	0.1135305	0.001	7.10	90.00	AVRG
Methylene Chloride	0.2435400	0.2651161	0.2651161	0.001	8.86	90.00	AVRG
trans-1,2-Dichloroethene	0.2862700	0.3214920	0.3214920	0.001	12.30	90.00	AVRG
thyl-tert-butyl ether	0.5156300	0.5082262	0.5082262	0.001	-1.44	90.00	AVRG
1-Dichloroethane	0.5543200	0.6221415	0.6221415	0.1	12.24	90.00	AVRG
cis-1,2-Dichloroethene	0.2853900	0.3108760	0.3108760	0.001	8.93	90.00	AVRG
2-butanone	0.0443400	0.0405706	0.0405706	0.001	-8.50	90.00	AVRG
Chloroform	0.6850900	0.8195148	0.8195148	0.001	19.62	20.00	AVRG
1,1,1-Trichloroethane	0.7715900	0.9573832	0.9573832	0.001	24.08	90.00	AVRG
Carbon Tetrachloride	0.6651300	0.8439732	0.8439732	0.001	26.89	90.00	AVRG
Benzene	0.8843900	1.0012841	1.0012841	0.001	13.22	90.00	AVRG
1,2-Dichloroethane	0.4988600	0.5991248	0.5991248	0.001	20.10	90.00	AVRG
Trichloroethene	0.2864700	0.3140608	0.3140608	0.001	9.63	90.00	AVRG
1,2-Dichloropropane	0.2157800	0.2287762	0.2287762	0.001	6.02	20.00	AVRG
Bromodichloromethane	0.4783900	0.5779856	0.5779856	0.001	20.82	90.00	AVRG
cis-1,3-Dichloropropene	0.3740300	0.3971202	0.3971202	0.001	6.17	90.00	AVRG
4-Methyl-2-pentanone	0.1615300	0.1607322	0.1607322	0.001	-0.49	90.00	AVRG
Toluene	0.9177900	0.9682241	0.9682241	0.001	5.50	20.00	AVRG
trans-1,3-Dichloropropene	0.5308900	0.5861074	0.5861074	0.001	10.40	90.00	AVRG
1,1,2-Trichloroethane	0.2215500	0.2420776	0.2420776	0.001	9.26	90.00	AVRG
Tetrachloroethene	0.4085500	0.4185427	0.4185427	0.001	2.44	90.00	AVRG
2-hexanone	0.1214700	0.1184074	0.1184074	0.001	-2.52	90.00	AVRG
Dibromochloromethane	0.3675000	0.4037250	0.4037250	0.001	9.86	90.00	AVRG
1,2-Dibromoethane	0.2532000	0.2714976	0.2714976	0.001	7.23	90.00	AVRG
Chlorobenzene	0.9805400	1.0560230	1.0560230	0.3	7.70	90.00	AVRG
Ethylbenzene	0.5362900	0.5887585	0.5887585	0.001	9.78	20.00	AVRG
m,p-Xylene	0.6729300	0.7527064	0.7527064	0.001	11.86	90.00	AVRG
o-Xylene	0.6391800	0.7049318	0.7049318	0.001	10.29	90.00	AVRG
Styrene	1.0336600	1.1147525	1.1147525	0.001	7.84	90.00	AVRG
Bromoform	0.2165400	0.2262880	0.2262880	0.1	4.50	90.00	AVRG
Isopropyl Benzene	1.9996200	2.2702121	2.2702121	0.001	13.53	90.00	AVRG
1,1,2,2-Tetrachloroethane	0.4302100	0.4392751	0.4392751	0.3	2.11	90.00	AVRG

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Lab File ID: 0C08004-TUN171 BFB Injection Date: 03/08/10

Instrument ID: 5972HP71 BFB Injection Time: 1118

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	27.7
75	30.0 - 60.0% of mass 95	59.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	80.3
175	5.0 - 9.0% of mass 174	6.3 (7.9)1
176	95.0 - 101.0% of mass 174	79.0 (98.4)1
177	5.0 - 9.0% of mass 176	5.2 (6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005	0C08004-CCV	0C08004-CCV1R7	03/08/10	1224
02	VBLKGN	0030805-BLK	0030805-BLK171	03/08/10	1303
03	VGNLCS	0030805-BS1	0030805-BS1R71	03/08/10	1443
04	IR69-GW09	1003029-14	1003029-14R71	03/08/10	1534
05	IR69-GW02DL	1003029-12R	1003029-12D71	03/08/10	1657
06	IR69-GW13IWDL	1003029-17R	1003029-17D71	03/08/10	1725
07	IR69-GW02DWDL	1003029-13R	1003029-13D271	03/08/10	1840
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FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Instrument ID: 5972HP71 Calibration Date: 03/08/10 Time: 1224

Lab File ID: 0C08004-CCV1R7 Init. Calib. Date(s): 03/04/10 03/04/10

Init. Calib. Times: 0250 0702

GC Column: SPB-624 ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF5 or AMOUNT	CCAL RRF5	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dichlorodifluoromethane	0.6257000	0.5939554	0.5939554	0.001	-5.07	90.00	AVRG
Chloromethane	0.3335500	0.3031687	0.3031687	0.1	-9.11	90.00	AVRG
Vinyl Chloride	0.3147200	0.2766464	0.2766464	0.001	12.10	20.00	AVRG
Bromomethane	0.2358300	0.1468590	0.1468590	0.001	-37.73	90.00	AVRG
Chloroethane	0.1621700	0.1731052	0.1731052	0.001	6.74	90.00	AVRG
Trichlorofluoromethane	0.8952100	0.8724164	0.8724164	0.001	-2.55	90.00	AVRG
1,1-Dichloroethene	0.2655900	0.2743862	0.2743862	0.001	3.31	20.00	AVRG
Carbon disulfide	0.8832200	0.8988586	0.8988586	0.001	1.77	90.00	AVRG
1,1,2-trichloro-1,2,2-triflu	0.2456800	0.2365777	0.2365777	0.001	-3.70	90.00	AVRG
Acetone	0.0397100	0.0179200	0.0179200	0.001	-54.80	90.00	AVRG
Methyl acetate	0.1060000	0.0770871	0.0770871	0.001	-27.28	90.00	AVRG
Methylene Chloride	0.2435400	0.2520367	0.2520367	0.001	3.49	90.00	AVRG
trans-1,2-Dichloroethene	0.2862700	0.3114343	0.3114343	0.001	8.79	90.00	AVRG
thyl-tert-butyl ether	0.5156300	0.5225292	0.5225292	0.001	1.34	90.00	AVRG
1-Dichloroethane	0.5543200	0.5675370	0.5675370	0.1	2.38	90.00	AVRG
cis-1,2-Dichloroethene	0.2853900	0.3168695	0.3168695	0.001	11.03	90.00	AVRG
2-butanone	0.0443400	0.0218285	0.0218285	0.001	-50.70	90.00	AVRG
Chloroform	0.6850900	0.7200925	0.7200925	0.001	5.11	20.00	AVRG
1,1,1-Trichloroethane	0.7715900	0.7749074	0.7749074	0.001	0.43	90.00	AVRG
Carbon Tetrachloride	0.6651300	0.6659341	0.6659341	0.001	0.12	90.00	AVRG
Benzene	0.8843900	0.9493105	0.9493105	0.001	7.34	90.00	AVRG
1,2-Dichloroethane	0.4988600	0.5186503	0.5186503	0.001	3.97	90.00	AVRG
Trichloroethene	0.2864700	0.3169675	0.3169675	0.001	10.64	90.00	AVRG
1,2-Dichloropropane	0.2157800	0.2237323	0.2237323	0.001	3.68	20.00	AVRG
Bromodichloromethane	0.4783900	0.5038952	0.5038952	0.001	5.33	90.00	AVRG
cis-1,3-Dichloropropene	0.3740300	0.4140370	0.4140370	0.001	10.70	90.00	AVRG
4-Methyl-2-pentanone	0.1615300	0.0762973	0.0762973	0.001	-52.76	90.00	AVRG
Toluene	0.9177900	0.9389581	0.9389581	0.001	2.31	20.00	AVRG
trans-1,3-Dichloropropene	0.5308900	0.5528848	0.5528848	0.001	4.14	90.00	AVRG
1,1,2-Trichloroethane	0.2215500	0.2270088	0.2270088	0.001	2.46	90.00	AVRG
Tetrachloroethene	0.4085500	0.4160992	0.4160992	0.001	1.85	90.00	AVRG
2-hexanone	0.1214700	0.0562531	0.0562531	0.001	-53.69	90.00	AVRG
Dibromochloromethane	0.3675000	0.3854833	0.3854833	0.001	4.89	90.00	AVRG
1,2-Dibromoethane	0.2532000	0.2604252	0.2604252	0.001	2.85	90.00	AVRG
Chlorobenzene	0.9805400	1.0324264	1.0324264	0.3	5.29	90.00	AVRG
Ethylbenzene	0.5362900	0.5672956	0.5672956	0.001	5.78	20.00	AVRG
m,p-Xylene	0.6729300	0.6992419	0.6992419	0.001	3.91	90.00	AVRG
o-Xylene	0.6391800	0.6471168	0.6471168	0.001	1.24	90.00	AVRG
Styrene	1.0336600	1.0597204	1.0597204	0.001	2.52	90.00	AVRG
Bromoform	0.2165400	0.2304963	0.2304963	0.1	6.44	90.00	AVRG
Isopropyl Benzene	1.9996200	1.9920955	1.9920955	0.001	-0.38	90.00	AVRG
1,1,2,2-Tetrachloroethane	0.4302100	0.4351773	0.4351773	0.3	1.15	90.00	AVRG

FORM 3
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix Spike - Sample No.: IR69-GW02

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Dichlorodifluoromethane	5	0.0	5.979	120	30-155
Chloromethane	5	0.0	5.164	103	40-125
Vinyl Chloride	5	19.69	22.63	59	50-145
Bromomethane	5	0.0	4.367	87	60-135
Chloroethane	5	0.0	13.9	278*	50-150
Trichlorofluoromethane	5	0.0	6.288	126	60-145
1,1-Dichloroethene	5	0.2088	5.613	108	70-130
Carbon disulfide	5	0.04126	5.71	113	35-160
1,1,2-trichloro-1,2,2-t	5	0.0	6.485	130	78-150
Acetone	25	2.021	25.84	95	40-140
Methyl acetate	5	0.0	5.837	117	50-150
Methylene Chloride	5	0.0	5.327	107	55-140
trans-1,2-Dichloroethen	5	23	28	100	60-140
Methyl-tert-butyl ether	5	0.0	4.856	97	65-125
1,1-Dichloroethane	5	0.0	5.521	110	70-135
cis-1,2-Dichloroethene	5	96	99	60*	70-125 JNJ
2-butanone	25	0.0	23.52	94	30-150
Chloroform	5	0.0	5.982	120	65-135
1,1,1-Trichloroethane	5	0.0	6.232	125	65-130
Carbon Tetrachloride	5	0.0	6.409	128	65-140
Benzene	5	0.04302	5.515	109	80-120
1,2-Dichloroethane	5	1.685	7.489	116	70-130
Trichloroethene	5	2.25	7.697	109	70-125
1,2-Dichloropropane	5	0.0	5.562	111	75-130
Bromodichloromethane	5	0.0	5.814	116	75-120
cis-1,3-Dichloropropene	5	0.0	5.461	109	70-130
4-Methyl-2-pentanone	25	0.0	24.38	98	60-135
Toluene	5	0.2752	5.445	103	75-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

FORM 3
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix Spike - Sample No.: IR69-GW02

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Dichlorodifluoromethane	5	6.218	124	4	30	30-155
Chloromethane	5	5.471	109	6	30	40-125
Vinyl Chloride	5	24.34	93	7	30	50-145
Bromomethane	5	4.105	82	6	30	60-135
Chloroethane	5	17.82	356*	25	30	50-150
Trichlorofluoromethane	5	6.41	128	2	30	60-145
1,1-Dichloroethene	5	5.799	112	3	30	70-130
Carbon disulfide	5	5.872	117	3	30	35-160
1,1,2-trichloro-1,2,2-t	5	6.593	132	2	30	78-150
Acetone	25	24.56	90	5	30	40-140
Methyl acetate	5	5.253	105	11	30	50-150
Methylene Chloride	5	5.294	106	1	30	55-140
trans-1,2-Dichloroethen	5	28	100	0	30	60-140
Methyl-tert-butyl ether	5	4.705	94	3	30	65-125
1,1-Dichloroethane	5	5.502	110	0	30	70-135
cis-1,2-Dichloroethene	5	97	20*	2	30	70-125
2-butanone	25	22.41	90	5	30	30-150
Chloroform	5	5.878	118	2	30	65-135
1,1,1-Trichloroethane	5	6.245	125	0	30	65-130
Carbon Tetrachloride	5	6.446	129	1	30	65-140
Benzene	5	5.564	110	1	30	80-120
1,2-Dichloroethane	5	7.23	111	4	30	70-130
Trichloroethene	5	7.781	111	1	30	70-125
1,2-Dichloropropane	5	5.311	106	5	30	75-130
Bromodichloromethane	5	5.692	114	2	30	75-120
cis-1,3-Dichloropropene	5	5.299	106	3	30	70-130
4-Methyl-2-pentanone	25	23.1	92	5	30	60-135
Toluene	5	5.59	106	3	30	75-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKGN

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Lab File ID: 0030805-BLK171_T Lab Sample ID: 0030805-BLK1

Date Analyzed: 03/08/10 Time Analyzed: 1303

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

Instrument ID: 5972HP71

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VGNLCS	0030805-BS1	0030805-BS1R	1443
02	IR69-GW09	1003029-14	1003029-14R7	1534
03	IR69-GW02DL	1003029-12RE1	1003029-12D7	1657
04	IR69-GW13IWDL	1003029-17RE1	1003029-17D7	1725
05	IR69-GW02DWDL	1003029-13RE1	1003029-13D2	1840
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COMMENTS:

acetone 1.0J ug/L
MC 0.074J
1,2,4-trichlorobenzene 0.076J

FORM IV VOA

Initial Calibration Date: 3-4-2010

RRF and %RSD Calculations:

Compound Name: vinyl chloride
Lab Value: 0.2755

Area of Compound	710664
Area of Internal STD	322403
Conc. of Internal STD	125
Conc. of Compound	1000
Calculated RRF	0.2755

Compound Name: styrene
Lab Value: 3.31

RRF of STD 1	0.9961
RRF of STD 2	1.0003
RRF of STD 3	1.0480
RRF of STD 4	1.0841
RRF of STD 5	1.0398
RRF of STD 6	1.0092
Calculated % RSD	3.31

Continuing Calibration File ID: 3-5/2010

RRF and %D Calculations:

Compound Name: methylene chloride
Lab Value: 0.265

Area of Compound	57189
Area of Internal STD	215713
Conc. of Internal STD	125
Conc. of Compound	125
Calculated RRF	0.265

Compound Name: toluene
Lab Value: 5.5

Average RRF	0.918
Calibration Check RRF	0.968
Calculated % D	-5.5

SAMPLE CALCULATION

Sample ID: IR69-EB01-022810-GW
Standard ID: 3/4/2010
Compound: acetone
Concnetration: 5.2 ug/L

	Water (ug/L)	Soil (ug/Kg)	Soil ug/Kg)
Area of Compound	7775		
Area of Internal STD	187308		
Conc. of Internal (ng)	125	250	
RRF of Compound	0.03971		
Dilution Factor	1	1	
Weight of Sample	NA	4.79	
Volume of Sample	25	NA	
% Moisture	NA	0.24	
Aliquot of sample	NA	NA	
Concentration	5.23	#DIV/0!	#DIV/0!

	RT of Internal STD	RT of Compound	RRT
Sample	11.078	7.699	0.695
Standard	11.074	7.695	0.695

CompuChem

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Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1003029
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS:

IR69-GW14	**IR69-GW14IW**	**IR69-GW12**	**IR69-GW12DW**
EB01-022810-GW	**EB01-022810-SB**	**IR69-GW14DW**	**EB01-022710-GW**
IR69-TN01-030110	**IR69-GW02**	**FB-030310**	**IR69-TB01-030310**
IR69-GW11	**IR69-GW13**	**IR69-GW02DW**	**IR69-GW09**
EB01-030210-GW	**IR69-TB01-030410**	**IR69-GW13IW**	**EB01-030110-GW**

The 20 aqueous samples listed above were received intact, properly refrigerated between 0.1°C and 1.9°C, with proper documentation, in sealed shipping containers, on March 4 through 5, 2010. The samples were scheduled for the requested analyses of the volatile, semivolatile, RSK and pesticide fractions. SW-846, 3rd Edition, Update 3, Method 8260B was used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices for SDG 1003029 are included in the sample data sections.

Analysis holding time requirements were met for all of these samples. The pH values of the samples were equal to 1. There were volatile Project/Target Compound List (TCL) analytes identified above the Contract Required Quantitation Limit (CRQL) in twelve of these twenty samples. All of the system monitoring compounds met recovery criteria in the analyses of the sample. All of the internal standards met response and retention time criteria in the analyses of the sample.

In the initial analyses of samples IR69-GW02, IR69-GW02DW and IR69-GW13IW, the on-column amounts of some target compounds exceeded the instrument's analytical range as defined by the highest concentration level of the Initial Calibration. The samples were reanalyzed using smaller aliquots of raw sample to bring the on-column amounts into range. We have reported both analyses of samples IR69-GW02, IR69-GW02DW and IR69-GW13IW.

All Bromofluorobenzene (BFB) abundance criteria were met for tunes associated to this SDG. All QC criteria were met for all initial and continuing calibration standards associated to this SDG. Manual integrations were performed on one or more of the process files associated with this SDG including, 0C03007-CAL171. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG. The associated method blanks met all quality control criteria. The associated Laboratory Control Samples (LCS/LCSD) met all accuracy criteria. However, VROLCS was bias high for bromodichloromethane. IR69-GW02 was used as the original to prepare the duplicate matrix spikes as requested. The associated duplicate matrix spikes met most of the advisory accuracy and precision criteria.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Data Completeness

The data package was received complete and intact. Resubmissions were not required. (SW846 Method 8270C)

Laboratory: CompuChem

Holding Times

Sampling Date: 2-16, 27-28, 3-3-10
Received Date: 3-04-5-10
Extraction Date: 3-0508, 31-10
Analysis Dates: 3-19-24, 04-1-2-10
Cooler Temp: 0.1-1.9°C

All prep and analysis holding time requirements were met with the exception of the re-analysis of the SIM analysis of samples IR69-EB01-030110-GW, IR69-EB01-030-210-GW, IR69-GW02-02-10A, IR69-GW09-10A, IR69-GW13-10A, IR69-GW13IW-10A and IR69-GW11-10A – however these samples were not used in favor of the initial analysis.

Calibrations

Mass assignments were verified by the injection of DFTPP.
The continuing calibrations required qualifications due to high %D values; see attached Form VIIs.

Internal Standards

All criteria met.

Blank Summary
Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying criteria.
- Qualification Action codes where applied as stated in table below:

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Field	Detects	Not detected	No qualifications
	< CRQL*	< CRQL*	Report CRQL value with a U
		> CRQL*	Use professional judgment
	> CRQL*	< CRQL*	Report CRQL value with a U
		> CRQL* and < blank concentration	Report the concentration for the sample with a U, or qualify the data as unusable R
		> CRQL* and ∃ blank concentration	Use professional judgment
	≈ CRQL*	< CRQL*	Report CRQL value with a U
		> CRQL*	Use professional judgment
	Gross contamination	Detects	Qualify results as unusable R

*5x the CRQL for bis(2-ethylhexyl)phthalate

Method blank contamination was exhibited- qualifications were required. The associated field QC for this data package was: IR69-FB01-022710-GW (no positive results), IR69-EB01-022810-GW, IR69-FB01-030110-GW (no positive results), IR69-EB01-030210-equipment blanks; IR69-FB01-030310 - field blank.

Blank Contamination and Qualification Summaries

Blank ID	Compound	Concentration	Reporting Limit
VBLKGN-SIM	pyrene	0.02J ug/L	0.2 ug/L
IR69-EB01-022810-GW-SIM	naphthalene	0.035J	0.21
IR69-FB01-030210-GW-SIM	naphthalene	0.049J	0.22
	acenaphthylene	0.014J	0.22
	fluoranthene	0.014J	0.22
	pyrene	0.018J	0.22
IR69-FB01-030310	bis(2-ethylhexyl)phthalate	6.5	5.0
	di-n-octylphthalate	1.8J	5.0

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Qual Code
IR69-GW12-10A	fluoranthene	U at RL	EBL
IR69-GW12-10A	pyrene	U at RL	EBL

Surrogates

All criteria were met.

Laboratory Control Sample

No qualifications were required; one LCS was not spiked- however a MS/MSD was within the batch of samples associated and all recoveries were within criteria. All samples were re-extracted out of holding time and therefore were not used.

Matrix Spike/Spike Duplicate Samples

An MS/MSD was submitted for sample IR69-GW02-10A; all criteria were met.

Field Duplicate Sample

A field duplicate was not submitted for this data package.

Specific Comments:

All sample results were reported within the calibration range of the instruments.
Detection limits were acceptable. Raw data and calculations were verified.
We have limited the supporting documentation, found with these worksheets, to those forms that indicate qualifications were required.

Validator Signature: L Mascenoff **Date:** 7/9/10

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Lab File ID: 0C20001-TUN1A70 DFTPP Injection Date: 03/20/10

Instrument ID: 5972HP70 DFTPP Injection Time: 1002

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	37.4
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	46.9
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 75.0% of mass 198	44.8
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.3
275	10.0 - 30.0% of mass 198	23.3
365	Greater than 0.75% of mass 198	3.56
441	Present, but less than mass 443	11.1
442	40.0 - 110.0% of mass 198	82.2
443	15.0 - 24.0% of mass 442	17.0 (20.7)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050MZ	0C20001-CCV1	0C20001-CCV1A7	03/20/10	1027
02	EB01-022810-SB	1003029-08	1003029-08JA70	03/20/10	1126
03	EB01-022710-GW	1003029-06	1003029-06JA70	03/20/10	1216
04	SBLKLP	0030601-BLK1	0030601-BLKA70	03/20/10	1306
05	SLPLCS	0030601-BS1	0030601-BS1A70	03/20/10	1356
06	IR69-GW02	1003029-12	1003029-12A70	03/20/10	1446
07	IR69-GW02MS	0030601-MS1	0030601-MS1A70	03/20/10	1535
08	IR69-GW02MSD	0030601-MSD1	0030601-MSDA70	03/20/10	1626
09	IR69-GW02DW	1003029-13	1003029-13A70	03/20/10	1716
10	IR69-GW09	1003029-14	1003029-14A70	03/20/10	1806
11	IR69-GW11	1003029-15	1003029-15A70	03/20/10	1857
12	IR69-GW13	1003029-16	1003029-16A70	03/20/10	1947
13	IR69-GW13IW	1003029-17	1003029-17A70	03/20/10	2037
14	EB01-030110-GW	1003029-18	1003029-18A70	03/20/10	2127
15					
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Instrument ID: 5972HP70 Calibration Date: 03/20/10 Time: 1027

Lab File ID: 0C20001-CCV1A7 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1501 1820

GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzaldehyde	0.8340000	0.8883903	0.01	6.52	50.00	AVRG
Phenol	1.3110000	1.4123804	0.01	7.73	20.00	AVRG
Bis(2-chloroethyl)ether	1.0880000	1.1326373	0.01	4.10	50.00	AVRG
2-Chlorophenol	1.0800000	1.1658934	0.01	7.95	50.00	AVRG
2-Methylphenol	0.9860000	1.0911187	0.01	10.66	50.00	AVRG
2,2'-oxybis(1-Chloropropane)	1.7770000	1.9365401	0.01	8.98	50.00	AVRG
Acetophenone	1.6440000	1.9356593	0.01	17.74	50.00	AVRG
4-Methylphenol	1.0780000	1.2133814	0.01	12.56	50.00	AVRG
N-Nitroso-di-N-propylamine	0.9210000	1.0734498	0.05	16.55	50.00	AVRG
Hexachloroethane	0.6820000	0.7695799	0.01	12.84	50.00	AVRG
Nitrobenzene	0.3740000	0.3857404	0.01	3.14	50.00	AVRG
Isophorone	0.6830000	0.7313425	0.01	7.08	50.00	AVRG
2-Nitrophenol	0.1880000	0.2020153	0.01	7.45	20.00	AVRG
2,4-Dimethylphenol	0.2260000	0.2361583	0.01	4.49	50.00	AVRG
Bis(2-chloroethoxy)methane	0.3960000	0.4411760	0.01	11.41	50.00	AVRG
2,4-Dichlorophenol	0.2560000	0.2768907	0.01	8.16	20.00	AVRG
Naphthalene	0.8750000	0.9456163	0.01	8.07	50.00	AVRG
4-Chloroaniline	0.3490000	0.3949488	0.01	13.16	50.00	AVRG
Hexachlorobutadiene	0.1980000	0.2241386	0.01	13.20	20.00	AVRG
Caprolactam	0.0620000	0.0850432	0.01	37.17	50.00	AVRG J/UJ
4-Chloro-3-methylphenol	0.2970000	0.3371683	0.01	13.52	20.00	AVRG
2-Methylnaphthalene	0.5320000	0.5897379	0.01	10.85	50.00	AVRG
Hexachlorocyclopentadiene	0.4430000	0.4468888	0.05	0.88	50.00	AVRG
2,4,6-Trichlorophenol	0.3660000	0.3878650	0.01	5.97	20.00	AVRG
2,4,5-Trichlorophenol	0.3820000	0.4520619	0.01	18.34	50.00	AVRG
1,1'-Biphenyl	1.2390000	1.3274964	0.01	7.14	50.00	AVRG
2-Chloronaphthalene	1.0350000	1.0993537	0.01	6.22	50.00	AVRG
2-Nitroaniline	0.4070000	0.4652772	0.01	14.32	50.00	AVRG
Dimethylphthalate	1.3010000	1.4219623	0.01	9.30	50.00	AVRG
2,6-Dinitrotoluene	0.3140000	0.3535100	0.01	12.58	50.00	AVRG
Acenaphthylene	1.6650000	1.8238135	0.01	9.54	50.00	AVRG
3-Nitroaniline	0.3570000	0.4074299	0.01	14.13	50.00	AVRG
Acenaphthene	0.9400000	1.0271807	0.01	9.27	20.00	AVRG
2,4-Dinitrophenol	0.2350000	0.2618637	0.05	11.43	50.00	AVRG
4-Nitrophenol	0.2320000	0.2644333	0.05	13.98	50.00	AVRG
2,4-Dinitrotoluene	0.4310000	0.4812334	0.01	11.66	50.00	AVRG
Dibenzofuran	1.4690000	1.6229780	0.01	10.48	50.00	AVRG
Diethylphthalate	1.4290000	1.6030788	0.01	12.18	50.00	AVRG
4-Chlorophenyl-phenylether	0.5720000	0.6238270	0.01	9.06	50.00	AVRG
Fluorene	1.1560000	1.2847359	0.01	11.14	50.00	AVRG
4-Nitroaniline	0.3390000	0.4053022	0.01	19.56	50.00	AVRG
4,6-Dinitro-2-methylphenol	0.1760000	0.2001049	0.01	13.70	50.00	AVRG

FORM VII SV

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO

SBLKLP

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Lab File ID: 0030601-BLK1C60 Lab Sample ID: 0030601-BLK1

Instrument ID: 5972HP60 Date Extracted: 03/08/10

Matrix: (soil/water) WATER Date Analyzed: 03/24/10

Level:(low/med) LOW Time Analyzed: 0812

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	SLQLCS	0030601-BS2	0030601-BS2C	03/24/10
02	IR69-GW02MS	0030601-MS2	0030601-MS2C	03/24/10
03	IR69-GW02MSD	0030601-MSD2	0030601-MSD2	03/24/10
04	IR69-GW02	1003029-12	1003029-12C6	03/24/10
05	IR69-GW02DW	1003029-13	1003029-13C6	03/24/10
06	IR69-GW09	1003029-14	1003029-14C6	03/24/10
07	IR69-GW11	1003029-15	1003029-15C6	03/24/10
08	IR69-GW13	1003029-16	1003029-16A6	03/24/10
09	IR69-GW13IW	1003029-17	1003029-17A6	03/24/10
10	EB01-030110-GW	1003029-18	1003029-18A6	03/24/10
11	EB01-030210-GW	1003029-19	1003029-19A6	03/24/10
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COMMENTS: Pyrene 0.010 J ug/L (0.20)

page 1 of 1

FORM IV SV

No qual

SAMPLE CALCULATION

Sample ID: IR69-FB01-030310
Standard ID: 3/19/2010
Compound: BIS(2-ETHYLHEXYL)PHTHALATE
Concnetration: 6 5ug/L

	Water (ug/L)	Soil (ug/Kg)
Area of Compound	414379	
Area of Internal STD	1532627	
Conc. of Internal (ng)	40	2
RRF of Compound	0.834	
Final Volume	1000	1000
Dilution Factor	1	1
GPC Factor	NA	1
Injection Volume	2	1
Weight of Sample	NA	
Initial Volume of Sample	1000	
% Moisture	NA	
Concentration	6.48	#DIV/0!

	RT of Internal STD	RT of Compound	RRT
Sample	30.188	30.796	1.02
Standard	30.203	30 812	1.020

Initial Calibration Date: 3/16/2010

RRF and %RSD Calculations:

Compound Name: phenol
Lab Value: 1.426

Area of Compound	301398
Area of Internal STD	422640
Conc. of Internal STD	40
Conc. of Compound	20
Calculated RRF	1.426

Compound Name: 2-methylphenol
Lab Value: 11.1

RRF of STD 1	1.055
RRF of STD 2	1.049
RRF of STD 3	0.906
RRF of STD 4	1.084
RRF of STD 5	0.834
Calculated % RSD	11.10

Continuing Calibration File ID: 3/19/2010

RRF and %D Calculations:

Compound Name: benzo(k)fluoranthene
Lab Value: 0.892

Area of Compound	1959196
Area of Internal STD	1756470
Conc. of Internal STD	40
Conc. of Compound	50
Calculated RRF	0.892

Compound Name: indeno(1,2,3-cd)pyrene
Lab Value: 2.6

Average RRF	0.852
Calibration Check RRF	0.8302147
Calculated % D	2.56

CompuChem

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SDG NARRATIVE
SDG # 1003029
PROTOCOL: SW-846
SAMPLE IDENTIFICATIONS: IR69-GW12, IR69-GW12DW, IR69-GW14, IR69-GW14IW, IR69-GW14DW, EB01-022710-GW, EB01-022810-GW, EB01-022810-SB, FB01-030310, IR69-GW02, IR69-GW02DW, IR69-GW09, IR69-GW11, IR69-GW13, IR69-GW13IW, EB01-030110-GW, and EB01-030210-GW

The 17 water samples listed above were received between 0.1°C and 1.9°C, with proper documentation, in sealed shipping container, on March 4th and 5th, 2010. The samples were scheduled for the requested analysis of the semivolatile fraction. SW-846, 3rd Edition, Update 3, Separatory Funnel extraction (Method 3510C), and Method 8270C were used to prepare and analyze these samples, with the exceptions and/or additions requested by the client. This portion of the SDG narrative deals with the semivolatile fraction only.

Semivolatiles
Extraction and analysis holding time requirements were met for these samples.

There was a semivolatile target compound list (TCL) analyte identified above the Quantitation Limit (QL) in one/17 of these samples.

Manual integrations were performed on sample files 1003029-14A70, 1003029-18A70; QC files 0030505-BLK1A70, 0030505-BS1A70, 0030505-BSD1A70, 0030601-BS1A70, 0030601-MS1A70, 0030601-MSDA70; ICAL files 0C16003-CAL1A70, 0C16003-CAL2A70, 0C16003-CAL3A70, 0C16003-CAL4A70, 0C16003-CAL5A70; and CCAL files 0C19004-CCV1A70, 0C20001-CCV1A70, 0C21004-CCV1A70. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.

All decafluorotriphenylphosphine (DFTPP) abundance criteria were met for tunes associated to this SDG. Tailing factor criteria were met for pentachlorophenol and benzidine. The breakdown criterion was met for DDT. These three compounds have been added to the DFTPP solution and analyzed together.

Overall QC criteria were met for all initial and continuing calibration standards associated to this SDG.

The surrogates met recovery criteria in the analyses of the samples.

All of the internal standards met response and retention time criteria in the analyses of the samples.

The associated method blanks met all quality control criteria.

The associated Laboratory Control Samples (SLJLCS/SLJLCSD) prepared and analyzed along with these samples bias high %Recovery for 3,3'-Dichlorobenzidine in SLJLCS and for 2,4-Dinitrophenol, Pentachlorophenol, 3,3'-Dichlorobenzidine in SLJLCSD; the % RPD bias high for Caprolactam. The LCS (SLPLCS) bias high %Recovery for 2,4-Dinitrophenol and 3,3'-Dichlorobenzidine. There were no detects for the compounds in the associated samples.

Sample IR69-GW02 was requested for matrix spike/matrix spike duplicate (MS/MSD) for the semi-volatile fraction with this SDG.

An uncertainty of these test results may be estimated from the recovery of the surrogates added to the sample prior to sample preparation or from the recovery of spiked compound(s) in the associated laboratory control sample. Further information is available upon request.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Preeti Khare

Preeti Khare
Data Reviewer I
April 16th, 2010

CompuChem

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Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE

SDG # 1003029

PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS: IR69-GW12, IR69-GW12DW, IR69-GW14, IR69-GW14IW, IR69-GW14DW, EB01-022710-GW, EB01-022810-GW, EB01-022810-SB, FB01-030310, IR69-GW02, IR69-GW02DW, IR69-GW09, IR69-GW11, IR69-GW13, IR69-GW13IW, EB01-030110-GW, and EB01-030210-GW

The 17 water samples listed above were received between 0.1°C and 1.9°C, in sealed shipping containers, on March 4th and 5th, 2010. The samples were scheduled for the requested analysis of the semivolatile fraction. SW-846, 3rd Edition, Update 3, Separatory Funnel extraction (Method 3510C), and Method 8270C-SIM was used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. This portion of the SDG narrative deals with the semivolatile fraction (SIM) only.

Semivolatiles
Extraction and analysis holding time requirements were met for the samples, except for the reextraction of the samples IR69-GW02, IR69-GW02DW, IR69-GW09, IR69-GW11, IR69-GW13, IR69-GW13IW, EB01-030110-GW, and EB01-030210-GW. Due to a laboratory error, the laboratory control spike associated with these samples was not spiked. The re-extracted samples were extracted with an LCS that met all quality control criteria.

There were no semivolatile target compound list (TCL) analytes identified above the Quantitation Limit (QL) for the SIM analysis in any of the samples.

Manual integrations were performed on one or more of the process files associated with this SDG. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.

Mass assignments were verified by the injections of perfluorotributylamine for the SIM analysis. Overall QC criteria were met for all initial standards associated to this SDG. The associated method blanks met all quality control criteria. All of the internal standards met response and retention time criteria in the analyses of these samples. IR69-GW02 was used as the original to prepare the duplicate matrix spikes as requested. The associated duplicate matrix spikes met all advisory accuracy and precision criteria. Except previously discussed, the associated Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) met all accuracy and precision criteria.

An uncertainty of these test results may be estimated from the recovery of the surrogates added to the samples prior to sample preparation or from the recovery of spiked compound(s) in the associated laboratory control sample. Further information is available upon request.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Rebecca K Mead for PK
Preeti Khare
Data Reviewer I
April 16th, 2010

Holding Times

Sampling Date: 2 27, 2 28, 3 1, 3 3
Received Date: 3 4, 3 5
Extraction Date: 3 5, 3 23
Analysis Dates: 3 9, 3 24

All extraction and analysis holding times were met for the samples in this SDG in the initial extraction. The MSD sample was re-extracted due to surrogate and spike recovery issues. No qualifications were required. Sample receipt data is in order. Cooler temperature was within acceptable range.

Calibrations

Initial calibrations were performed according to the method with a five-point curve for the single component pesticides, toxaphene, chlordane and the PCB target compounds 1016 & 1660. Single points were included for the other Aroclors. Calibration factors were calculated. %RSDs were within QC limits. Continuing calibration standards were analyzed per the SW-846 methods requested. All PEM breakdowns and %D criteria were met. All continuing calibration criteria were within QC limits (average %D rule applied) for target compounds in associated standards with the exception of two compounds in the CCVs associated with the RE of the MSD. Column resolution was acceptable. The correct analytical sequence was run. All required instrument blanks were analyzed. Raw data was verified. No qualifications were required due to calibration issues.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Any compound detected in the sample, and the associated blank, must be qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than five (5) times the blank concentration.
- Sample weight, volume or dilution factor must be taken into consideration when applying the 5X criteria.
- Apply the same data validation guidelines to any associated rinse and field blanks and all associated samples.
- Qualification Action codes:
-

No Action -	The sample result is greater than the RL and greater than five times (5X) the blank value.
U at RL-	The sample result is less than the RL when the blank contamination level is less than the RL.

No contamination that resulted in qualification of the data was noted in the associated method or instrument blanks or the submitted field QC blanks.

SURROGATE RECOVERIES

The MSD RE exhibited non-compliant surrogate recoveries but this RE was not used in the validation other than to verify that the cause of the spike issues in the initial MSD run was due to a spiking error and not matrix issues. Therefore, no qualifications were required.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

The associated MS MSD pair was from sample IR69-GW02-10A. All results were acceptable or out in only the MSD. The laboratory re-extracted and analyzed the MSD to verify the recoveries and all was acceptable. Therefore it was determined to be a spiking error and not a matrix error. No qualifications were required in the samples.

LABORATORY CONTROL SAMPLES

The submitted LCS samples submitted exhibited acceptable recoveries. No qualifications were required.

FIELD DUPLICATE SAMPLE SUMMARY

Sample ID: none **Duplicate ID:**

Compound	Sample Conc.	Duplicate Conc.	RPD
			#DIV/0!

Comments:

SAMPLE RESULT VERIFICATION

Calculations were verified. All P flagged results were qualified as estimated J (column quantitation %Ds >40.)

Reviewer JACleveland Date: 7/23/10

CompuChem

a division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1003029
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS: EB01-022710-GW, EB01-022810-GW, EB01-022810-SB, EB01-030110-GW, EB01-030210-GW, FB01-030310, IR69-GW02, IR69-GW02DW, IR69-GW09, IR69-GW11, IR69-GW12, IR69-GW12DW, IR69-GW13, IR69-GW13IW, IR69-GW14, IR69-GW14DW, IR69-GW14IW

The seventeen water samples listed above were received intact, refrigerated between 0.1 and 1.2°C, with proper documentation, in sealed shipping containers, on March 4th and 5th, 2010. The samples were scheduled for the requested analysis of the Pesticide/PCB fraction. SW-846, 3rd Edition, Update 3, Method 8081A and 8082 were used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section and all pertinent Laboratory notices for SDG # 1003029 are included in the sample data sections.

Pesticide/PCB

Extraction and analysis holding time requirements were met for the samples. The MSD for the pesticide spike was re-extracted due to surrogate and spike failures.

No target analytes confirmed above the reporting limits in the samples.

All QC criteria were met for all initial and continuing calibration standards associated to this SDG. The closing calibration of INDC3YJ did not meet continuing calibration criteria.

All surrogate recoveries were with the method specified limits, with the exception of all of the surrogates in IR69-GW02MSD. Rerun

The method blank associated with the samples met all quality control criteria.

Duplicate matrix spikes were performed with sample IR69-GW02, and met recovery and precision criteria, with the exception of the recovery of alpha-Chlordane in the REMSD. The Laboratory Control Sample (LCS) prepared and analyzed with the samples met recovery criteria.

An uncertainty of these test results may be estimated from the recovery of the surrogates added to the sample prior to sample preparation or from the recovery of spiked compound(s) in the associated laboratory control sample. Further information is available upon request.

I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on CD has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

for Kathy Humphries
Teresa Amentt Jennings
GC/HPLC Data Reviewer
March 30, 2010

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Instrument ID: TRACEGC84 Calibration Date: 03/25/10 Time: 0126

Lab File ID: 070YINDC3YJ Init. Calib. Date(s): 03/23/10 03/23/10

Init. Calib. Times: 1657 1852

GC Column: CLPEST ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	496550.00	564750.00	0.01	13.73	20.00	AVRG	
alpha-BHC	583465.00	652150.00	0.01	11.77	20.00	AVRG	
beta-BHC	233902.50	273150.00	0.01	16.78	20.00	AVRG	
delta-BHC	480842.50	537750.00	0.01	11.83	20.00	AVRG	
gamma-BHC (Lindane)	560232.50	626800.00	0.01	11.88	20.00	AVRG	
4,4'-DDD	321382.50	372975.00	0.01	16.05	20.00	AVRG	
4,4'-DDE	426562.50	496450.00	0.01	16.38	20.00	AVRG	
4,4'-DDT	356181.25	417400.00	0.01	17.19	20.00	AVRG	
Dieldrin	419721.25	486925.00	0.01	16.01	20.00	AVRG	
Endosulfan I	437512.50	522400.00	0.01	19.40	20.00	AVRG	
Endosulfan II	378910.00	445100.00	0.01	17.47	20.00	AVRG	
Endosulfan sulfate	305740.00	330625.00	0.01	8.14	20.00	AVRG	
Endrin	350445.00	386350.00	0.01	10.24	20.00	AVRG	
Endrin Aldehyde	297741.25	362950.00	0.01	21.90	20.00	AVRG	<- NQ
ptachlor	532377.50	601750.00	0.01	13.03	20.00	AVRG	
ptachlor Epoxide	480972.50	550350.00	0.01	14.42	20.00	AVRG	
Methoxychlor	158578.50	183325.00	0.01	15.60	20.00	AVRG	
Endrin Ketone	399100.00	479025.00	0.01	20.03	20.00	AVRG	<- NQ
gamma-Chlordane	481315.00	546500.00	0.01	13.54	20.00	AVRG	
alpha-Chlordane	418380.00	483750.00	0.01	15.62	20.00	AVRG	
Decachlorobiphenyl	355780.00	423550.00	0.01	19.05	20.00	AVRG	
Tetrachloro-m-Xylene	394660.00	439150.00	0.01	11.27	20.00	AVRG	

1R69-GW02-10A RE MSD
only assoc - No Quals

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Instrument ID: TRACEGC85 Calibration Date: 03/25/10 Time: 0126

Lab File ID: 070YINDC3YJ Init. Calib. Date(s): 03/23/10 03/23/10

Init. Calib. Times: 1657 1852

GC Column: CLPEST2 ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	366037.50	420400.00	0.01	14.85	20.00	AVRG	
beta-BHC	181445.00	213650.00	0.01	17.75	20.00	AVRG	
alpha-BHC	420260.00	479000.00	0.01	13.98	20.00	AVRG	
delta-BHC	363645.00	400450.00	0.01	10.12	20.00	AVRG	
gamma-BHC (Lindane)	407532.50	467550.00	0.01	14.73	20.00	AVRG	
4,4'-DDD	236267.50	279900.00	0.01	18.47	20.00	AVRG	
4,4'-DDE	328318.75	385525.00	0.01	17.42	20.00	AVRG	
4,4'-DDT	259135.00	312550.00	0.01	20.61	20.00	AVRG	<- NQ
Dieldrin	317570.00	371775.00	0.01	17.07	20.00	AVRG	
Endosulfan I	333097.50	390850.00	0.01	17.34	20.00	AVRG	
Endosulfan II	285862.50	337900.00	0.01	18.20	20.00	AVRG	
Endosulfan sulfate	232957.50	253450.00	0.01	8.80	20.00	AVRG	
Endrin	267780.00	298975.00	0.01	11.65	20.00	AVRG	
Endrin Aldehyde	226580.00	276650.00	0.01	22.10	20.00	AVRG	<- NQ
Heptachlor	387567.73	451050.00	0.01	16.38	20.00	AVRG	
Heptachlor Epoxide	354597.50	414600.00	0.01	16.92	20.00	AVRG	
Methoxychlor	121604.25	143755.00	0.01	18.22	20.00	AVRG	
Endrin Ketone	301991.25	367075.00	0.01	21.55	20.00	AVRG	<- NQ
gamma-Chlordane	354510.00	412300.00	0.01	16.30	20.00	AVRG	
alpha-Chlordane	309890.00	362700.00	0.01	17.04	20.00	AVRG	
Decachlorobiphenyl	275000.00	329792.50	0.01	19.92	20.00	AVRG	
Tetrachloro-m-Xylene	314637.50	348600.00	0.01	10.79	20.00	AVRG	

1R69-GW02-10A REMSD

Only assoc - No Quals

FORM VII PEST

3E

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix Spike - EPA Sample No.: IR69-GW02-10A

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Aldrin	0.15	0.0	0.13	87	25-140
beta-BHC	0.15	0.012	0.12	72	65-125
alpha-BHC	0.15	0.0	0.14	93	60-130
delta-BHC	0.15	0.0	0.15	100	45-135
gamma-BHC (Lindane)	0.15	0.0	0.12	80	25-135
4,4'-DDD	0.38	0.0	0.35	92	25-150
4,4'-DDE	0.38	0.0	0.33	87	35-140
4,4'-DDT	0.38	0.0	0.31	82	45-140
Dieldrin	0.38	0.0	0.35	92	60-130
Endosulfan I	0.15	0.0	0.12	80	50-110
Endosulfan II	0.38	0.0	0.32	84	30-130
Endosulfan sulfate	0.38	0.0	0.31	82	55-135
Endrin	0.38	0.0	0.33	87	55-135
Endrin Aldehyde	0.38	0.0	0.24	63	55-135
Heptachlor	0.15	0.0	0.14	93	40-130
Heptachlor Epoxide	0.15	0.0	0.14	93	60-130
Methoxychlor	0.38	0.0	0.37	97	55-150
Endrin Ketone	0.38	0.0	0.35	92	75-125
gamma-Chlordane	0.15	0.0	0.14	93	60-125
alpha-Chlordane	0.15	0.0	0.15	100	65-125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

3E

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix Spike - EPA Sample No.: IR69-GW02-10A

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aldrin	0.15	0.045	30	97*	40	25-140
beta-BHC	0.15	0.035	15*	110*	40	65-125
alpha-BHC	0.15	0.036	24*	118*	40	60-130
delta-BHC	0.15	0.040	27*	116*	40	45-135
gamma-BHC (Lindane)	0.15	0.034	23*	112*	40	25-135
4,4'-DDD	0.38	0.095	25	115*	40	25-150
4,4'-DDE	0.38	0.095	25*	110*	40	35-140
4,4'-DDT	0.38	0.087	23*	112*	40	45-140
Dieldrin	0.38	0.099	26*	112*	40	60-130
Endosulfan I	0.15	0.036	24*	108*	40	50-110
Endosulfan II	0.38	0.093	24*	110*	40	30-130
Endosulfan sulfate	0.38	0.092	24*	108*	40	55-135
Endrin	0.38	0.092	24*	113*	40	55-135
Endrin Aldehyde	0.38	0.075	20*	105*	40	55-135
Heptachlor	0.15	0.0	0*		40	40-130
Heptachlor Epoxide	0.15	0.10	67	33	40	60-130
Methoxychlor	0.38	0.11	29*	108*	40	55-150
Endrin Ketone	0.38	0.10	26*	111*	40	75-125
gamma-Chlordane	0.15	0.041	27*	109*	40	60-125
alpha-Chlordane	0.15	0.043	29*	111*	40	65-125

No Qualifications

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 18 out of 20 outside limits
Spike Recovery: 17 out of 40 outside limits

COMMENTS:

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

EB01-022810-SB

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Lab Sample ID: 1003029-08 Date(s) Analyzed: 03/09/10 03/09/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Dieldrin	1	14.94	14.91	15.05	0.054	
	2	14.52	14.52	14.66	0.0028	180.3 J
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

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FORM X PEST-1

10A

PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

EB01-030210-GW

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Lab Sample ID: 1003029-19 Date(s) Analyzed: 03/09/10 03/09/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD	
delta-BHC	1	10.91	10.85	10.99	0.027		
	2	10.92	10.88	11.02	0.0061	126.3	J
Dieldrin	1	14.94	14.91	15.05	0.032		
	2	14.53	14.52	14.66	0.0045	150.7	J
	1						
	2						
	1						
	2						
	1						
	2						
	1						
	2						
	1						
	2						
	1						
	2						

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FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-GW02

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Lab Sample ID: 1003029-12 Date(s) Analyzed: 03/09/10 03/09/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
beta-BHC	1	10.47	10.42	10.56	0.0075	
	2	10.27	10.18	10.32	0.012	46.2 J
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

page 1 of 1

FORM X PEST-1

Initial Calibration Date: 3-5-8-10 on TraceGE84

RRF and %RSD Calculations:

Compound Name: Endrin in Level 3
Lab Value: 441125.0000

Area of Compound	17645
Conc. of Compound	0.04
Calculated RRF	441125.0000

Compound Name: Endrin
Lab Value: 9.6

RRF of STD 1	499200.0000
RRF of STD 2	471900.0000
RRF of STD 3	441125.0000
RRF of STD 4	409900.0000
RRF of STD 5	396112.5000
RRF of STD 6	
Calculated % RSD	9.62

Continuing Calibration File ID: 132uindc3uv, 3-9-10 at 2023

RRF and %D Calculations:

Compound Name: heptachlor epoxide
Lab Value: 569050.00000

Area of compound	11381
Conc. Of compound	0.02
Calculated CF	569050.00000

Compound Name: heptachlor epoxide
Lab Value: 1.4

Avg. CF from ICAL	561227.50000
CF of CCV	569050.00000
Calculated % D	-1.4

SAMPLE CALCULATION

Sample ID: EB01-030210-GW
Standard ID: ICAL curve 3/5-8/10
Compound: Dieldrin
Concnetration: 0 032 ug/L

	Water (ug/L)	Soil (ug/Kg)
Area of Compound	3130	
Calibration Factor of Compound	496771	
Dilution Factor	1	1
Weight/Volume of Sample	1000	
Final Volume extract	5000	NA
% Moisture	NA	
conversion factor	1	NA
Concentration	0.03150	#REF!

Holding Times

Sampling Date: 2 27, 2 28, 3 1, 3 2
Received Date: 3 4, 3 5 at TestAmerica Cooler temps were within acceptable range.
Extraction Date: 3 5 10
Analysis Dates: 3 13 10, 3 18 10

All extraction and analysis holding times were met for the samples in this SDG. Sample receipt data is in order. Cooler temperature was within acceptable range. This analysis was sub-contracted to Test America Savannah by Compuchem.

Calibrations

Initial calibrations were performed according to the method with a eight-point curve for the organophosphorus pesticide target compounds. Calibration factors were calculated or LR curves were plotted. %RSDs or correlation coefficients were within QC limits. Continuing calibration standards were analyzed per the SW-846 methods requested. All %D criteria were not met. Please see the report for necessary qualifications. Column resolution was acceptable. Retention time windows were provided, retention times were stable throughout the analytical sequence. All required instrument blanks were analyzed. Raw data was verified. Resubmissions were required due to inconsistencies noted in the analytical sequence. The laboratory was required to resubmit all continuing calibration standards data for the ICAL 3 12 10. The earlier ICAL (3 9-10 10) was not required in the data package. All resubmitted pages were swapped out in the data package and the old pages were stored with the raw data.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Any compound detected in the sample, and the associated blank, must be qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than five (5) times the blank concentration.
- Sample weight, volume or dilution factor must be taken into consideration when applying the 5X criteria.
- Apply the same data validation guidelines to any associated rinse and field blanks and all associated samples.
- Qualification Action codes:
-

No Action -	The sample result is greater than the RL and greater than five times (5X) the blank value.
U at RL -	The sample result is less than the RL when the blank contamination level is less than the RL.

No contamination that resulted in qualification of the data was noted in the associated method or instrument blanks or the submitted field QC blanks.

SURROGATE RECOVERIES

Surrogate recoveries were acceptable.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

The associated MS MSD pair of sample IR69-GW02-10A exhibited 0% in both the MS and the MSD for the compound demeton-s. The compound was also recovered low (14%) in the associated LCS. The compound demeton-s was rejected in the native sample of the spike pair (IR69-GW02-10A) and was qualified as J UJ in all other samples, with a caution that the reported results should be considered significantly biased low. No other qualifications were required due to spike results.

LABORATORY CONTROL SAMPLES

The submitted LCS LCSD pair submitted exhibited acceptable recoveries with the exception of demeton-s. See

comments under Matrix Spike Matrix Spike Duplicate for qualification specifics.

FIELD DUPLICATE SAMPLE SUMMARY

Sample ID: None **Duplicate ID:**

Compound	Sample Conc.	Duplicate Conc.	RPD
			#DIV/0!

Comments:

SAMPLE RESULT VERIFICATION

Raw data was verified. Calculations were verified. Copies of all e-mail correspondence with the lab are included in these validation worksheets.

Reviewer JACleveland **Date:** 7/23/10

Job Narrative
680-55553-1

Comments
No additional comments

Receipt
One container for the following sample was received broken: IR69-FB-030310 (680-55553-7)

The Chains-of-Custody (COCs) were not properly filled out. The equipment blanks were not listed on the COCs using the nomenclature defined by the client. The client submitted revised chains of custody to reflect the proper identification of the equipment blanks

All other samples were received in good condition within temperature requirements

GC Semi VOA
Method(s) 8141A: The laboratory control sample (LCS) for batch 680-162339 exceeded control limits for the following analytes: Demeton-S. The vendor purchased standard for Demeton-O and Demeton-S is expressed as a the value of the total concentration of the two analytes and not as the concentration of the individual analytes. The ratio of the LCS standard differs from the rations present in the calibration standards. The % recovery of the total od Demeton-O and Demeton-S was within limits.

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 680-55553-1

SDG No.: CLJ55553-1

Lab Sample ID: CCV 680-163433/2 Calibration Date: 03/18/2010 06:55

Instrument ID: SG0 Calib Start Date: 03/17/2010 16:01

GC Column: Rtx-OPP 2 ID: 0.32(mm) Calib End Date: 03/17/2010 18:54

Lab File ID: oc17049.d Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorvos	Ave	3204419	3635009		250	0.500	4.7	15.0
Mevinphos	QuaF	4325526	4126304		250	0.500	-11.0	
Demeton-O	Ave	1811930	1945042		250	0.500	7.3	15.0
Ethoprop	Ave	8172436	8517664		500	0.500	4.2	15.0
Naled	QuaF	1207707	1145698		500	0.500	-11.9	
Phorate	Ave	7352306	7442780		250	0.500	1.2	15.0
Demeton-S	QuaF	4124764	4873170		250	0.500	5.4	
Diazinon	Ave	6903049	7185136		250	0.500	4.1	15.0
Disulfoton	Ave	7316498	7536732		250	0.500	2.9	15.0
Methyl parathion	QuaF	4797111	5648099		500	0.500	3.0	
Ronnel	Ave	8183136	8471798		250	0.500	3.5	15.0
Chlorpyrifos	Ave	6071099	6465840		250	0.500	6.5	15.0
Trichloronate	Ave	4806338	5298106		250	0.500	10.2	15.0
Fenthion	Ave	9391408	9171732		250	0.500	-2.3	15.0
Stirophos	Ave	5026936	6902980		250	0.500	37.3*	15.0
Tokuthion	Ave	5402783	5233848		250	0.500	-4.5	15.0
Fensulfothion	QuaF	2753556	2405560		500	0.500	-17.8	
Bolstar	Ave	5772317	6153826		250	0.500	6.6	15.0
Azinphos-methyl	Ave	3189586	3791616		250	0.500	18.9*	15.0
Coumaphos	Ave	3345386	3519738		250	0.500	5.2	15.0
Merphos	Ave	5629980	5147430		250	0.500	-8.6	15.0

~~JHJ~~ NG

~~JHJ~~ NG

X2corr JAC 72310

1R69-GW14DW-10A
FB01-022710-GW
022810-GW
022810-SB
FB01-030310
GW12-10A
GW12DW-10A

No Quals - non compliance is due to an increase in response relative to the ICAL.

FORM VII 8141A

07/20/2010 267

Jacqueline Cleveland

From: Cathy Dover [cdover@compuchemlabs.com]
Sent: Tuesday, July 20, 2010 3:51 PM
To: DataQual; Jacqueline Cleveland
Cc: Gwen.Buckley@CH2M.com; Anita.Dodson@CH2M.com; Rebekha.Shaw@CH2M.com
Subject: FW: Lejeune CTO-81 Resubmission Request - revised
Attachments: _0720164205_001.pdf

Results Received
Pages swapped out
& stored with
Law
JAC
7/23/10

Hi Jackie,

I am forwarding the form VIII revisions from Abbie @ Test America.

Let me know if you need anything else.

Have a great night!

Cathy

Cathy Dover
Supervisor of Project Management
Compuchem
501 Madison Ave
Cary, N.C. 27513
(919)379-4089 office
(919)379-4050 fax

From: Yant, Abbie [mailto:Abbie.Yant@testamericainc.com]
Sent: Tuesday, July 20, 2010 4:45 PM
To: Cathy Dover
Subject: RE: Lejeune CTO-81 Resubmission Request - revised

I re-printed all of the form VII to reinsert

Please see attached

From: Cathy Dover [mailto:cdover@compuchemlabs.com]
Sent: Tuesday, July 20, 2010 4:37 PM
To: Yant, Abbie
Subject: RE: Lejeune CTO-81 Resubmission Request - revised

Hi Abbie,

Can you e-mail the revision?

That would be terrific!

Thanks,

Cathy

Cathy Dover
Supervisor of Project Management
Compuchem
501 Madison Ave.
Cary, N.C. 27513
(919)379-4089 office
(919)379-4050 fax

From: Yant, Abbie [mailto:Abbie.Yant@testamericainc.com]
Sent: Tuesday, July 20, 2010 4:33 PM
To: Cathy Dover
Subject: RE: Lejeune CTO-81 Resubmission Request - revised

Cathy – I've posted the revised data – see pages beginning 283

Can you grab form Total Access or do you want me to e-mail you something?

Thank you
Abbie

From: Cathy Dover [mailto:cdover@compuchemlabs.com]
Sent: Monday, July 19, 2010 8:53 PM
To: Yant, Abbie
Subject: FW: Lejeune CTO-81 Resubmission Request
Importance: High

Hi Abbie,

Can you take a look at the data inquiry below? Can you let me know if a response/revision is possible for tomorrow?

Thanks and have a good night!

Cathy

Cathy Dover
Supervisor of Project Management
Compuchem
501 Madison Ave.
Cary, N.C. 27513
(919)379-4089 office
(919)379-4050 fax

From: Jacqueline Cleveland [mailto:cleve137@charter.net]
Sent: Monday, July 19, 2010 6:11 PM
To: Cathy Dover
Cc: dataqual@charter.net; Rebekha.Shaw@CH2M.com; Gwen.Buckley@CH2M.com
Subject: Lejeune CTO-81 Resubmission Request
Importance: High

Cathy,

This request is regarding the OPP package from TestAmerica with the SDG # CLJ55553-1 (corresponds to your log-in number of 1003255) for the groundwater package. Regarding the submitted calibration data- based on the initial calibrations and sequence summaries presented for instrument SGO – the continuing calibrations analyzed on 3/13 at 10:10 and 10:35 should refer back to the initial calibration analyzed on 3/12/10, not the initial calibration analyzed 3/9-10/10. However, these continuing calibrations refer back to the initial calibration analyzed 3/9-10/10. This is very confusing – in particular since a sequence with an initial calibration analyzed 3/12/10 is present with these continuing as the closing standards. Please take a look at this and clarify and resubmit as necessary. The other sequence (3/17-3/18) appears to be correct other than some calibration factor rounding issues between the Form 6s and the Form 7s. Thank you for your help in this matter!

Jackie

Jacqueline Cleveland
Vice-President
DataQual, INC
636-352-9591
cleve137@charter.net

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Please consider the environment before printing this e-mail.

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FORM III

[illegible] SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Cleveland Job No.: [illegible]

SDG No.: CLJ55553-1

Matrix: Water Level: Low Lab File ID: [illegible]

Lab ID: LCS [illegible] Client ID:

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Azinphos-methyl	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Bolstar	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Chlorpyrifos	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Coumaphos	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Demeton-O	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Demeton-S	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	J/UJ
Diazinon	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Dichlorvos	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Disulfoton	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Ethoprop	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Fensulfothion	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Fenthion	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	M
Merphos	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Methyl parathion	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Mevinphos	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Naled	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Phorate	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Ronnel	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Stirophos	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Tokuthion	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Trichloronate	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	M

Calculations are performed before rounding

Column to be used to flag recovery values

FORM III [illegible]

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FORM III

GC/SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah

SDG No.: CL55553-1

Matrix: Water Level: Low Lab File ID: [illegible]

Lab ID: [illegible] Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS % RECOVERY (%)	QC LIMITS % RECOVERY	#
Dimethoate	4.00	[illegible]	[illegible]	
EPN	4.00	[illegible]	[illegible]	
Famphur	4.00	[illegible]	[illegible]	
Malathion	4.00	[illegible]	[illegible]	
Monochrotophos	40.0	[illegible]	[illegible]	
Parathion	4.00	[illegible]	[illegible]	
Sulfotepp	4.00	[illegible]	[illegible]	
Thionazin	4.00	[illegible]	[illegible]	

Calculations are performed before rounding to significant figures in accordance with Method requirements.

Column to be used to flag recovery that exceed QC limits.

FORM III [illegible]

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FORM III

[illegible] MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Savannah

SDG No.: CL755553-1

Matrix: Water

Level: Low

Lab File ID: [illegible]

Lab ID: 680-55594-[illegible] MS

Client ID: [illegible] MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC.	#
Azinphos-methyl	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Bolstar	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Chlorpyrifos	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Coumaphos	[illegible]	[illegible]	[illegible]		[illegible]	
Demeton-O	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Demeton-S	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	J/R
Diazinon	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Dichlorvos	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Disulfoton	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Ethoprop	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Fensulfothion	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Fenthion	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Merphos	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Methyl parathion	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Mevinphos	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Naled	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Phorate	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Ronnel	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Stirophos	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Tokuthion	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Trichloronate	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

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FORM III

GC SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Savannah Job No.: [illegible]

SDG No.: CLJ55553-1

Matrix: Water Level: Low Lab File ID: [illegible]

Lab ID: 680-55594-[illegible] MS Client ID: [illegible] A MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	SPIKE CONCENTRATION (ug/L)	SPIKE % REC	QC LIMITS REC
Dimethoate	4.00	[illegible]	[illegible]	[illegible]	[illegible]
EPN	4.00	[illegible]	[illegible]	[illegible]	[illegible]
Famphur	4.00	[illegible]	[illegible]	[illegible]	[illegible]
Malathion	4.00	[illegible]	[illegible]	[illegible]	[illegible]
Monochrotophos	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Parathion	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sulfotepp	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Thionazin	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Calculations are performed before rounding

Column to be used to flag recovery that exceeds QC limits

FORM III [illegible]

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FORM III

GC/SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: [illegible]

SDG No.: CLW55553-1

Matrix: Water Level: Low Lab File ID: [illegible]2045.d

Lab ID: 680-55584-[illegible] MSD Client ID: IR68-GW01-1[illegible]A MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD REC #	RPD #	QC LIMITS RPD	QC LIMITS REC
Azinphos-methyl	4.00	2.67	[illegible]	[illegible]	40	[illegible]
Bolstar	4.[illegible]	[illegible]	[illegible]	[illegible]	40	[illegible]
Chlorpyrifos	4.00	3.44	84	[illegible]	40	[illegible]
Coumaphos	4.00	2.73	[illegible]	[illegible]	40	[illegible]
Demeton-O	4.00	[illegible]	[illegible]	[illegible]	40	[illegible]
Demeton-S	4.00	[illegible]	[illegible]	[illegible]	40	[illegible]
Diazinon	4.00	[illegible]	[illegible]	[illegible]	40	[illegible]
Dichlorvos	4.00	3.[illegible]	[illegible]	[illegible]	40	[illegible]
Disulfoton	4.00	[illegible]	[illegible]	[illegible]	40	[illegible]
Ethoprop	4.00	[illegible]	[illegible]	[illegible]	40	[illegible]
Fensulfothion	4.00	4.37	[illegible]	[illegible]	40	[illegible]
Fenthion	4.00	3.44	[illegible]	[illegible]	40	[illegible]
Merphos	4.00	3.35	84	[illegible]	40	[illegible]
Methyl parathion	4.00	[illegible]	[illegible]	[illegible]	40	[illegible]
Mevinphos	4.00	[illegible]	[illegible]	[illegible]	40	[illegible]
Naled	4.00	[illegible]	[illegible]	[illegible]	40	[illegible]
Phorate	4.00	[illegible]	[illegible]	[illegible]	40	[illegible]
Ronnel	4.00	3.37	84	1	40	46-142
Stirophos	4.00	3.[illegible]	[illegible]	[illegible]	40	[illegible]
Tokuthion	4.00	3.21	[illegible]	[illegible]	40	[illegible]
Trichloronate	4.00	2.92	[illegible]	[illegible]	40	[illegible]

NQ
J7R

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

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FORM III

[illegible] SEMI-VOA MATRIX SPIKE/DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: [illegible]

SDG No.: CLJ55553-1

Matrix: Water Level: Low Lab File ID: [illegible]

Lab ID: 680-[illegible] MS Client ID: [illegible]

COMPOUND	SPIKE ADDED (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	MSD % REC #	QC LIMITS REC.	QC LIMITS RPD
Dimethoate	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
EPN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Famphur	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Malathion	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Monochrotophos	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Parathion	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sulfotepp	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Thionazin	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

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Initial Calibration Date: 3 12 2010

RRF and %RSD Calculations:

Compound Name: ethoprop in level 1

Lab Value: 9435360.0000

Area of Compound	471768
Conc. of Compound	0.05
Calculated RRF	9435360.0000

Compound Name: ethoprop

Lab Value: 7.6

RRF of STD 1	9435360.0000
RRF of STD 2	7154440.0000
RRF of STD 3	8014332.0000
RRF of STD 4	8338442.0000
RRF of STD 3	8400881.0000
RRF of STD 4	8533517.0000
RRF of STD 5	8658428.0000
RRF of STD 6	8431685.0000
Calculated % RSD	7.63

Continuing Calibration File ID: oc12053.d

RRF and %D Calculations:

Compound Name: stirophos

Lab Value: 4237762.00000

Area of compound	2118881
Conc. Of compound	0.5
Calculated CF	4237762.00000

Compound Name: stirophos

Lab Value: 9.8

Avg. CF from ICAL	4698669.00000
CF of CCV	4237762.00000
Calculated % D	9.8

DataQual

~~Pest/PCB~~ OPP GC 7310

SAMPLE CALCULATION

Sample ID: IR69-GW02-10A MSD
Standard ID: ICAL curve3/12/10
Compound: Demeton-O
Concnetration: 2 74J ug/L

	Water (ug/L)	Soil (ug/Kg)
Area of Compound	536914	
Calibration Factor of Compound	1956754	
Dilution Factor	1	1
Weight/Volume of Sample	500	
Final Volume extract	5000	NA
% Moisture	NA	
conversion factor	1	NA
Concentration	2.74390	#REF!

This SDG contains select metals analysis using SW-846 6010B/7470A 7471A.

HOLDING TIMES

Sampling Date: 2 27, 2 28, 3 1, 3 2
Received Date: 3 4, 3 5 Cooler temps: OK
Prep. Dates: 3 8 ICP, 3 26 Hg
Analysis Dates: 3 9-3 10, 3 30 ICP, 3 26 Hg
All holding time requirements were met.

CALIBRATIONS

All initial calibration criteria were met Single point calibration was analyzed for ICP. Calibration verification criteria were met for all ICV and CCV standards. The RL standards were analyzed and met method criteria for all analytes. Interference check standards were analyzed and met criteria in all standards. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if an analyte is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying the criteria.
- Apply the same data validation guidelines to any associated calibration, preparation, and field QC blanks and all associated samples.
- Qualification Action codes:
  - No Action - The sample result is greater than the CRDL and greater than ten times (10X) the blank value.
  - U - The sample result is greater than or equal to the MDL but less than or equal to the RL, result is reported as non-detect at the RL.
  - R or J. The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator.

Blank Contamination and Qualification Summaries

Blank ID	Analyte	Concentration	Action Level	Q Flag	Q Code
CCB, 3/9-3 10 Run	copper	2.7B ug L	RL	U	MBL
	magnesium	48.4B ug L	RL	U	MBL
ICB, 3 30 Run	beryllium	0.2B ug L	RL	U	MBL
	calcium	121.2B ug L	RL	U	MBL
CCB, 3.30 Run	magnesium	47.2B ug L	RL	U	MBL
FB01-030310	zinc	0.82B ug L	RL	U	FBL
EB01-030210-GW	zinc	21.4 ug L	RL up to 10X blank	J	EBL
EB01-022710-GW	zinc	1460 ug L	RL up to 10X blank	J	EBL

The concentration noted for the CCBs is the highest concentration in all the CCBs However, when qualifying samples for CCB contamination, associated samples are those just prior to or just following a CCB Therefore, not all analytes in all samples are flagged for noted CCB contamination See worksheets for associations Samples are qualified for field QC blank contamination based on QC tracking provided by CH2M HILL Negative contamination in a prep blank or CCB, at less than the analyte CRDL, is qualified based on professional judgment

Please note that based on the National Functional Guidelines, for contamination above the CRDL, results in the field samples that are greater than the RL up to 10X the blank contamination level should be qualified as estimated and considered biased high or they should be rejected. Associated samples and required qualifications are noted in the following table.

Sample ID	Analyte	Q Flag	Q Code
IR69-GW02DW-10A, IR69-GW09-10A, IR69-GW11-10A, IR69-GW13-10A, IR69-GW13IW-10A, IR69-GW14-10A	copper	U at RL	MBL
all field samples	magnesium	U at RL	MBL
IR69-GW12-10A	beryllium	U at RL	MBL
IR69-GW12-10A	calcium	U at RL	MBL
IR69-GW02DW-10A, IR69-GW09-10A, IR69-GW11-10A, IR69-GW12DW-10A, IR69-GW13-10A, IR69-GW13IW-10A, IR69-GW14-10A, IR69-GW14DW-10A, IR69-GW14IW-10A	zinc	U at RL	FBL
IR69-GW02-10A, IR69-GW12-10A	zinc	J	FBL

MATRIX SPIKE/DUPLICATE SUMMARY

Spike recoveries were acceptable in the MS or the MSD except selenium. All PDS recoveries were acceptable. Selenium exhibited a 0% R in both the MS & the MSD. All results for Se in the field samples were qualified as estimated J UJ based on the NFG (not rejected since the %R in the PDS was good). However, in the professional judgment of the data validator, Se results in the field samples should be considered significantly biased low. The matrix duplicate RPD for Zn was high (49.8%) and all results for zinc in the field samples were qualified as estimated J UJ. Please note that many of the Zinc results were flagged as U at the RL due to field blank contamination. All LCS recoveries and RPDs were acceptable.

SERIAL DILUTIONS

The serial dilution results were OK with the exception of barium (12%). Positive and non-detect results for Ba in the in the field samples are qualified as estimated J UJ.

SAMPLE CALCULATION

EPA SAMPLE ID: IR69-GW02DW-10A
ANALYTE: manganese
CONCENTRATION: 80.9 ug L
%Solids NA

Raw Data result: 80.90813 ug L. Water results are direct read from the instrument.

FIELD DUPLICATE SAMPLE SUMMARY

Note: Field duplicate results are assessed only if both results are above the CRDL.

Sample ID: None **Duplicate Sample ID:** None

Analyte	Sample Conc.	Duplicate Conc.	RPD
aluminum			#DIV/0!
barium			#DIV/0!
calcium			#DIV/0!
chromium			#DIV/0!
iorn			#DIV/0!
lead			#DIV/0!
magnesium			#DIV/0!
manganese			#DIV/0!
nickel			#DIV/0!
zinc			#DIV/0!

Comments:

SAMPLE RESULT VERIFICATION

Specific Comments:

All sample results were reported within the calibration linear range of the instruments. Detection limits were acceptable. Raw data was verified. All positive results reported at concentrations between the IDL and the RL were qualified as estimated J by the laboratory. All field sample and QC blank IDs were missing either the first 4 or the last four characters. The characters (-10A) were added for the field samples and the characters IR69 were added for the field QC blanks to the Form 1s in the DV reports by the data validator.

Reviewer JACleveland **Date:** 7-19-10

CompuChem
a Division of Liberty Analytical Corp.
501 Madison Avenue
Cary, NC 27513

SDG NARRATIVE
SDG # 1003029

The indicated Sample Delivery Group (SDG) consisting of seventeen (17) water samples was received into the laboratory information management system (LIMS) on March 4 and 5, 2010 intact and in good condition with Chain of Custody (COC) Records in order, unless otherwise noted in any attachments or Quality Assurance Notices. The temperature of the samples upon receipt was 0.1 to 1.9°C. Sample ID's reported in this data package are noted by the receiving department on the COC if they differ from those listed by the samplers on the COC.

The samples were prepared and analyzed in accordance with SW846 methodology for the requested TAL metals and mercury.

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (ICV & CCV) and blanks (ICB & CCB) associated with this data were confirmed to be within allowable limits.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verification (PBW & LCSW) was found to be within acceptable ranges and the field samples were analyzed within the specified holding times. Sample EB022710-GW had the lid of its container switched with the lid from the sulfide zinc acetate preserved container. This was noted by the receiving person when checking the pH of the sample. The sample was analyzed several times trying to get sodium within control. The sample has been reported with sodium at a dilution. The project manager was contacted about this situation. The mercury samples were re-digested. The original analysis for mercury did not meet the QC criteria of only ten samples between CCVs. This was not discovered until after the samples had been disposed of, so the samples had to be reprepped and analyzed.

MATRIX RELATED QUALITY CONTROL:

The sample matrix spikes, CCN # 1003029-12 ID IR69-GW02S and IR69-GW02SD were inside control limits for the requested analytes except selenium.

Control limits for matrix spikes recoveries are set at 75% to 125% of the analyte quantity added unless original sample concentrations exceed the true values of these "spikes" by a factor of four or more. In this case, affected analytes are not flagged even if recoveries are outside percentage recovery control limits.

The sample matrix duplicate, CCN # 1003029-12 ID IR69-GW02D was inside control limits for the requested analytes except zinc.

CLP control limits for duplicate determinations are +/- 20% Relative Percent Difference (RPD) for concentrations greater than or equal to five times the CRDL in both the original and duplicate samples, and +/- the CRDL for concentrations less than five times the CRDL. The RPD is not calculated if both the original and duplicate values fall below the IDL.

A five-fold serial dilution of sample, CCN # 1003029-12 ID IR69-GW02L was performed in accordance with requirements for ICP and mercury analysis.

AMENDED DATA

The adjusted sample concentration was inside control limits for the requested analytes except barium.

The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice

For Susan Bass

Susan W. Bass
Senior Chemist
March 30, 2010

AMENDED DATA

Jacqueline Cleveland

From: Cathy Dover [cdover@compuchemlabs.com]
Sent: Wednesday, July 28, 2010 11:43 AM
To: Jacqueline Cleveland
Cc: DataQual; Gwen.Buckley@CH2M.com
Subject: RE: CTO-81 Lejeune Resubmission Status
Attachments: CTO-081 site 69 revised metals narratives.pdf

Hi Jackie,

Sorry for the delay! I have attached the three revised metals case narratives (WO#1003029, 1003032 & 1003089).

Ken, who was helping with the xylene issue, is on vacation. I have been trying to reach him so he can verify the list you sent in the e-mail this week. I wanted him to answer the data inquiry since the xylene reporting has changed recently.

I will call and see if I can reach him so that I can respond back to you today.

Cathy

Cathy Dover
Supervisor of Project Management
Compuchem
501 Madison Ave.
Cary, N.C. 27513
(919)379-4089 office
(919)379-4050 fax

From: Jacqueline Cleveland [mailto:cleve137@charter.net]
Sent: Wednesday, July 28, 2010 11:28 AM
To: Cathy Dover
Cc: 'DataQual'; Gwen.Buckley@CH2M.com
Subject: CTO-81 Lejeune Resubmission Status
Importance: High

Cathy,

Good Morning! Laura and I have two outstanding issues for the CTO-81 data packages that we are checking up on. I am waiting for metals case narratives for three SDGs (to explain REs) and Laura has a question regarding xylene results. Do you have an idea when we might see these items? Thanks for the info!

Jackie

Jacqueline Cleveland
Vice President
DataQual, LS, LLC
636-352-9391
cleve137@charter.net

Jacqueline Cleveland

From: Jacqueline Cleveland [cleve137@charter.net]
Sent: Thursday, July 22, 2010 8:46 AM
To: 'Cathy Dover'
Cc: 'DataQual'; 'Anita.Dodson@CH2M.com'; 'Rebekha.Shaw@CH2M.com'; 'Gwen.Buckley@CH2M.com'
Subject: FW: CTO-81 Lejeune

Importance: High

Cathy,

I am just checking on the status of the request below – I sent it over Monday and don't believe that I have heard back on it. Please let me know!

Thanks, Jackie

From: Jacqueline Cleveland [mailto:cleve137@charter.net]
Sent: Monday, July 19, 2010 12:00 PM
To: 'Cathy Dover'
Cc: 'DataQual'; 'Rebekha.Shaw@CH2M.com'; 'Gwen.Buckley@CH2M.com'
Subject: CTO-81 Lejeune

Dear Cathy,

I have a request regarding the metals data packages for SDGs 1003029, 1003032 and 1003089. Based on the sample summary in the front of the data packages, it looks like most of the samples were re-digested and/or reanalyzed for some reason. There is no mention of this in the case narratives. Please provide revised narratives that addresses these RE samples and explains the reason for the RE suffix. Thanks so much!

Jackie

Jacqueline Cleveland
Vice President
DataQual, ES, LLC
636-352-9391
cleve137@charter.net

Jacqueline Cleveland

From: Cathy Dover [cdover@compuchemlabs.com]
Sent: Thursday, July 22, 2010 9:02 AM
To: Jacqueline Cleveland
Cc: DataQual; Anita.Dodson@CH2M.com; Gwen.Buckley@CH2M.com
Subject: FW: New CH2M HILL, INC. Inquiry: 1593, Due Date: 7/20/2010

Hi Jackie,

I have been waiting to speak with both the Inorganic supervisor and lab director since he e-mailed me the response below. I have already asked him to please ask the reviewer to mention instances like this even though holding times were meet. I will update you as soon as we meet to discuss.

Cathy

Cathy Dover
Supervisor of Project Management
Compuchem
501 Madison Ave.
Cary, N.C. 27513
(919)379-4089 office
(919)379-4050 fax

From: James Feldhaus
Sent: Monday, July 19, 2010 2:10 PM
To: Cathy Dover; Rebecca K. Mead
Cc: Bob Meierer
Subject: RE: New CH2M HILL, INC. Inquiry: 1593, Due Date: 7/20/2010

Cathy

It is not policy to state in the narrative why batch QC or instrument QC required either a re-digestion or reanalysis if samples met required holding times.

Jim Feldhaus
Inorganic Manager
Compuchem Laboratories
Cary, NC 27513
(919)-379-4039

From: cdover@compuchemlabs.com [mailto:cdover@compuchemlabs.com]
Sent: Monday, July 19, 2010 1:59 PM
To: James Feldhaus
Cc: Cathy Dover; William Waring; Mark Ross; Rebecca K. Mead; Jennifer Rebman; Bob Meierer; Cathy Dover
Subject: New CH2M HILL, INC. Inquiry: 1593, Due Date: 7/20/2010

You have a new Client Inquiry (1593) waiting for review.
View

Contract Required TAT: 1 day

Penalty Assessment:

Originator:	Catherine Dover
Inquiry Date:	7/19/2010
Client:	CH2M HILL, INC.
Project Name:	CTO-081 SITE 69/289017.SA.DM/N62470-08-D-1000
Client Contact:	GWEN BUCKLEY
Work Order(s):	
1003029	
1003032	
1003089	
Required Response Date:	7/20/2010
Department(s):	
Inorganics	
Categories(s):	
Other	
Questions/Issues:	Please see attached e-mail copy requesting a response for why the samples were re-prepped.
Resolution:	

SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Preparation Blank Matrix (soil/water): WATER Run 3/9-3/10

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M	
Aluminum	200.0	U	200.0	U	200.0	U	200.0	U	200.000	U	P	
Antimony	10.0	U	6.0	B NQ+	6.8	B NQ+	5.1	B NQ+	10.000	U	P	
Arsenic	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P	
Barium	-0.4	B NQ	200.0	U	-0.4	B NQ	200.0	U	-0.490	B	P	NQ
Beryllium	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P	
Cadmium	5.0	U	5.0	U	5.0	U	5.0	U	-0.515	B	P	NQ
Calcium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	5000.000	U	P	
Chromium	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P	
Cobalt	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P	
Copper	5.0	U	5.0	U	5.0	U	2.7	B ✓	5.000	U	P	
Iron	100.0	U	22.3	B NQ	100.0	U	26.9	B NQ	100.000	U	P	
Lead	3.0	U	3.0	U	3.0	U	3.0	U	3.000	U	P	
Magnesium	5000.0	U	32.4	B ✓	14.2	B ✓	38.1	B ✓	5000.000	U	P	
Manganese	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P	
Mercury	0.200	U	0.200	U	0.200	U	-0.106	B NQ	0.200	U	CV	
Nickel	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P	
Potassium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	5000.000	U	P	
Selenium	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P	
Silver	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P	
Sodium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	5000.000	U	P	
Thallium	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P	
Vanadium	20.0	U	20.0	U	20.0	U	20.0	U	20.000	U	P	
Zinc	20.0	U	20.0	U	20.0	U	20.0	U	1.546	B	P	

GW02 GW14 ○ GW02DW ○
~~GW02D~~ GW14IW GW09 ○
GW12DW GW14DW GW11 ○
GW13 ○
GW13IW ○

✓ flag as noted in report

SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1 (4)	C	2 (5)	C	3 (6)	C	Preparation Blank	C	M
Aluminum			200.0	U	200.0	U	96.3	B			P
Antimony			5.2	B	7.0	B	3.2	B			P
Arsenic			10.0	U	10.0	U	10.0	U			P
Barium			200.0	U	200.0	U	-0.6	B			P
Beryllium			0.3	B	0.4	B	0.5	B			P
Cadmium			0.4	B	0.5	B	5.0	U			P
Calcium			5000.0	U	5000.0	U	5000.0	U			P
Chromium			10.0	U	10.0	U	10.0	U			P
Cobalt			5.0	U	5.0	U	5.0	U			P
Copper			2.4	B	1.5	B	-3.4	B			P
Iron			26.7	B	33.6	B	100.0	U			P
Lead			3.0	U	3.0	U	3.0	U			P
Magnesium			48.4	B	53.5	B	5000.0	U			P
Manganese			10.0	U	10.0	U	10.0	U			P
Mercury			-0.119	B	0.200	U	0.200	U			CV
Nickel			5.0	U	5.0	U	5.0	U			P
Potassium			5000.0	U	5000.0	U	5000.0	U			P
Selenium			5.0	U	5.0	U	5.0	U			P
Silver			5.0	U	5.0	U	5.0	U			P
Sodium			5000.0	U	5000.0	U	472.6	B			P
Thallium			10.0	U	10.0	U	10.0	U			P
Vanadium			20.0	U	20.0	U	20.0	U			P
Zinc			20.0	U	20.0	U	20.0	U			P

NQ NQ NQ NQ ✓ ✓

GW02DW
GW09
GW11
GW13
GW13IW

none assoc

✓ flag as noted in report

SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L Run 3/30

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum	200.0	U	93.0	B NQ	65.1	B NQ					P
Antimony	10.0	U	10.0	U	10.0	U					P
Arsenic	10.0	U	10.0	U	10.0	U					P
Barium	-0.5	B NQ	200.0	U	-0.4	B NQ					P
Beryllium	0.2	B ✓	0.8	B See ICB	0.6	B See ICB					P
Cadmium	5.0	U	0.5	B NQ	5.0	U					P
Calcium	121.2	B ✓	238.9	B See ICB	217.0	B See ICB					P
Chromium	10.0	U	10.0	U	10.0	U					P
Cobalt	5.0	U	5.0	U	5.0	U					P
Copper	5.0	U	-1.6	B NQ	-1.6	B NQ					P
Iron	100.0	U	100.0	U	100.0	U					P
Lead	3.0	U	3.0	U	2.0	B NQ					P
Magnesium	5000.0	U	47.2	B ✓	20.6	B ✓					P
Manganese	10.0	U	10.0	U	10.0	U					P
Nickel	5.0	U	5.0	U	5.0	U					P
Potassium	5000.0	U	5000.0	U	5000.0	U					P
Selenium	5.0	U	5.0	U	5.0	U					P
Silver	5.0	U	-1.6	B NQ	-1.4	B NQ					P
Sodium	5000.0	U	5000.0	U	5000.0	U					P
Thallium	10.0	U	10.0	U	10.0	U					P
Vanadium	20.0	U	20.0	U	20.0	U					P
Zinc	20.0	U	20.0	U	20.0	U					P

GW12 ✓ flag as noted on report

SW846 - METALS

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

IR69-GW02S

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	2403.2930		515.2351		2000.00	94.4		P
Antimony	75 - 125	476.1531		10.0000	U	500.00	95.2		P
Arsenic	75 - 125	40.0786		10.0000	U	40.00	100.2		P
Barium	75 - 125	1954.8510		21.6290	B	2000.00	96.7		P
Beryllium	75 - 125	47.1230		5.0000	U	50.00	94.2		P
Cadmium	75 - 125	46.9821		5.0000	U	50.00	94.0		P
Chromium	75 - 125	194.6945		1.7780	B	200.00	96.5		P
Cobalt	75 - 125	479.1793		5.0000	U	500.00	95.8		P
Copper	75 - 125	248.8600		5.0000	U	250.00	99.5		P
Iron		4924.6310		4201.1400		1000.00	72.3		P
Lead	75 - 125	19.7215		3.0000	U	20.00	98.6		P
Manganese	75 - 125	621.3145		151.6473		500.00	93.9		P
Mercury	75 - 125	1.1000		0.2000	U	1.00	110.0		CV
Nickel	75 - 125	476.9123		1.4122	B	500.00	95.1		P
Selenium	75 - 125	5.0000	U	3.8181	B	10.00	0.0	N	P J/R
Silver	75 - 125	48.1360		5.0000	U	50.00	96.3		P
Thallium	75 - 125	52.0768		10.0000	U	50.00	104.2		P
Vanadium	75 - 125	518.0977		26.0188		500.00	98.4		P
Zinc	75 - 125	507.1811		35.7578		500.00	94.3		P

Comments:

SW846 - METALS

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

IR69-GW02SD

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	2468.5690		515.2351		2000.00	97.7		P
Antimony	75 - 125	489.6524		10.0000	U	500.00	97.9		P
Arsenic	75 - 125	39.1054		10.0000	U	40.00	97.8		P
Barium	75 - 125	2001.2530		21.6290	B	2000.00	99.0		P
Beryllium	75 - 125	48.8681		5.0000	U	50.00	97.7		P
Cadmium	75 - 125	48.4665		5.0000	U	50.00	96.9		P
Chromium	75 - 125	201.4714		1.7780	B	200.00	99.8		P
Cobalt	75 - 125	497.9191		5.0000	U	500.00	99.6		P
Copper	75 - 125	251.4649		5.0000	U	250.00	100.6		P
Iron		5150.1780		4201.1400		1000.00	94.9		P
Lead	75 - 125	20.3085		3.0000	U	20.00	101.5		P
Manganese	75 - 125	645.5552		151.6473		500.00	98.8		P
Mercury	75 - 125	1.0800		0.2000	U	1.00	108.0		CV
Nickel	75 - 125	490.8456		1.4122	B	500.00	97.9		P
Selenium	75 - 125	5.0000	U	3.8181	B	10.00	0.0	N	P J/R
Silver	75 - 125	48.7861		5.0000	U	50.00	97.6		P
Thallium	75 - 125	52.2874		10.0000	U	50.00	104.6		P
Vanadium	75 - 125	535.9563		26.0188		500.00	102.0		P
Zinc	75 - 125	485.8066		35.7578		500.00	90.0		P

Comments:

SW846 - METALS

5B

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

IR69-GW02A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Selenium		14.33		3.82	B	10.0	105.1		P

Note

Comments:

SW846 - METALS

6

DUPLICATES

SAMPLE NO.

IR69-GW02D

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum	200.0	515.2351		526.9990		2.3		P
Antimony		10.0000	U	10.0000	U			P
Arsenic		10.0000	U	10.0000	U			P
Barium		21.6290	B	21.2973	B	1.5		P
Beryllium		5.0000	U	5.0000	U			P
Cadmium		5.0000	U	5.0000	U			P
Calcium	5000.0	7900.9380		7784.8100		1.5		P
Chromium		1.7780	B	2.2410	B	23.0		P
Cobalt		5.0000	U	5.0000	U			P
Copper		5.0000	U	5.0000	U			P
Iron		4201.1400		4869.8481		14.7		P
Lead		3.0000	U	3.0000	U			P
Magnesium		676.7611	B	673.5980	B	0.5		P
Manganese		151.6473		156.3278		3.0		P
Mercury		0.2000	U	0.2000	U			CV
Nickel		1.4122	B	1.5529	B	9.5		P
Potassium		150.0584	B	154.2583	B	2.8		P
Selenium		3.8181	B	5.0000	U	200.0		P
Silver		5.0000	U	5.0000	U			P
Sodium	5000.0	21358.4100		21076.0600		1.3		P
Thallium		10.0000	U	10.0000	U			P
Vanadium	20.0	26.0188		27.3186		4.9		P
Zinc	20.0	35.7578		59.4519		49.8 *		P

SW846 - METALS

9
ICP SERIAL DILUTIONS

SAMPLE NO.

IR69-GW02L

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	515.24		359.60	B	30.2		P
Antimony	10.00	U	50.00	U			P
Arsenic	10.00	U	50.00	U			P
Barium	21.63	B	19.03	B	12.0	E	P
Beryllium	5.00	U	25.00	U			P
Cadmium	5.00	U	25.00	U			P
Calcium	7900.94		8301.85	B	5.1		P
Chromium	1.78	B	50.00	U	100.0		P
Cobalt	5.00	U	25.00	U			P
Copper	5.00	U	25.00	U			P
Iron	4201.14		4231.18		0.7		P
Lead	3.00	U	15.00	U			P
Magnesium	676.76	B	661.12	B	2.3		P
Manganese	151.65		149.98		1.1		P
Nickel	1.41	B	25.00	U	100.0		P
Potassium	150.06	B	137.36	B	8.5		P
Selenium	3.82	B	25.00	U	100.0		P
Silver	5.00	U	25.00	U			P
Sodium	21358.41		20546.33	B	3.8		P
Thallium	10.00	U	50.00	U			P
Vanadium	26.02		25.36	B	2.5		P
Zinc	35.76		34.16	B	4.5		P

J/UJ

Serial Dilution

Metals

The serial dilution analysis exhibited a non-compliant %D for one analyte. Specific action is noted in the following table.

SD	Analyte	Samples Affected	%D	Q Flag	Q Code
IR69-GW02-10A	barium	all field samples	12	J/UJ	SD

Identification/Quantitation

VOA

Sample IR69-GW02-10A, IR69-GW02DW-10A and IR69-GW13IW-10A required a dilution to obtain results within the calibration range. All E-flagged results are excluded in favor of the corresponding D-flagged results from the dilution analysis. All results except corresponding D-flagged results in the dilution analysis are excluded in favor of the results reported from the undiluted analysis.

SVOA

All SVOA compounds that were also analyzed by SVOA-SIM were excluded due to redundant analysis, qualifier code: RE.

One of the LCS samples was not spiked; therefore all samples associated with this LCS were re-analyzed. The re-extraction was preformed out of holding time. Within the batch of samples associated with this LCS was a matrix spike and matrix spike duplicate. Recoveries for these samples were within criteria. Therefore the initial SIM analysis of IR69-EB01-030110-GW, IR69-EB01-030210-GW, IR69-GW02-10A, IR69-GW09-10A, IR69-GW13-10A, IR69-GW13IW-10A, IR69-GW02DW-10A and IR69-GW11-10A was used and the re-analysis was excluded.

Pesticides/PCBs

All positive results reported with a P flag to indicate column quantitation %Ds greater than 40% are qualified as estimated J with a qualifier code of 2C.

Metals

All results reported between the IDL and the RL (B flagged by laboratory) were qualified as estimated J. No qualification code was required.

Summary of Data Qualifications

VOA

Sample ID	Compound	Results	Q-Flag	Q Code
all samples	acetone 2-butanone	+/-	J/R	ICL
IR69-GW12-10A, IR69-GW12DW-10A, IR69-GW14-10A, IR69-GW14IW-10A, IR69-GW14DW-10A, IR69-EB01-022710-GW, IR69-EB01-022810-GW, IR69-EB01-022810-SB, IR69-FB01-030310, IR69-TB01-030310, IR69-TB01-030110	dichlorodifluoromethane trichlorofluoromethane 1,1,2-trichloro-1,2,2-trifluoroethane 1,1,1-trichloroethane carbon tetrachloride bromodichloromethane	+/-	J/UJ	CCH
IR69-GW09-10A	bromomethane methyl acetate 4-methyl-2-pentanone 2-hexanone	+/-	J/UJ	CCL
IR69-GW09-10A	1,2,4-trichlorobenzene	+	U at RL	MBL
IR69-GW02-10A, IR69-GW02DW-10A, IR69-GW11-10A, IR69-GW14IW-10A	acetone	+	U at RL	TBL
IR69-GW02DW-10A	methylene chloride	+	U at RL	TBL
IR69-GW02-10A	benzene	+	U at RL	EBL
IR69-GW02-10A, IR69-GW02DW-10A, iR69-GW09-10A, IR69-GW13-10A	toluene	+	U at RL	EBL
IR69-GW11-10A	cis-1,2-dichloroethene	+	U at RL	TBL
IR69-GW14DW-10A	toluene	+	U	FBL
IR69-GW14-10A	acetone	+	U	EBL
IR69-GW02-10A	cis-1,2-dichloroethene	+/-	J/UJ	MSL
IR69-GW02-10A, IR69-GW02DW-10A, IR69-GW13IW-10A	all E-flagged compounds	+/-	exclude	DL
IR69-GW02-10ADL, IR69-GW02DW-10ADL, IR69-GW13IW-10ADL	all except corresponding D-flagged compounds	+/-	exclude	DL

SVOA

Sample ID	Compound	Results	Q-Flag	Q Code
IR69-GW02-10A, IR69-GW02DW-10A, IR69-GW09-10A, IR69-GW11-10A, IR69-GW13-10A, IR69-GW13IW-10A, IR69-EB01-030110-GW	caprolactam	+/-	J/UJ	CCH
IR69-GW12-10A-SIM	fluoranthene	+	U at RL	EBL
IR69-GW12-10A-SIM	pyrene	+	U at RL	EBL
IR69-EB01-030110-GW-SIMRE,IR69-EB01-030210-GW-SIMRE, IR69-GW02-10A-SIMRE, IR69-GW09-10A-SIMRE, IR69-GW13-10A-SIMRE, IR69-GW13IW-10A-SIMRE, IR69-GW11-10A-SIMRE, IR69-GW02DW-10A-SIMRE	all results	+/-	exclude	RE
all SVOA compounds also ran as SIM-SVOA	all results	+/-	exclude	RE

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

JR64 EB01-022710-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 WM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-06

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-06JA70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

WM 081310

WM 072010

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRBY- EB01-022710-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-06

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-06JA70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude PC
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude PC
120-12-7	Anthracene	5.0	~~U~~ exclude PC
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude PC
129-00-0	Pyrene	5.0	~~U~~ exclude PC
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude PC
218-01-9	Chrysene	5.0	~~U~~ exclude PC
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude PC
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

LM 083010

LM 072010

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRM EB01-022810-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 WM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-07

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003029-07A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.1	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.1	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.1	U
98-86-2	Acetophenone	5.1	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.1	U
67-72-1	Hexachloroethane	5.1	U
98-95-3	Nitrobenzene	5.1	U
78-59-1	Isophorone	5.1	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.1	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.1	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.1	U
105-60-2	Caprolactam	5.1	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.1	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.1	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.1	U
91-58-7	2-Chloronaphthalene	5.1	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.1	U
606-20-2	2,6-Dinitrotoluene	5.1	U
208-96-8	Acenaphthylene	5.1	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.1	~~U~~ exclude RE

WM 081310

WM 072010

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69 EB01-022810-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-07

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003029-07A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.1	U
132-64-9	Dibenzofuran	5.1	U
84-66-2	Diethylphthalate	5.1	U
7005-72-3	4-Chlorophenyl-phenylether	5.1	U
86-73-7	Fluorene	5.1	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.1	U
101-55-3	4-Bromophenyl-phenylether	5.1	U
118-74-1	Hexachlorobenzene	5.1	U
1912-24-9	Atrazine	5.1	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.1	~~U~~ exclude RE
120-12-7	Anthracene	5.1	~~U~~ exclude RE
86-74-8	Carbazole	5.1	U
84-74-2	Di-n-butylphthalate	5.1	U
206-44-0	Fluoranthene	5.1	~~U~~ exclude RE
129-00-0	Pyrene	5.1	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.1	U
91-94-1	3,3'-Dichlorobenzidine	5.1	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.1	U
56-55-3	Benzo(a)anthracene	5.1	~~U~~ exclude RE
218-01-9	Chrysene	5.1	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.1	U
205-99-2	Benzo(b)fluoranthene	5.1	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.1	U
50-32-8	Benzo(a)pyrene	5.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.1	U
53-70-3	Dibenzo(a,h)anthracene	5.1	U
191-24-2	Benzo(g,h,i)perylene	5.1	U

(1) - Cannot be separated from Diphenylamine

LM 081310

LM 072010

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRG- EB01-022810-SB

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-08

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003029-08JA70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.1	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.1	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.1	U
98-86-2	Acetophenone	5.1	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.1	U
67-72-1	Hexachloroethane	5.1	U
98-95-3	Nitrobenzene	5.1	U
78-59-1	Isophorone	5.1	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.1	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.1	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.1	U
105-60-2	Caprolactam	5.1	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.1	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.1	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.1	U
91-58-7	2-Chloronaphthalene	5.1	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.1	U
606-20-2	2,6-Dinitrotoluene	5.1	U
208-96-8	Acenaphthylene	5.1	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.1	~~U~~ exclude RE

LM 081310

LM 072010

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR64- EB01-022810-SB

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-08

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003029-08JA70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.1	U
132-64-9	Dibenzofuran	5.1	U
84-66-2	Diethylphthalate	5.1	U
7005-72-3	4-Chlorophenyl-phenylether	5.1	U
86-73-7	Fluorene	5.1	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.1	U
101-55-3	4-Bromophenyl-phenylether	5.1	U
118-74-1	Hexachlorobenzene	5.1	U
1912-24-9	Atrazine	5.1	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.1	~~U~~ exclude RE
120-12-7	Anthracene	5.1	~~U~~ exclude RE
86-74-8	Carbazole	5.1	U
84-74-2	Di-n-butylphthalate	5.1	U
206-44-0	Fluoranthene	5.1	~~U~~ exclude RE
129-00-0	Pyrene	5.1	~~U~~
85-68-7	Butylbenzylphthalate	5.1	U
91-94-1	3,3'-Dichlorobenzidine	5.1	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.1	U
56-55-3	Benzo(a)anthracene	5.1	~~U~~ exclude RE
218-01-9	Chrysene	5.1	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.1	U
205-99-2	Benzo(b)fluoranthene	5.1	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.1	U
50-32-8	Benzo(a)pyrene	5.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.1	U
53-70-3	Dibenzo(a,h)anthracene	5.1	U
191-24-2	Benzo(g,h,i)perylene	5.1	U

(1) - Cannot be separated from Diphenylamine

WM 081310

WM 072010

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRM EB01-030110-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-18

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-18A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	~~U~~ UJ CCH
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

LM 081310

LM 072010

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRGA EB01-030110-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 WM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-18

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-18A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

WM 081310

WM 072010

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRG- EB01-030210-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-19

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003029-19JA70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/21/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.4	U
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.4	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.4	U
98-86-2	Acetophenone	5.4	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.4	U
67-72-1	Hexachloroethane	5.4	U
98-95-3	Nitrobenzene	5.4	U
78-59-1	Isophorone	5.4	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.4	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.4	~~U~~ exclude PE
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.4	U
105-60-2	Caprolactam	5.4	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.4	~~U~~ exclude PE
77-47-4	Hexachlorocyclopentadiene	5.4	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.4	U
91-58-7	2-Chloronaphthalene	5.4	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.4	U
606-20-2	2,6-Dinitrotoluene	5.4	U
208-96-8	Acenaphthylene	5.4	~~U~~ exclude PE
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.4	~~U~~ exclude PE

UM 072010

UM 082310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRM- EB01-030210-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 UM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-19

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003029-19JA70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/21/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.4	U
132-64-9	Dibenzofuran	5.4	U
84-66-2	Diethylphthalate	5.4	U
7005-72-3	4-Chlorophenyl-phenylether	5.4	U
86-73-7	Fluorene	5.4	~~U~~ exclude RE
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.4	U
101-55-3	4-Bromophenyl-phenylether	5.4	U
118-74-1	Hexachlorobenzene	5.4	U
1912-24-9	Atrazine	5.4	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.4	~~U~~ exclude RE
120-12-7	Anthracene	5.4	~~U~~ exclude RE
86-74-8	Carbazole	5.4	U
84-74-2	Di-n-butylphthalate	5.4	U
206-44-0	Fluoranthene	5.4	~~U~~ exclude RE
129-00-0	Pyrene	5.4	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.4	U
91-94-1	3,3'-Dichlorobenzidine	5.4	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.4	U
56-55-3	Benzo(a)anthracene	5.4	~~U~~ exclude RE
218-01-9	Chrysene	5.4	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.4	U
205-99-2	Benzo(b)fluoranthene	5.4	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.4	U
50-32-8	Benzo(a)pyrene	5.4	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.4	U
53-70-3	Dibenzo(a,h)anthracene	5.4	U
191-24-2	Benzo(g,h,i)perylene	5.4	U

(1) - Cannot be separated from Diphenylamine

UM 072010

UM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69 FB01-030310

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-09

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-09A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

LM 072010

LM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69- FB01-030310

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-09

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-09A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ include RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ include RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	6.5	
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	1.8	J
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

LM 072010

LM 082310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

~~IR69~~ IR69-GW02-10A
LM 07/2010

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 07/2010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-12

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-12A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	~~U~~ UJ CCH
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

LM 08/23/10

LM 07/2010

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02-104

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-12

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-12A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U exclude RE
120-12-7	Anthracene	5.0	U exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U exclude RE
129-00-0	Pyrene	5.0	U exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U exclude RE
218-01-9	Chrysene	5.0	U exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02DW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-13

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-13A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	~~U~~ UJ CCH
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

LM 072010

LM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02DW-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-13

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-13A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U exclude RE
120-12-7	Anthracene	5.0	U exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U exclude RE
129-00-0	Pyrene	5.0	U exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U exclude RE
218-01-9	Chrysene	5.0	U exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 VM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-14

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-14A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N) __ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	~~U~~ US CCH
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

VM 072010

VM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-14

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-14A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-15

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-15A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	~~U~~ UJ CCH
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

UM 072010

UM 082310

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11-104

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-15

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-15A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

WM 072010

WM 083010

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW12-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-01A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

WM 072010

WM 08310

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW12-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-01A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW12DW-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-02

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-02A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

LM 072010

LM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW12DW-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-02

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-02A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

LM 072010

LM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13 -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-16

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-16A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	~~U~~ UJ CCH
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

LM 072010

LM 082310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-16

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-16A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

LM 081310

LM 072010

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13IW-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 WM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-17

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-17A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	~~U~~ UJ CLH
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

WM 072010

WM 081310

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13IW-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 WM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-17

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-17A70

Level: (low/med) LOW Date Received: 03/05/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/08/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/20/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

WM 072010

WM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW14-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-03A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

LM 072010

LM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW14-104

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-03A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

LM 072010

LM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW14DW -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-05A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

LM 081310

LM 072010

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW14DW-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-05A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

LM 072010

LM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW14IW-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029 LM 072010

Matrix: (soil/water) WATER Lab Sample ID: 1003029-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-04A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

LM 072010

LM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW14IW-1 04

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix: (soil/water) WATER Lab Sample ID: 1003029-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003029-04A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/05/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132*64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U exclude RE
120-12-7	Anthracene	5.0	U exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U exclude RE
129-00-0	Pyrene	5.0	U exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U exclude RE
218-01-9	Chrysene	5.0	U exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

SW846 - METALS
-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1R9- EB01-022810-GW

JAC 7/10

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003029

Matrix (soil/water): WATER Lab Sample ID: 1003029-07

Level (low/med): LOW Date Received: 3/4/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U	~~B~~	P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	1.7	~~B~~	J	P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	5.0	U	~~N~~	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	5000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	3.0	~~B~~	~~J~~ J	P

JAC 8/10

JAC 7/10

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

DataQual

Environmental Services, LLC

CH2M HILL
5700 Cleveland Street
Suite 101
Virginia Beach, VA 23462

July 30, 2010
CompuChem & TestAmerica-Savannah
SDG# 1003030 & CLJ55553-2
MCB Camp Lejeune, CTO-81 Site 69

Dear Ms. Buckley,

The following Data Validation report is provided as requested for the parameters noted in the table below for SDG #s 1003030 & CLJ55553-2. The data validation was performed in accordance with the SW846 Methods 8260B for volatiles, 8270C and 8270C-SIM for semivolatiles and PAH, 8081A for pesticides, 8082 for PCBs, 8141A for organophosphorous pesticides (OPP), 6010B/7470A/7471A for metals and mercury and good professional judgment. Also used in the validation of these samples were the National Functional Guidelines for Organic Data Review (June, 2008) and the National Functional Guidelines for Inorganic Data Review (October, 2004), as applicable. All areas of concern are discussed in the body of the report and a summary of data qualifications is provided.

Sample ID	Lab ID	Matrix	VOA	SVOA	LL PAH	Pest	PCBs	OPP	Metals
IR69-SS02-10A	1003030-01	soil	X	X	X	X	X	X	X
IR69-SS02-10A MS	1003030-01MS	soil	X	X		X	X	X	X
IR69-SS02-10A MSD	1003030-01MSD	soil	X	X		X	X	X	X

The samples were evaluated based on the following criteria:

- Data Completeness *
- Technical Holding Times *
- GC/MS Tunes *
- GC Performance *
- Initial/Continuing Calibrations
- CRI Standards
- Interference Check Sample *
- Blanks
- Internal Standards *
- Surrogates *
- Laboratory Control Samples
- Matrix Spike Recoveries
- Matrix Duplicate RPDs
- Post Digestion Spike Recoveries *

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- Serial Dilutions
- Field Duplicates NA
- Identification/Quantitation
- Reporting Limits *
- Tentatively Identified Compounds NA

* - indicates that no qualifications were required based on this criteria

Overall Evaluation of Data/Potential Usability Issues

A summary of qualifications applied to the sample results are noted below for the fractions validated. Specific details regarding qualification of the data are addressed in the Specific Evaluation section of this narrative. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte the validator has chosen the qualifier that best indicates possible bias in the results and flagged the data accordingly. However, information regarding all quality control issues is provided in the body of the report and on the qualification summary page. Please note that when a compound or analyte is flagged due to blank contamination the BL qualifier code takes precedence over all other qualifier codes except a code that explains rejected data.

VOA

Three sample compounds were qualified as estimated based on high %RSDs and %Ds which were exhibited in the initial and continuing calibrations.

Blank contamination was exhibited in the method and/or QC blanks that resulted in qualifications to the data.

The matrix spike and matrix spike duplicate exhibited low recoveries for one compound that resulted in qualifications to the associated sample.

SVOA

Several sample compounds were qualified as estimated based on high %Ds which were exhibited in the continuing calibrations.

Blank contamination was exhibited in the method and QC blanks that resulted in qualifications to the data.

The matrix spike and matrix spike duplicate exhibited low recoveries for several compounds that resulted in qualifications to the associated sample.

Pesticides/PCBs

The GC performance standards for compound breakdown exhibited non-compliant results for 4, 4'-DDT. Qualification/rejection of the data was required.

Several target compounds exhibited non-compliant %Ds in the associated continuing calibration standards. Qualification rejection of the data was required.

The field sample was cleaned up and reanalyzed due to non-compliant calibration %Ds. Results and calibration %Ds were similar in the RE analysis. The RE was excluded in favor of the results reported from the original analysis.

Some of the reported positive results exhibited column quantitation %Ds that were >40% (P flagged by the laboratory). These results were qualified as estimated J.

Organophosporous Pesticides (OPP)

One compound was qualified in the sample due to non-compliant continuing calibration %Ds.

Some of the target compounds were recovered below the QC limits in the MS/MSD pair and in the laboratory control samples. Qualifications were required in the sample.

Metals

The associated CRI standard exhibited a recovery for one analyte that was below the method QC limit of 70% to 130%. Qualification was required in the sample.

Qualifications were required in the samples due to laboratory blank contamination.

One analyte required qualification in the samples due to non-compliant matrix duplicate results.

Two analytes required qualification in the samples due to non-compliant serial dilution %Ds.

All results reported between the MDL and the RL (B flagged by the laboratory) were qualified as estimated J.

Specific Evaluation of Data

Data Completeness

The OPP fraction required resubmissions due to missing compounds on the MS/MSD and LCS summary forms. Please note: All field sample and QC blank IDs were missing the

first four (IR69) and/or the last four (-10A) characters. The characters were added to the Form 1s in the DV reports by the data validator.

Technical Holding Times

According to chain of custody records, sampling was performed on 2/28/10 and samples were received at the laboratory 3/04/10. All sample preparation and analysis was performed within method holding time requirements.

GC Performance

Pesticides/PCBs

The breakdown standards were non-compliant (>20%) for 4, 4'-DDT. The reported positive result for 4, 4'-DDD was qualified as NJ, presumptively present at an estimated concentration in the field sample. The reported non-detect result for 4, 4'-DDT was rejected R in the field sample. The qualifier code is OT.

Initial/Continuing Calibration

VOA

Calibration standards exhibited %Ds that were non-compliant. A summary of these non-compliances and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	RRF, %RSD, %D	Samples	Q Flag	Q Code
IC 2/09/10	1,2-dichloropropane	18.140	all samples	JUJ	ICH
CC 3/04/10	trichlorofluoromethane	23.53	all samples	JUJ	CCH

SVOA

Calibration standards exhibited %Ds that were non-compliant. A summary of these non-compliances and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	RRF, %RSD, %D	Samples	Q Flag	Q Code
CC 3/18/10	caprolactam	24.40	all samples	JUJ	CCH

OPP

Calibration standards exhibited %Ds that were non-compliant. Qualification was required for one compound due to a decrease in response. A summary of these non-compliances and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	%D	Samples	Q Flag	Q Code
CCV 680-162947-1 2	naled	-77.7	all samples	J UJ	CCL

Pesticides /PCBs

Calibration standards exhibited %Ds that were non-compliant due to a decrease in response. A summary of these non-compliances and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	RRF, %RSD, %D	Samples	Q Flag	Q Code
206UINDC3VL & 214UINDC3VN	4,4'-DDT*	-91.96 -99.31	IR69-SB02-08-10-10A	J R	CCL
	heptachlor methoxychlor endrin ketone	-23.94 -22.90 -70.48 -68.31 -38.04 -36.06		J UJ	CCL

*final qualifier code for 4, 4'-DDT is OT

CRI Standards

Metals

The CRI standard associated with the field sample exhibited a low recovery for nickel (67%). The reported non-detect result in sample IR69-SS02-10A was qualified as estimated UJ with a qualifier code of OT.

Blanks

VOA

The associated method and/or QC blanks exhibited contamination as noted in the following table. Compounds for which there was no action required, are not included in the following table.

Blank ID	Compound	Concentration	Reporting Limit	Action Level	Q Flag
IR69-EB01-030410-SS	2-butanone	1.8J ug/L	2.5 ug/L	all soils < RL	U at RL

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Q Code
IR69-SS02-10A	2-butanone	U at RL	EBL

SVOA

The associated method and/or QC blanks exhibited contamination as noted in the following table. Compounds for which there was no action required, are not included in the following table.

Blank ID	Compound	Concentration	Reporting Limit	Action Level	Q Flag
VBLKLV-SIM	naphthalene	1.4J ug Kg	8.3 ug Kg	all soils < RL	U at RL
	2-methylnaphthalene	0.83J	8.3	all soils < RL	U at RL

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Q Code
IR69-SS02-10A-SIM	naphthalene	U at RL	MBL
IR69-SS02-10A-SIM	2-methylnaphthalene	U at RL	MBL

Metals

Contamination was noted in associated blanks and qualification was required in the associated samples. Required action is noted in the following tables.

Blank ID	Analyte	Concentration	Action Level	Q Flag	Q Code
ICB	magnesium	35.9B ug L	RL	U	MBL
PBS	calcium	3.764B mg Kg	RL	U	MBL

Associated samples and required qualifications are noted in the following table.

Sample ID	Analyte	Q Flag	Q Code
IR69-SS02-10A	calcium	U at RL	MBL
IR69-SS02-10A	magnesium	U at RL	MBL

Laboratory Control Samples

OPP

The laboratory control sample associated with the samples in this SDG exhibited a low recovery for the compound demeton-s (22%) and for the compound monochrotophos (26%). These compounds are qualified as estimated J/UJ in the field sample with a qualifier code of BSL. However, the compounds were also at issue in the MS/MSD pair therefore, please note that MSL is the final qualifier code.

Matrix Spikes

VOA

A matrix spike and matrix spike duplicate were submitted for sample IR69-SS02-10A; low recoveries were exhibited for cis-1, 2-dichloroethene at 62% and 50% (QC limit 70-125%); therefore results were qualified as estimated (JUJ) in the associated sample.

SVOA

A matrix spike and matrix spike duplicate were submitted for sample IR69-SS02-10A; the following compounds exhibited non-compliant recoveries, qualifications were applied to the associated sample as stated in the table below.

MS/MSD Associated Sample ID	Non-compliant Spiked Compound	MS % Rec	MSD % Rec	QC Limit	Qualifier	Q-Code
IR69-SS02-10A	4-chloroaniline	11	7	26-129	J/UJ	MSL
	3-nitroaniline	31	16	43-100	J/UJ	
	4-nitroaniline	29	17	42-100	J/UJ	
	3,3-dichlorobenzidine	0	0	21-100	J/R	

OPP

The MS/MSD pair of sample IR69-SS02-10A exhibited 0% recovery for the compound Demeton-s. This compound is rejected in the native sample only with a MSL qualifier code.

The MS/MSD pair of sample IR69-SS02-10A exhibited low (13%/0%) recovery for the compound monochrotophos. This compound is qualified as estimated J/UJ in the native sample only with a MSL qualifier code.

Matrix Duplicates

Metals

One of the associated matrix duplicate analyses exhibited a non-compliant RPD for one analyte. Specific action is noted in the following table.

MD	Analyte	Samples Affected	RPD	Q Flag	Q Code
IR69-SS02-10A	manganese	all field samples	34.3	J/UJ	MDP

Serial Dilution

Metals

The serial dilution analysis exhibited a non-compliant %D for two analytes. Specific action is noted in the following table.

SD	Analyte	Samples Affected	%D	Q Flag	Q Code
IR69-SS02-10A	barium calcium*	all field samples	16.8 10.1	J/UJ	SD

*calcium was flagged U at the RL due to blank contamination and then J due to serial dilution non-compliance with the final qualifier code of MBL to indicate why the result was changed from a detect to a non-detect

Identification/Quantitation

Pesticides/PCBs

The RE of sample IR69-SS02-10A was excluded in favor of the results reported from the original analysis of the sample, qualifier code RE.

All positive results reported with a P flag to indicate column quantitation %Ds greater than 40% are qualified as estimated J with a qualifier code of 2C.

Metals

All results reported between the IDL and the RL (B flagged by laboratory) were qualified as estimated J. No qualification code was required.

A summary of qualifications required is provided on the following page. Please do not hesitate to contact DataQual ES with any questions regarding this validation report.

Sincerely,

Laura Maschhoff
President

Jacqueline Cleveland
Vice-President

Summary of Data Qualifications

VOA

Sample ID	Compound	Results	Q-Flag	Q Code
all samples	1,2-dichloropropane	- -	J UJ	ICH
all samples	trichlorofluoromethane	- -	J UJ	CCH
IR69-SS02-10A	2-butanone	-	U at RL	EBL
IR69-SS02-10A	cis-1,2-dichloroethene	- -	J UJ	MSL

SVOA

Sample ID	Compound	Results	Q-Flag	Q Code
all samples	caprolactam	- -	J UJ	CCH
IR69-SS02-10A-SIM	naphthalene	-	U at RL	MBL
IR69-SS02-10A-SIM	2-methylnaphthalene	-	U at RL	MBL
IR69-SS02-10A	4-chloroaniline 3-nitroaniline 4-nitroaniline 3,3-dichlorobenzidine	- -	J UJ	MSL

Pesticides/PCBs

Sample ID	Compound	Results	Q-Flag	Q Code
IR69-SS02-10A RE	all compounds	- -	exclude	RE
IR69-SS02-10A	4,4'-DDE	-	NJ	OT
IR69-SS02-10A	4,4'-DDT	- -	J R	OT
IR69-SS02-10A	4,4'-DDT*	- -	J R	CCL
	heptachlor methoxychlor endrin ketone	- -	J UJ	CCL
all samples	all compounds	- P	J	2C**

*final qualifier code for 4, 4'-DDT is OT **2C qualifier code was applied only if no other non-compliant QC criteria resulted in flagging

Organophosphorous Pesticides

Sample ID	Compound	Results	Q-Flag	Q Code
IR69-SS02-10A	naled	- -	J UJ	CCL
IR69-SS02-10A	demeton-s	-	R	MSL
IR69-SS02-10	monochrotophos	- -	J UJ	MSL
IR69-SS02-10A	demeton-s	- -	J UJ	BSL*
IR69-SS02-10A	monochrotophos	- -	J UJ	BSL*

*final qualifier code is MSL

Summary of Data Qualifications

Metals

Sample ID	Analyte	Results	Q-Flag	Q Code
IR69-SS02-10A	nickel	- -	J UJ	OT
IR69-SS02-10A	calcium	- B	U at RL	MBL
IR69-SS02-10A	magnesium	- B	U at RL	MBL
all field samples	manganese	- -	J UJ	MDP
all field samples	barium calcium*	- -	J UJ	SD
all samples	all analytes	- B	J	

*calcium was flagged U at the RL due to blank contamination and then J due to serial dilution non-compliance with the final qualifier code of MBL to indicate why the result was changed from a detect to a non-detect

Glossary of Qualification Flags and Abbreviations

Qualification Flags (Q-Flags)

U	not detected above the reported sample quantitation limit
J	estimated value
UJ	reported quantitation limit is qualified as estimated
R	result is rejected: the presence or absence of the analyte cannot be verified
D	result value is based on dilution analysis result
NJ	analyte has been tentatively identified, estimated value
L	analyte present, biased low
UL	not detected, quantitation limit is probably higher
K	analyte present, biased high

Inorganic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 10X the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL and the result is raised to the RL and flagged U.
R or J	The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator. (see NFG, Rev. date 10/04, p. 17 for extracted blanks (PB))

Organic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 5X (10X for common laboratory contaminants) the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is raised to the RL and flagged U.
U	The sample result for the blank contaminant is greater than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is flagged U at the reported value.

General Abbreviations

RL / MDL	reporting limit method detection limit
CRQL	contract required quantitation limit
Q Code	qualifier code
+	positive result
-	non-detect result

QUALIFIER CODE REFERENCE

Qualifier	Description
TN	Tune
BSI	Blank Spike LCS - High Recovery
BSH	Blank Spike LCS - Low Recovery
BD	Blank Spike Blank Spike Duplicate (LCS LCSD) Precision
BRI	Below Reporting Limit
ISI	Internal Standard - Low Recovery
ISH	Internal Standard - High Recovery
MSI	Matrix Spike and or Matrix Spike Duplicate - Low Recovery
MSH	Matrix Spike and or Matrix Spike Duplicate - High Recovery
MI	Matrix interference obscuring the raw data
MDP	Matrix Spike Matrix Spike Duplicate Precision
2S	Second Source - Bad reproducibility between tandem detectors
SSI	Spiked Surrogate - Low Recovery
SSH	Spiked Surrogate - High Recovery
SD	Serial Dilution Reproducibility
ICL	Initial Calibration - Low Relative Response Factors (RRF)
ICH	Initial Calibration - High Relative Response Factors (RRF)
ICB	Initial Calibration - Bad Linearity or Curve Function
CCI	Continuing Calibration - Low Recovery or %Difference
CCH	Continuing Calibration - High Recovery or %Difference
LD	Lab Duplicate Reproducibility
HT	Holding Time
PD	Pesticide Degradation
2C	Second Column - Poor Dual Column Reproducibility
LR	Concentration Exceeds Linear Range
BL	Blank Contamination (MBL, EBL, FBL, TBL)
RE	Redundant Result - due to Re-analysis or Re-extraction
DL	Redundant Result - due to Dilution
FD	Field Duplicate
OT	Other - explained in data validation report
%SOI	High moisture content

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS02-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030 LM 072310

Matrix: (soil/water) SOIL Lab Sample ID: 1003030-01

Sample wt/vol: 7.83(g/mL) G Lab File ID: 1003030-0159

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. 13 Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	3.7	U
74-87-3	Chloromethane	3.7	U
75-01-4	Vinyl Chloride	3.7	U
74-83-9	Bromomethane	3.7	U
75-00-3	Chloroethane	3.7	U
75-69-4	Trichlorofluoromethane	3.7	~~U~~ UJ CCH
75-35-4	1,1-Dichloroethene	3.7	U
75-15-0	Carbon disulfide	3.7	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	3.7	U
67-64-1	Acetone	93	
75-09-2	Methylene Chloride	3.7	U
156-60-5	trans-1,2-Dichloroethene	3.7	U
1634-04-4	Methyl-tert-butyl ether	3.7	U
75-34-3	1,1-Dichloroethane	3.7	U
156-59-2	cis-1,2-Dichloroethene	3.7	~~U~~ UJ MSL
78-93-3	2-butanone	9.2 ~~4.7~~	~~J~~ U EBL
67-66-3	Chloroform	3.7	U
71-55-6	1,1,1-Trichloroethane	3.7	U
56-23-5	Carbon Tetrachloride	3.7	U
71-43-2	Benzene	3.7	U
107-06-2	1,2-Dichloroethane	3.7	U
79-01-6	Trichloroethene	3.7	U
78-87-5	1,2-Dichloropropane	3.7	~~U~~ UJ ICH
75-27-4	Bromodichloromethane	3.7	U
10061-01-5	cis-1,3-Dichloropropene	3.7	U
108-10-1	4-Methyl-2-pentanone	9.2	U
108-88-3	Toluene	3.7	U
10061-02-6	trans-1,3-Dichloropropene	3.7	U
79-00-5	1,1,2-Trichloroethane	3.7	U
127-18-4	Tetrachloroethene	3.7	U
591-78-6	2-hexanone	9.2	U
124-48-1	Dibromochloromethane	3.7	U
106-93-4	1,2-Dibromoethane	3.7	U

FORM I VOA

LM 072010

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

TR69-SS02-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030 LIK 072810

Matrix: (soil/water) SOIL Lab Sample ID: 1003030-01

Sample wt/vol: 7.83(g/mL) G Lab File ID: 1003030-0159

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. 13 Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	3.7	U
100-41-4	Ethylbenzene	3.7	U
100-42-5	Styrene	3.7	U
75-25-2	Bromoform	3.7	U
98-82-8	Isopropyl Benzene	3.7	U
79-34-5	1,1,2,2-Tetrachloroethane	3.7	U
541-73-1	1,3-Dichlorobenzene	3.7	U
106-46-7	1,4-Dichlorobenzene	3.7	U
95-50-1	1,2-Dichlorobenzene	3.7	U
96-12-8	1,2-Dibromo-3-Chloropropane	3.7	U
120-82-1	1,2,4-Trichlorobenzene	3.7	U
1330-20-7	Xylene (total)	3.7	U
79-20-9	Methyl acetate	87	
110-82-7	Cyclohexane	3.7	U
108-87-2	Methylcyclohexane	3.7	U
108-38-3	m,p-Xylene (part of total)	7.3	U
95-47-6	o-Xylene (part of total)	3.7	U

FORM 1 VOA

LIK 072010

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS02MS-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix: (soil/water) SOIL Lab Sample ID: 0030414-MS1

Sample wt/vol: 10.62(g/mL) G Lab File ID: 0030414-MS159

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. 13 Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	24	
74-87-3	Chloromethane	28	
75-01-4	Vinyl Chloride	28	
74-83-9	Bromomethane	29	
75-00-3	Chloroethane	29	
75-69-4	Trichlorofluoromethane	32	
75-35-4	1,1-Dichloroethene	26	
75-15-0	Carbon disulfide	29	
76-13-1	1,1,2-trichloro-1,2,2-triflu	26	
67-64-1	Acetone	110	
75-09-2	Methylene Chloride	26	
156-60-5	trans-1,2-Dichloroethene	27	
1634-04-4	Methyl-tert-butyl ether	27	
75-34-3	1,1-Dichloroethane	28	
156-59-2	cis-1,2-Dichloroethene	27	
78-93-3	2-butanone	65	
67-66-3	Chloroform	28	
71-55-6	1,1,1-Trichloroethane	28	
56-23-5	Carbon Tetrachloride	28	
71-43-2	Benzene	27	
107-06-2	1,2-Dichloroethane	27	
79-01-6	Trichloroethene	28	
78-87-5	1,2-Dichloropropane	26	
75-27-4	Bromodichloromethane	28	
10061-01-5	cis-1,3-Dichloropropene	27	
108-10-1	4-Methyl-2-pentanone	69	
108-88-3	Toluene	28	
10061-02-6	trans-1,3-Dichloropropene	27	
79-00-5	1,1,2-Trichloroethane	28	
127-18-4	Tetrachloroethene	30	
591-78-6	2-hexanone	65	
124-48-1	Dibromochloromethane	29	
106-93-4	1,2-Dibromoethane	28	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS02MS-10A

ab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix: (soil/water) SOIL Lab Sample ID: 0030414-MS1

Sample wt/vol: 10.62(g/mL) G Lab File ID: 0030414-MS159

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. 13 Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	28	
100-41-4	Ethylbenzene	28	
100-42-5	Styrene	22	
75-25-2	Bromoform	25	
98-82-8	Isopropyl Benzene	27	
79-34-5	1,1,2,2-Tetrachloroethane	33	
541-73-1	1,3-Dichlorobenzene	29	
106-46-7	1,4-Dichlorobenzene	28	
95-50-1	1,2-Dichlorobenzene	27	
96-12-8	1,2-Dibromo-3-Chloropropane	24	
120-82-1	1,2,4-Trichlorobenzene	17	
1330-20-7	Xylene (total)	80	
79-20-9	Methyl acetate	140	E
110-82-7	Cyclohexane	24	
108-87-2	Methylcyclohexane	24	
108-38-3	m,p-Xylene (part of total)	54	
95-47-6	o-Xylene (part of total)	26	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS02MSD ~1 CA

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix: (soil/water) SOIL Lab Sample ID: 0030414-MSD1

Sample wt/vol: 7.79(g/mL) G Lab File ID: 0030414-MSD159

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. 13 Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	30	
74-87-3	Chloromethane	35	
75-01-4	Vinyl Chloride	37	
74-83-9	Bromomethane	38	
75-00-3	Chloroethane	38	
75-69-4	Trichlorofluoromethane	42	
75-35-4	1,1-Dichloroethene	35	
75-15-0	Carbon disulfide	37	
76-13-1	1,1,2-trichloro-1,2,2-triflu	34	
67-64-1	Acetone	150	
75-09-2	Methylene Chloride	36	
156-60-5	trans-1,2-Dichloroethene	34	
1634-04-4	Methyl-tert-butyl ether	36	
75-34-3	1,1-Dichloroethane	36	
156-59-2	cis-1,2-Dichloroethene	36	
78-93-3	2-butanone	89	
67-66-3	Chloroform	37	
71-55-6	1,1,1-Trichloroethane	36	
56-23-5	Carbon Tetrachloride	35	
71-43-2	Benzene	35	
107-06-2	1,2-Dichloroethane	35	
79-01-6	Trichloroethene	36	
78-87-5	1,2-Dichloropropane	33	
75-27-4	Bromodichloromethane	35	
10061-01-5	cis-1,3-Dichloropropene	35	
108-10-1	4-Methyl-2-pentanone	98	
108-88-3	Toluene	37	
10061-02-6	trans-1,3-Dichloropropene	35	
79-00-5	1,1,2-Trichloroethane	37	
127-18-4	Tetrachloroethene	39	
591-78-6	2-hexanone	91	
124-48-1	Dibromochloromethane	38	
106-93-4	1,2-Dibromoethane	38	

FORM 1 VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS02MSD-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

LM 072310

Matrix: (soil/water) SOIL Lab Sample ID: 0030414-MSD1

Sample wt/vol: 7.79(g/mL) G Lab File ID: 0030414-MSD159

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. 13 Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	35	
100-41-4	Ethylbenzene	37	
100-42-5	Styrene	28	
75-25-2	Bromoform	34	
98-82-8	Isopropyl Benzene	34	
79-34-5	1,1,2,2-Tetrachloroethane	48	
541-73-1	1,3-Dichlorobenzene	35	
106-46-7	1,4-Dichlorobenzene	34	
95-50-1	1,2-Dichlorobenzene	33	
96-12-8	1,2-Dibromo-3-Chloropropane	37	
120-82-1	1,2,4-Trichlorobenzene	19	
1330-20-7	Xylene (total)	100	
79-20-9	Methyl acetate	170	E
110-82-7	Cyclohexane	31	
108-87-2	Methylcyclohexane	29	
108-38-3	m,p-Xylene (part of total)	70	
95-47-6	o-Xylene (part of total)	34	

FORM I VOA

LM 072010

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS02-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

LM 072310

Matrix: (soil/water) SOIL Lab Sample ID: 1003030-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003030-01A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: 13 decanted: (Y/N) N Date Extracted: 03/09/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	38	J
108-95-2	Phenol	380	U
111-44-4	Bis(2-chloroethyl)ether	200	U
95-57-8	2-Chlorophenol	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	200	U
98-86-2	Acetophenone	200	U
106-44-5	4-Methylphenol	380	U
621-64-7	N-Nitroso di-N-propylamine	200	U
67-72-1	Hexachloroethane	200	U
98-95-3	Nitrobenzene	200	U
78-59-1	Isophorone	200	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	Bis(2-chloroethoxy)methane	200	U
120-83-2	2,4-Dichlorophenol	380	U
91-20-3	Naphthalene	200	U
106-47-8	4-Chloroaniline	380	~~U~~ UJ MSL
87-68-3	Hexachlorobutadiene	200	U
105-60-2	Caprolactam	200	~~U~~ UJ CCH
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	200	U
77-47-4	Hexachlorocyclopentadiene	200	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
92-52-4	1,1'-Biphenyl	200	U
91-58-7	2-Chloronaphthalene	200	U
88-74-4	2-Nitroaniline	380	U
131-11-3	Dimethylphthalate	200	U
606-20-2	2,6-Dinitrotoluene	200	U
208-96-8	Acenaphthylene	200	U
99-09-2	3-Nitroaniline	380	~~U~~ UJ MSL
83-32-9	Acenaphthene	200	U

LM 072010

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS02-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix: (soil/water) SOIL Lab Sample ID: 1003030-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003030-01A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: 13 decanted: (Y/N) N Date Extracted: 03/09/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	380	U
100-02-7	4-Nitrophenol	380	U
121-14-2	2,4-Dinitrotoluene	200	U
132-64-9	Dibenzofuran	200	U
84-66-2	Diethylphthalate	200	U
7005-72-3	4-Chlorophenyl-phenylether	200	U
86-73-7	Fluorene	200	U
100-01-6	4-Nitroaniline	380	~~U~~ UJ MSL
534-52-1	4,6-Dinitro-2-methylphenol	380	U
86-30-6	N-Nitrosodiphenylamine (1)	200	U
101-55-3	4-Bromophenyl-phenylether	200	U
118-74-1	Hexachlorobenzene	200	U
1912-24-9	Atrazine	200	U
87-86-5	Pentachlorophenol	380	U
85-01-8	Phenanthrene	200	U
120-12-7	Anthracene	200	U
86-74-8	Carbazole	200	U
84-74-2	Di-n-butylphthalate	200	U
206-44-0	Fluoranthene	200	U
129-00-0	Pyrene	200	U
85-68-7	Butylbenzylphthalate	200	U
91-94-1	3,3'-Dichlorobenzidine	200	~~U~~ UJ MSL
117-81-7	bis(2-ethylhexyl)Phthalate	200	U
56-55-3	Benzo(a)anthracene	200	U
218-01-9	Chrysene	200	U
117-84-0	Di-n-octylphthalate	200	U
205-99-2	Benzo(b)fluoranthene	200	U
207-08-9	Benzo(k)fluoranthene	200	U
50-32-8	Benzo(a)pyrene	200	U
193-39-5	Indeno(1,2,3-cd)pyrene	200	U
53-70-3	Dibenzo(a,h)anthracene	200	U
191-24-2	Benzo(g,h,i)perylene	200	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS02-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix: (soil/water) SOIL Lab Sample ID: 1003030-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003030-01C60

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: 13 decanted: (Y/N) N Date Extracted: 03/09/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	9.5 ~~4.6~~	~~J~~ UMBL
91-57-6	2-Methylnaphthalene	9.5 ~~2.6~~	~~J~~ UMBL
208-96-8	Acenaphthylene	9.5	U
83-32-9	Acenaphthene	9.5	U
86-73-7	Fluorene	9.5	U
85-01-8	Phenanthrene	3.4	J
120-12-7	Anthracene	9.5	U
206-44-0	Fluoranthene	3.2	J
129-00-0	Pyrene	2.7	J
56-55-3	Benzo(a)anthracene	1.2	J
218-01-9	Chrysene	2.5	J
205-99-2	Benzo(b)fluoranthene	3.0	J
207-08-9	Benzo(k)fluoranthene	2.0	J
50-32-8	Benzo(a)pyrene	3.2	J
193-39-5	Indeno(1,2,3-cd)pyrene	2.1	J
53-70-3	Dibenzo(a,h)anthracene	9.5	U
191-24-2	Benzo(g,h,i)perylene	1.8	J

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS02MS-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix: (soil/water) SOIL Lab Sample ID: 0030902-MS1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0030902-MS1A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: 13 decanted: (Y/N) N Date Extracted: 03/09/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	840	
108-95-2	Phenol	1400	
111-44-4	Bis(2-chloroethyl)ether	990	
95-57-8	2-Chlorophenol	1300	
95-48-7	2-Methylphenol	1600	
108-60-1	2,2'-oxybis(1-Chloropropane)	1100	
98-86-2	Acetophenone	1200	
106-44-5	4-Methylphenol	1500	
621-64-7	N-Nitroso-di-N-propylamine	1300	
67-72-1	Hexachloroethane	860	
98-95-3	Nitrobenzene	1000	
78-59-1	Isophorone	1300	
88-75-5	2-Nitrophenol	1200	
105-67-9	2,4-Dimethylphenol	1800	
111-91-1	Bis(2-chloroethoxy)methane	1300	
120-83-2	2,4-Dichlorophenol	1500	
91-20-3	Naphthalene	1100	
106-47-8	4-Chloroaniline	170	J
87-68-3	Hexachlorobutadiene	1200	
105-60-2	Caprolactam	2900	E
59-50-7	4-Chloro-3-methylphenol	1600	
91-57-6	2-Methylnaphthalene	1200	
77-47-4	Hexachlorocyclopentadiene	760	
88-06-2	2,4,6-Trichlorophenol	1600	
95-95-4	2,4,5-Trichlorophenol	1700	
92-52-4	1,1'-Biphenyl	1200	
91-58-7	2-Chloronaphthalene	1200	
88-74-4	2-Nitroaniline	1500	
131-11-3	Dimethylphthalate	1400	
606-20-2	2,6-Dinitrotoluene	1500	
208-96-8	Acenaphthylene	1400	
99-09-2	3-Nitroaniline	480	
83-32-9	Acenaphthene	1400	

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS02MS-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix: (soil/water) SOIL Lab Sample ID: 0030902-MS1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0030902-MS1A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: 13 decanted: (Y/N) N Date Extracted: 03/09/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1500	
100-02-7	4-Nitrophenol	1200	
121-14-2	2,4-Dinitrotoluene	1400	
132-64-9	Dibenzofuran	1400	
84-66-2	Diethylphthalate	1400	
7005-72-3	4-Chlorophenyl-phenylether	1400	
86-73-7	Fluorene	1500	
100-01-6	4-Nitroaniline	450	
534-52-1	4,6-Dinitro-2-methylphenol	1300	
86-30-6	N-Nitrosodiphenylamine (1)	1700	
101-55-3	4-Bromophenyl-phenylether	1400	
118-74-1	Hexachlorobenzene	1400	
1912-24-9	Atrazine	1200	
87-86-5	Pentachlorophenol	1600	
85-01-8	Phenanthrene	1400	
120-12-7	Anthracene	1400	
86-74-8	Carbazole	1300	
84-74-2	Di-n-butylphthalate	1300	
206-44-0	Fluoranthene	1300	
129-00-0	Pyrene	1700	
85-68-7	Butylbenzylphthalate	1600	
91-94-1	3,3'-Dichlorobenzidine	200	U
117-81-7	bis(2-ethylhexyl)Phthalate	1500	
56-55-3	Benzo(a)anthracene	1500	
218-01-9	Chrysene	1400	
117-84-0	Di-n-octylphthalate	1600	
205-99-2	Benzo(b)fluoranthene	1400	
207-08-9	Benzo(k)fluoranthene	1600	
50-32-8	Benzo(a)pyrene	1400	
193-39-5	Indeno(1,2,3-cd)pyrene	1300	
53-70-3	Dibenzo(a,h)anthracene	1200	
191-24-2	Benzo(g,h,i)perylene	1200	

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS02MSD-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix: (soil/water) SOIL Lab Sample ID: 0030902-MSD1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0030902-MSD1JA70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: 13 decanted: (Y/N) N Date Extracted: 03/09/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	930	
108-95-2	Phenol	1200	
111-44-4	Bis(2-chloroethyl)ether	910	
95-57-8	2-Chlorophenol	1200	
95-48-7	2-Methylphenol	1400	
108-60-1	2,2'-oxybis(1-Chloropropane)	1000	
98-86-2	Acetophenone	1100	
106-44-5	4-Methylphenol	1400	
621-64-7	N-Nitroso-di-N-propylamine	1200	
67-72-1	Hexachloroethane	950	
98-95-3	Nitrobenzene	1000	
78-59-1	Isophorone	1200	
88-75-5	2-Nitrophenol	1200	
105-67-9	2,4-Dimethylphenol	1700	
111-91-1	Bis(2-chloroethoxy)methane	1300	
120-83-2	2,4-Dichlorophenol	1400	
91-20-3	Naphthalene	1100	
106-47-8	4-Chloroaniline	100	J
87-68-3	Hexachlorobutadiene	1300	
105-60-2	Caprolactam	2400	E
59-50-7	4-Chloro-3-methylphenol	1500	
91-57-6	2-Methylnaphthalene	1100	
77-47-4	Hexachlorocyclopentadiene	900	
88-06-2	2,4,6-Trichlorophenol	1500	
95-95-4	2,4,5-Trichlorophenol	1600	
92-52-4	1,1'-Biphenyl	1100	
91-58-7	2-Chloronaphthalene	1200	
88-74-4	2-Nitroaniline	1400	
131-11-3	Dimethylphthalate	1300	
606-20-2	2,6-Dinitrotoluene	1300	
208-96-8	Acenaphthylene	1200	
99-09-2	3-Nitroaniline	250	J
83-32-9	Acenaphthene	1300	

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS02MSD-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix: (soil/water) SOIL Lab Sample ID: 0030902-MSD1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0030902-MSD1JA70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: 13 decanted: (Y/N) N Date Extracted: 03/09/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1500	
100-02-7	4-Nitrophenol	1400	
121-14-2	2,4-Dinitrotoluene	1300	
132-64-9	Dibenzofuran	1300	
84-66-2	Diethylphthalate	1300	
7005-72-3	4-Chlorophenyl-phenylether	1300	
86-73-7	Fluorene	1300	
100-01-6	4-Nitroaniline	260	J
534-52-1	4,6-Dinitro-2-methylphenol	1400	
86-30-6	N-Nitrosodiphenylamine (1)	1600	
101-55-3	4-Bromophenyl-phenylether	1400	
118-74-1	Hexachlorobenzene	1300	
1912-24-9	Atrazine	1200	
87-86-5	Pentachlorophenol	1600	
85-01-8	Phenanthrene	1300	
120-12-7	Anthracene	1300	
86-74-8	Carbazole	1300	
84-74-2	Di-n-butylphthalate	1200	
206-44-0	Fluoranthene	1300	
129-00-0	Pyrene	1400	
85-68-7	Butylbenzylphthalate	1400	
91-94-1	3,3'-Dichlorobenzidine	200	U
117-81-7	bis(2-ethylhexyl)Phthalate	1400	
56-55-3	Benzo(a)anthracene	1300	
218-01-9	Chrysene	1300	
117-84-0	Di-n-octylphthalate	1600	
205-99-2	Benzo(b)fluoranthene	1600	
207-08-9	Benzo(k)fluoranthene	1400	
50-32-8	Benzo(a)pyrene	1300	
193-39-5	Indeno(1,2,3-cd)pyrene	1100	
53-70-3	Dibenzo(a,h)anthracene	1100	
191-24-2	Benzo(g,h,i)perylene	1100	

(1) - Cannot be separated from Diphenylamine

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1R69-SS02-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix: (soil/water) SOIL Lab Sample ID: 1003030-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 13 decanted: (Y/N) N Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/09/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/12/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	2.0	
319-85-7	beta-BHC	0.98	U
319-84-6	alpha-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
72-54-8	4,4'-DDD	3.8	U
72-55-9	4,4'-DDE	1.7	~~JP~~ NJ OT
50-29-3	4,4'-DDT	3.8	~~U~~ R OT
60-57-1	Dieldrin	3.8	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	3.8	U
1031-07-8	Endosulfan sulfate	2.8	J
72-20-8	Endrin	3.8	U
7421-93-4	Endrin Aldehyde	3.8	U
76-44-8	Heptachlor	1.4	~~JP~~ J CCL
1024-57-3	Heptachlor Epoxide	2.0	U
72-43-5	Methoxychlor	20	~~U~~ UJ CCL
8001-35-2	Toxaphene	95	U
12674-11-2	Aroclor-1016	28	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	20	U
53494-70-5	Endrin Ketone	3.8	~~U~~ UJ CCL
5103-74-2	gamma-Chlordane	2.0	U
5103-71-9	alpha-Chlordane	1.4	~~JP~~ J 2C

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SS02RE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix: (soil/water) SOIL Lab Sample ID: 1003030-01RE1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 13 decanted: (Y/N) N Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/09/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/20/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	2.0	U
319-85-7	beta-BHC	0.98	U
319-84-6	alpha-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
72-54-8	4,4'-DDD	3.8	U
72-55-9	4,4'-DDE	3.8	U
50-29-3	4,4'-DDT	3.8	U
60-57-1	Dieldrin	3.8	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	3.8	U
1031-07-8	Endosulfan sulfate	2.3	J
72-20-8	Endrin	3.8	U
7421-93-4	Endrin Aldehyde	0.57	J
76-44-8	Heptachlor	1.6	JP
1024-57-3	Heptachlor Epoxide	2.0	U
72-43-5	Methoxychlor	20	U
8001-35-2	Toxaphene	95	U
12674-11-2	Aroclor-1016	28	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	20	U
53494-70-5	Endrin Ketone	3.8	U
5103-74-2	gamma-Chlordane	2.0	U
5103-71-9	alpha-Chlordane	1.7	JP

Exclude RE

JLC 72310

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1R69-SS02MS

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix: (soil/water) SOIL Lab Sample ID: 0030901-MS1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 13 decanted: (Y/N) N Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/09/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/12/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	5.7	
319-85-7	beta-BHC	3.6	P
319-84-6	alpha-BHC	5.0	
319-86-8	delta-BHC	4.8	
58-89-9	gamma-BHC (Lindane)	4.7	
72-54-8	4,4'-DDD	12	
72-55-9	4,4'-DDE	13	
50-29-3	4,4'-DDT	8.6	
60-57-1	Dieldrin	12	
959-98-8	Endosulfan I	3.9	
33213-65-9	Endosulfan II	11	
1031-07-8	Endosulfan sulfate	11	
72-20-8	Endrin	11	
7421-93-4	Endrin Aldehyde	6.4	
76-44-8	Heptachlor	7.7	
1024-57-3	Heptachlor Epoxide	5.0	
72-43-5	Methoxychlor	11	J
8001-35-2	Toxaphene	95	U
12674-11-2	Aroclor-1016	28	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	20	U
53494-70-5	Endrin Ketone	10	
5103-74-2	gamma-Chlordane	4.9	
5103-71-9	alpha-Chlordane	5.6	

JAC 72310

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SS02MSD

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix: (soil/water) SOIL Lab Sample ID: 0030901-MSD1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 13 decanted: (Y/N) N Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/09/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/12/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	6.5	~~P~~
319-85-7	beta-BHC	3.3	
319-84-6	alpha-BHC	5.0	
319-86-8	delta-BHC	5.0	
58-89-9	gamma-BHC (Lindane)	4.5	
72-54-8	4,4'-DDD	13	
72-55-9	4,4'-DDE	13	
50-29-3	4,4'-DDT	4.1	~~P~~
60-57-1	Dieldrin	12	
959-98-8	Endosulfan I	3.9	
33213-65-9	Endosulfan II	11	
1031-07-8	Endosulfan sulfate	12	
72-20-8	Endrin	11	
7421-93-4	Endrin Aldehyde	6.9	
76-44-8	Heptachlor	5.7	
1024-57-3	Heptachlor Epoxide	5.4	
72-43-5	Methoxychlor	20	U
8001-35-2	Toxaphene	95	U
12674-11-2	Aroclor-1016	28	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	20	U
53494-70-5	Endrin Ketone	8.3	
5103-74-2	gamma-Chlordane	4.7	
5103-71-9	alpha-Chlordane	5.9	

JAC 72310

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SS02PCBMS

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix: (soil/water) SOIL Lab Sample ID: 0030901-MS2

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 13 decanted: (Y/N) N Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/09/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/12/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	7.1	~~P~~
319-85-7	beta-BHC	0.98	U
319-84-6	alpha-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
72-54-8	4,4'-DDD	3.8	U
72-55-9	4,4'-DDE	3.8	U
50-29-3	4,4'-DDT	3.8	U
60-57-1	Dieldrin	3.8	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	3.8	U
1031-07-8	Endosulfan sulfate	3.8	U
72-20-8	Endrin	3.8	U
7421-93-4	Endrin Aldehyde	3.8	U
76-44-8	Heptachlor	2.0	U
1024-57-3	Heptachlor Epoxide	2.0	U
72-43-5	Methoxychlor	20	U
8001-35-2	Toxaphene	95	U
12674-11-2	Aroclor-1016	150	
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	150	
53494-70-5	Endrin Ketone	3.8	U
5103-74-2	gamma-Chlordane	2.0	U
5103-71-9	alpha-Chlordane	2.0	U

JAC 72310

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SS02PCBMSD

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix: (soil/water) SOIL Lab Sample ID: 0030901-MSD2

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 13 decanted: (Y/N) N Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/09/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/12/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	1.4	JP
319-85-7	beta-BHC	0.98	U
319-84-6	alpha-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
72-54-8	4,4'-DDD	3.8	U
72-55-9	4,4'-DDE	3.8	U
50-29-3	4,4'-DDT	3.8	U
60-57-1	Dieldrin	3.8	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	3.8	U
1031-07-8	Endosulfan sulfate	3.8	U
72-20-8	Endrin	3.8	U
7421-93-4	Endrin Aldehyde	3.8	U
76-44-8	Heptachlor	2.0	U
1024-57-3	Heptachlor Epoxide	2.0	U
72-43-5	Methoxychlor	20	U
8001-35-2	Toxaphene	95	U
12674-11-2	Aroclor-1016	260	P
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	150	
53494-70-5	Endrin Ketone	3.8	U
5103-74-2	gamma-Chlordane	2.0	U
5103-71-9	alpha-Chlordane	2.0	U

JAC 12310

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SS02REMS

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix: (soil/water) SOIL Lab Sample ID: 0030901-MS5

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 13 decanted: (Y/N) N Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/09/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/19/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	5.5	
319-85-7	beta-BHC	3.8	
319-84-6	alpha-BHC	6.4	
319-86-8	delta-BHC	4.9	
58-89-9	gamma-BHC (Lindane)	4.9	
72-54-8	4,4'-DDD	12	
72-55-9	4,4'-DDE	12	
50-29-3	4,4'-DDT	7.3	
60-57-1	Dieldrin	12	
959-98-8	Endosulfan I	4.0	
33213-65-9	Endosulfan II	11	
1031-07-8	Endosulfan sulfate	12	
72-20-8	Endrin	12	
7421-93-4	Endrin Aldehyde	6.2	
76-44-8	Heptachlor	7.1	
1024-57-3	Heptachlor Epoxide	5.4	
72-43-5	Methoxychlor	8.4	J
8001-35-2	Toxaphene	95	U
12674-11-2	Aroclor-1016	28	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	20	U
53494-70-5	Endrin Ketone	11	
5103-74-2	gamma-Chlordane	5.1	
5103-71-9	alpha-Chlordane	5.7	

JAC 72310

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1R69-SS02REMSD

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix: (soil/water) SOIL Lab Sample ID: 0030901-MSD5

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 13 decanted: (Y/N) N Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/09/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/19/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	4.8	
319-85-7	beta-BHC	3.6	
319-84-6	alpha-BHC	5.4	
319-86-8	delta-BHC	4.9	
58-89-9	gamma-BHC (Lindane)	4.8	
72-54-8	4,4'-DDD	13	
72-55-9	4,4'-DDE	13	
50-29-3	4,4'-DDT	2.6	JP
60-57-1	Dieldrin	12	
959-98-8	Endosulfan I	3.9	
33213-65-9	Endosulfan II	12	
1031-07-8	Endosulfan sulfate	12	
72-20-8	Endrin	12	
7421-93-4	Endrin Aldehyde	6.5	
76-44-8	Heptachlor	5.9	
1024-57-3	Heptachlor Epoxide	5.7	
72-43-5	Methoxychlor	5.0	JP
8001-35-2	Toxaphene	95	U
12674-11-2	Aroclor-1016	28	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	20	U
53494-70-5	Endrin Ketone	8.2	
5103-74-2	gamma-Chlordane	5.1	
5103-71-9	alpha-Chlordane	5.9	

JJC 72310

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
IR69-SS0
2REPCBMS

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix: (soil/water) SOIL Lab Sample ID: 0030901-MS6

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 13 decanted: (Y/N) N Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/09/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/19/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	2.0	U
319-85-7	beta-BHC	0.98	U
319-84-6	alpha-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
72-54-8	4,4'-DDD	3.8	U
72-55-9	4,4'-DDE	3.8	U
50-29-3	4,4'-DDT	3.8	U
60-57-1	Dieldrin	3.8	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	3.8	U
1031-07-8	Endosulfan sulfate	3.8	U
72-20-8	Endrin	3.8	U
7421-93-4	Endrin Aldehyde	3.8	U
76-44-8	Heptachlor	3.0	
1024-57-3	Heptachlor Epoxide	2.0	U
72-43-5	Methoxychlor	20	U
8001-35-2	Toxaphene	95	U
12674-11-2	Aroclor-1016	200	
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	150	
53494-70-5	Endrin Ketone	3.8	U
5103-74-2	gamma-Chlordane	2.0	U
5103-71-9	alpha-Chlordane	1.8	J

JC 72310

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SS0
2REPCBMSD

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix: (soil/water) SOIL Lab Sample ID: 0030901-MSD6

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 13 decanted: (Y/N) N Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/09/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/20/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	2.0	U
319-85-7	beta-BHC	0.98	U
319-84-6	alpha-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
72-54-8	4,4'-DDD	3.8	U
72-55-9	4,4'-DDE	3.8	U
50-29-3	4,4'-DDT	3.8	U
60-57-1	Dieldrin	3.8	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	3.8	U
1031-07-8	Endosulfan sulfate	3.8	U
72-20-8	Endrin	3.8	U
7421-93-4	Endrin Aldehyde	3.8	U
76-44-8	Heptachlor	1.7	JP
1024-57-3	Heptachlor Epoxide	2.0	U
72-43-5	Methoxychlor	20	U
8001-35-2	Toxaphene	95	U
12674-11-2	Aroclor-1016	180	
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	140	
53494-70-5	Endrin Ketone	3.8	U
5103-74-2	gamma-Chlordane	2.0	U
5103-71-9	alpha-Chlordane	1.7	JP

JAC 72310

FORM I PEST

FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55553-2

SDG No.: CLJ55553-2

Client Sample ID: IR69-SS02-10A | Lab Sample ID: 680-55553-8

Matrix: Solid | Lab File ID: [illegible]

Analysis Method: 8141A | Date Collected: 02/28/2010 [illegible]

Extraction Method: 3550B | Date Extracted: [illegible]

Sample wt/vol: 15.02(g) | Date Analyzed: 03/10/2010 08:56

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-CLP 2 ID: 0.32(mm)

% Moisture: 13.8 | GPC Cleanup: Y/N/ N

Analysis Batch No.: 162946 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	PQL	MDL
86-50-0	Azinphos-methyl	[illegible]	U	[illegible]	[illegible]
35400-43-2	Bolstar	[illegible]	U	[illegible]	[illegible]
2921-88-2	Chlorpyrifos	[illegible]	U	[illegible]	[illegible]
56-72-4	Coumaphos	38	U	[illegible]	20
298-03-3	Demeton-O	[illegible]	~~U~~ ~~UJ MSL~~	[illegible]	[illegible]
126-75-0	Demeton-S	[illegible]	~~UJ~~ R MSL	[illegible]	[illegible]
333-41-5	Diazinon	[illegible]	U	[illegible]	20
62-73-7	Dichlorvos	[illegible]	U	[illegible]	[illegible]
60-51-5	Dimethoate	[illegible]	U	[illegible]	[illegible]
298-04-4	Disulfoton	[illegible]	U	[illegible]	[illegible]
2104-64-5	EPN	38	U	[illegible]	20
13194-48-4	Ethoprop	[illegible]	U	[illegible]	4.8
56-38-2	Ethyl Parathion	[illegible]	U	[illegible]	20
52-85-7	Famphur	[illegible]	U	[illegible]	39
115-90-2	Fensulfothion	[illegible]	U	[illegible]	98
55-38-9	Fenthion	38	U	[illegible]	20
121-75-5	Malathion	[illegible]	U	[illegible]	[illegible]
150-50-5	Merphos	38	U	[illegible]	39
298-00-0	Methyl parathion	[illegible]	U	[illegible]	3.8
7786-34-7	Mevinphos	[illegible]	U	[illegible]	39
6923-22-4	Monochrotophos	390	~~UJ~~ UJ MSL	[illegible]	200
300-76-5	Naled	[illegible]	UJ CCL	[illegible]	98
298-02-2	Phorate	38	U	[illegible]	20
299-84-3	Ronnel	38	U	[illegible]	20
22248-79-9	Stirophos	38	U	[illegible]	20
3689-24-5	Sulfotepp	[illegible]	U	[illegible]	9.8
297-97-2	Thionazin	38	U	[illegible]	20
34643-46-4	Tokuthion	38	U	[illegible]	20
327-98-0	Trichloronate	38	U	[illegible]	20

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	90	42-128	

x KOFF
JAC 12310

JAC 12310

FORM I 8141A

06/15/2010

036

FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55553-2

SDG No.: CLJ55553-2

Client Sample ID: IR69-SS02-10A MS | Lab Sample ID: 680-55553-8 MS

Matrix: Solid | Lab File ID: [illegible]

Analysis Method: 8141A | Date Collected: 02/28/2010 09:00

Extraction Method: 3550B | Date Extracted: 03/08/2010 [illegible]

Sample wt/vol: [illegible] | Date Analyzed: 03/10/2010 [illegible]

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-CLP 2 ID: 0.32(mm)

% Moisture: 13.2 | GPC Cleanup: Y/N N

Analysis Batch No.: 162946 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	[illegible]		[illegible]	20
35400-43-2	Bolstar	[illegible]		[illegible]	20
2921-88-2	Chlorpyrifos	[illegible]		[illegible]	20
56-72-4	Coumaphos	[illegible]		[illegible]	20
298-03-3	Demeton-O	[illegible]		[illegible]	48
126-75-0	Demeton-S	[illegible]	[illegible]	[illegible]	48
333-41-5	Diazinon	[illegible]		[illegible]	20
62-73-7	Dichlorvos	125		[illegible]	39
298-04-4	Disulfoton	91.6		[illegible]	39
13194-48-4	Ethoprop	[illegible]		[illegible]	9.8
115-90-2	Fensulfothion	[illegible]	J	[illegible]	98
55-38-9	Fenthion	[illegible]		[illegible]	20
150-50-5	Merphos	[illegible]		[illegible]	29
298-00-0	Methyl parathion	[illegible]		[illegible]	9.8
7786-34-7	Mevinphos	[illegible]		[illegible]	39
300-76-5	Naled	[illegible]	J	[illegible]	98
298-02-2	Phorate	[illegible]		[illegible]	20
299-84-3	Ronnel	[illegible]		[illegible]	20
22248-79-9	Stirophos	114		[illegible]	20
34643-46-4	Tokuthion	[illegible]		[illegible]	20
327-98-0	Trichloronate	95.6		[illegible]	20

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	[illegible]	42-128	

JAC 12310

FORM I 8141A

FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55553-2

SDG No.: CLJ55553-2

Client Sample ID: IR69-SS02-10A MS | Lab Sample ID: 680-55553-8 MS

Matrix: Solid | Lab File ID: [illegible]040.d

Analysis Method: 8141A | Date Collected: 02/26/2010 09:00

Extraction Method: 3550B | Date Extracted: 03/08/2010 16:50

Sample wt/vol: 15.23(g) | Date Analyzed: 03/10/2010 10:10

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-CLP 2 ID: 0.32(mm)

% Moisture: 13.8 | GPC Cleanup: Y/N: N

Analysis Batch No.: 162946 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
60-51-5	Dimethoate	84.7		[illegible]	39
2104-64-5	EPN	144		38	19
56-38-2	Ethyl Parathion	138		38	19
52-85-7	Famphur	130		77	39
121-75-5	Malathion	131		38	19
6923-22-4	Monochrotophos	138	J	380	190
3689-24-5	Sulfotepp	132		19	9.7
297-97-2	Thionazin	125		38	19

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	93	42-128	

JC 7-23-10

FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55553-2

SDG No.: CLJ55553-2

Client Sample ID: IR69-SS02-10A MSD | Lab Sample ID: 680-55553-8 MSD

Matrix: Solid | Lab File ID: ec08033.d

Analysis Method: 8141A | Date Collected: 02/28/2010 09:00

Extraction Method: 3550B | Date Extracted: 03/08/2010 14:50

Sample wt/vol: 15.22(g) | Date Analyzed: 03/10/2010 09:45

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-CLP 2 ID: 0.32(mm)

% Moisture: 13.8 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 162946 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	[illegible]		[illegible]	19
35400-43-2	Bolstar	[illegible]		[illegible]	19
2921-88-2	Chlorpyrifos	104		[illegible]	19
56-72-4	Coumaphos	[illegible]		[illegible]	19
298-03-3	Demeton-O	[illegible]	J	[illegible]	48
126-75-0	Demeton-S	[illegible]		[illegible]	48
333-41-5	Diazinon	111		[illegible]	19
62-73-7	Dichlorvos	[illegible]		[illegible]	39
298-04-4	Disulfoton	93.3		[illegible]	39
13194-48-4	Ethoprop	114		[illegible]	9.7
115-90-2	Fensulfothion	145	J	[illegible]	97
55-38-9	Fenthion	[illegible]		[illegible]	19
150-50-5	Merphos	132		[illegible]	29
298-00-0	Methyl parathion	121		[illegible]	9.7
7786-34-7	Mevinphos	102		[illegible]	39
300-76-5	Naled	137	J	[illegible]	97
298-02-2	Phorate	96.3		[illegible]	19
299-84-3	Ronnel	111		[illegible]	19
22248-79-9	Stirophos	121		[illegible]	19
34643-46-4	Tokuthion	121		[illegible]	19
327-98-0	Trichloronate	112		[illegible]	19

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	81	42-128	

JBC 72310

FORM I 8141A

FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah Job No.: 680-55553-2

SDG No.: CLJ55553-2

Client Sample ID: IR69-SS02-10A MSD Lab Sample ID: 680-55553-8 MSD

Matrix: Solid Lab File ID: c09041.d

Analysis Method: 8141A Date Collected: 02/28/2010 09:00

Extraction Method: 3550B Date Extracted: 03/08/2010 16:50

Sample wt/vol: 15.21(g) Date Analyzed: 03/10/2010 10:35

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 2(uL) GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 13.8 GPC Cleanup:(Y/N) N

Analysis Batch No.: 162946 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
60-51-5	Dimethoate	49.5	J	[illegible]	39
2104-64-5	EPN	134		38	19
56-38-2	Ethyl Parathion	124		38	19
52-85-7	Famphur	112		[illegible]	39
121-75-5	Malathion	120		38	19
6923-22-4	Monochrotophos	380	U J	380	190
3689-24-5	Sulfotepp	116		19	9.7
297-97-2	Thionazin	109		38	19

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	85	42-108	

JC 72310

FORM I 8141A

06/15/2010

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-SS02-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix (soil/water): SOIL Lab Sample ID: 1003030-01

Level (low/med): LOW Date Received: 3/4/2010

% Solids: 87.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	1100			P	
7440-36-0	Antimony	1.1	~~B~~	J	P	
7440-38-2	Arsenic	1.1	U		P	
7440-39-3	Barium	4.6	~~B~~	~~E~~ J	P	SD
7440-41-7	Beryllium	0.57	U		P	
7440-43-9	Cadmium	0.57	U		P	
7440-70-2	Calcium	572 ~~215~~	~~B~~	~~E~~ UJ	P	MBL
7440-47-3	Chromium	0.96	~~B~~	J	P	
7440-48-4	Cobalt	0.57	U		P	
7440-50-8	Copper	0.90			P	
7439-89-6	Iron	606			P	
7439-92-1	Lead	3.9			P	
7439-95-4	Magnesium	572 ~~55.5~~	~~B~~	U	P	MBL
7439-96-5	Manganese	24.8		J	P	MDP
7439-97-6	Mercury	0.03	~~B~~	J	CV	
7440-02-0	Nickel	0.57	~~U~~	UJ	P	OT
7440-09-7	Potassium	62.6	~~B~~	J	P	
7782-49-2	Selenium	0.57	U		P	
7440-22-4	Silver	0.57	U		P	
7440-23-5	Sodium	41.8	~~B~~	J	P	
7440-28-0	Thallium	1.1	U		P	
7440-62-2	Vanadium	2.1	~~B~~	J	P	
7440-66-6	Zinc	2.3			P	

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

150

21867-A2

Page 1 of 1

CompuChem
a division of Liberty Analytical Corp.

CHAIN OF CUSTODY

501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information		Project Information	
Company Name	CH2M HILL	Project Name	CTO-081
Address	11301 Carmel Commons Blvd. Ste 304	Sampling Location	MCB Camp Lejeune, Site 69
City	Charlotte State NC Zip 28226	Turnaround time	Standard
Project Contact	Gwen Buckley	Batch QC or Project Specific? If Specific, which Sample ID?	
Phone #	757-671-6292	Are aqueous samples field filtered for metals? Y or N	Yes
Sampler's Name	Jessica High	Are high concentrations expected? Y or N? If yes, which ID(s)?	No

Requested Analysis (include method and bottle type): 8260B: VOCs GW: 3-40mL HCl VOAs Soil: 2 Nalgene Jars, INCL VOA, 1 ziploc; RSK175: MSE 2-40mL HCl VOAs; TOC: 2-40mL H_2SO_4 VOAs; 6010B: TOTAL METALS GW: 500mL HNO3 poly Soil: Soil jar; 8270C/8270C-SIM: SVOCs/PAHs GW: 2-1L Ambers Soil (8oz jar); 8330B/8081A: OC Pesticides GW: 2-1L Ambers Soil (8oz jar); 8082: PCBs GW: 2-1L Ambers Soil (8oz jar); CN, NO3 & NO2: 1-250mL poly, unpres.; Sulfide: 1-500mL ZnAc & NaOH poly; 6010B: DISSOLVED METALS FIELD FILTERED 1-500mL HNO3 poly

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MeOH	Other X	8260B	RSK175	TOC	6010B	8270C/8270C-SIM	8330B/8081A	8082	CN, NO3 & NO2	Sulfide	6010B FIELD FILTERED	pH / Sample Info (Lab Use)
1003030-01	IR69-SS02-10A	2/28/10	0900	Soil	2						2				X 8oz	X	X	X				
	IR69-SS02-10A-MS	2/28/10	0900	Soil	2						2				X 8oz	X	X	X				
	IR69-SS02-10A-SD	2/28/10	0900	Soil	2						2				X 8oz	X	X	X				
1003031-01	IR69-SB02-08-10-10A	2/28/10	1030	Soil	2						2				X 2oz	X	X	X				
	IR69-SB02-08-10-10A-MS	2/28/10	1030	Soil	2						2				X 2oz	X	X	X				
	IR69-SB02-08-10-10A-SD	2/28/10	1030	Soil	2						2				X 2oz	X	X	X				

Lab Use Only

Sample Unpacked By: Jennifer Bowen
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Sample Custody

Relinquished by: [illegible]	Date/Time: 3/3/10 1400	Received by: [illegible]	Date/Time: 3/3/10 1400
Relinquished by: [illegible]	Date/Time: 3/4/10 1020	Received by: Jennifer Bowen	Date/Time: 3/4/10 1020
Subcontract? Y or N If yes, where?		Custody Seal(s) intact? Y or N	On Ice? Y or N Cooler Temp: 0.7 °C

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer

SN0010

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website www.testamericainc.com
Phone (912) 354-7858
Fax (912) 352-0165

PROJECT REFERENCE: CTO-081	PROJECT NO: 374082 FT FEG	PROJECT LOCATION: MCB Camp Lejeune
TESTAMERICA LAB PROJECT MANAGER: Abbie York	P.O. NUMBER	CONTRACT NO
CLIENT (SITE) PM: Gwen Buckley	CLIENT PHONE: 757-671-6292	CLIENT FAX: 704-544-4041
CLIENT NAME: CH2M HILL	CLIENT EMAIL: Gwen.Buckley@CH2M.com	
CLIENT ADDRESS: 11301 Carmel Commons Blvd Ste 304 Charlotte, NC 28226		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ( )
DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ( )
DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: None

REQUIRED ANALYSES: Method 8141A OP Pesticides

NUMBER OF CONTAINERS SUBMITTED = ~~16~~ 10 pm

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	Method 8141A OP Pesticides	REMARKS
2/28/2010	9:00	IR69-SS02-10A	C		X			X	
2/28/2010	9:00	IR69-SS02-10A-MS	C		X			X	
2/28/2010	9:00	IR69-SS02-10A-SD	C		X			X	
2/28/2010	10:30	IR69-SB02-08-10-10A	C		X			X	
2/28/2010	10:30	IR69-SB02-08-10-10A-MS	C		X			X	
2/28/2010	10:30	IR69-SB02-08-10-10A-SD	C		X			X	
2/27/2010	14:25	IR69-GW12-10A	G	X				X	
2/27/2010	14:35	IR69-GW12DW-10A	G	X				X	

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY (SIGNATURE)	DATE	TIME
[signature]	3/1/10	1400						
RECEIVED BY (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/4/10	0916	YES ( ) NO ( )		680-55553	1.2

FCU052 01 02.08:2

Data Completeness

The data package was received complete and intact. Resubmissions were not required. (SW846 Method 8260B)

Laboratory: CompuChem

Holding Times

Sampling Date: 2 28 10
Received Date: 3 04 10
Analysis Dates: 3 5 10

Cooler Temp: 0.7°C

All prep and analysis holding time requirements were met.

Calibrations

Mass assignments were verified by the injection of BFB.

The initial and continuing calibrations required qualifications due to high %D; see attached FormVI and VIIs.

Internal Standards

All criteria met.

Blank Summary

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying criteria.
- Qualification Action codes where applied as stated in table below:

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Storage, Field, Trip, Instrument	Detects	Not detected	No qualifications
	< CRQL*	< CRQL*	Report CRQL value with a U
		> CRQL*	Use professional judgment
	> CRQL*	< CRQL*	Report CRQL value with a U
		> CRQL* and < blank concentration	Report the concentration for the sample with a U, or qualify the data as unusable R
		> CRQL* and > blank concentration	Use professional judgment
	> CRQL*	< CRQL*	Report CRQL value with a U
		> CRQL*	Use professional judgment
	Gross contamination	Detects	Qualify results as unusable R

*2x the CRQL for methylene chloride, 2-butanone and acetone

Method blank contamination was not exhibited- no qualifications were required. The associated field QC for this data package was: IR69-TB01-030310 - trip blank; IR69-EB01-030410-SS-equipment blank; IR69-FB01-030310 - field blank.

Blank Contamination and Qualification Summaries

Blank ID	Compound	Concentration	Reporting Limit
IR69-TB01-030310	acetone	2.4J ug/L	2.5 ug/L
IR69-EB01-030410-SS	carbon disulfide	0.022J	0.5
	acetone	6.2	2.5
	methylene chloride	11	0.5
	2-butanone	1.8J	2.5
	chloroform	0.95	0.5
	benzene	0.2J	0.5
	1,2-dichloroethane	0.32J	0.5
	bromodichloromethane	0.08J	0.5
	toluene	0.93	0.5
	chlorobenzene	0.023J	0.5
	ethylbenzene	0.16J	0.5
	o-xylene	0.31J	0.5
	xylene (total)	0.31J	0.5
IR69-FB01-030310	acetone	4.1	2.5
	methylene chloride	13	0.5
	chloroform	0.31J	0.5
	toluene	4.1	0.5
	chlorobenzene	0.47J	0.5

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Qual Code
IR69-SS02-10A	2-butanone	U at RL	EBL

Surrogates

All criteria were met.

Laboratory Control Sample

All criteria were met.

Matrix Spike/Spike Duplicate Samples

An MS/MSD was submitted for sample IR69-SS02-10A; low recoveries were exhibited for the MS and MSD for cis-1,2-dichloroethene at 62% and 50% (QC limit 70-125%); therefore results were qualified as estimated (JUJ) in the associated sample.

Field Duplicate Sample

A field duplicate was not submitted for this data package.

Specific Comments:

All sample results were reported within the calibration range of the instruments

Detection limits were acceptable. Raw data and calculations were verified.

We have limited the supporting documentation, found with these worksheets, to those forms that indicate qualifications were required.

Validator Signature: L Mascello **Date:** 7/14/10

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Lab File ID: 0B09006-TUN159 BFB Injection Date: 02/09/10

Instrument ID: 5972HP59 BFB Injection Time: 1622

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.5
75	30.0 - 60.0% of mass 95	51.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	74.7
175	5.0 - 9.0% of mass 174	5.3 (7.1)1
176	95.0 - 101.0% of mass 174	74.7 (99.9)1
177	5.0 - 9.0% of mass 176	5.0 (6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005	0B09006-CAL	0B09006-CAL1R5	02/09/10	1735
02	VSTD010	0B09006-CAL	0B09006-CAL2R5	02/09/10	1802
03	VSTD020	0B09006-CAL	0B09006-CAL359	02/09/10	1830
04	VSTD200	0B09006-CAL	0B09006-CAL659	02/09/10	1858
05	VSTD100	0B09006-CAL	0B09006-CAL559	02/09/10	1925
06	VSTD050	0B09006-CAL	0B09006-CAL459	02/09/10	1953
07					
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FORM V VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Instrument ID: 5972HP59 Calibration Date(s): 02/09/10 02/09/10

Column: SPB-624 ID: 0.32 (mm) Calibration Time(s): 1735 1953

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2	MAX %RSD OR R^2
Dichlorodifluoromethane	AVRG		0.36223956	3.697	15.000
Chloromethane	AVRG		0.24233564	4.243	15.000
Vinyl Chloride	AVRG		0.27149637	5.187	30.000
Bromomethane	AVRG		0.24720750	5.299	15.000
Chloroethane	AVRG		0.14568642	7.720	15.000
Trichlorofluoromethane	AVRG		0.51919338	4.825	15.000
1,1-Dichloroethene	AVRG		0.19066989	6.292	30.000
Carbon disulfide	AVRG		0.62845630	6.091	15.000
1,1,2-trichloro-1,2,2-triflu	AVRG		0.33687776	9.085	15.000
Acetone	AVRG		0.06124325	8.471	15.000
Methylene Chloride	AVRG		0.28684016	7.205	15.000
trans-1,2-Dichloroethene	AVRG		0.24603374	7.392	15.000
Methyl-tert-butyl ether	AVRG		0.75306200	3.957	15.000
1,1-Dichloroethane	AVRG		0.46567981	9.573	15.000
cis-1,2-Dichloroethene	AVRG		0.28650964	6.701	15.000
2-butanone	AVRG		0.08409555	7.749	15.000
Chloroform	AVRG		0.60700085	6.151	30.000
1,1-Trichloroethane	AVRG		0.53404775	5.938	15.000
rbon Tetrachloride	AVRG		0.44729750	6.204	15.000
Benzene	AVRG		0.92510984	8.481	15.000
1,2-Dichloroethane	AVRG		0.41025724	4.068	15.000
Trichloroethene	AVRG		0.27925571	4.738	15.000
1,2-Dichloropropane	AVRG		0.19378755	18.140	30.000
Bromodichloromethane	AVRG		0.46728535	3.674	15.000
cis-1,3-Dichloropropene	AVRG		0.45653702	4.184	15.000
4-Methyl-2-pentanone	AVRG		0.25907498	5.823	15.000
Toluene	AVRG		0.86512275	6.152	30.000
trans-1,3-Dichloropropene	AVRG		0.57063499	8.293	15.000
1,1,2-Trichloroethane	AVRG		0.28843443	2.430	15.000
Tetrachloroethene	AVRG		0.28957103	7.080	15.000
2-hexanone	AVRG		0.18700542	4.248	15.000
Dibromochloromethane	AVRG		0.41180279	6.267	15.000
1,2-Dibromoethane	AVRG		0.32273442	2.532	15.000
Chlorobenzene	AVRG		0.88099987	5.170	15.000
Ethylbenzene	AVRG		0.45447133	5.704	30.000
Styrene	AVRG		0.96827758	11.328	15.000
Bromoform	AVRG		0.23224965	9.332	15.000
Isopropyl Benzene	AVRG		1.62258312	8.230	15.000
1,1,2,2-Tetrachloroethane	AVRG		0.77080388	3.478	15.000
1,3-Dichlorobenzene	AVRG		1.45668578	6.697	15.000
1,4-Dichlorobenzene	AVRG		1.43122186	4.011	15.000
1,2-Dichlorobenzene	AVRG		1.36567887	4.372	15.000
1,2-Dibromo-3-Chloropropane	AVRG		0.14889516	12.264	15.000
1,2,4-Trichlorobenzene	AVRG		0.94494333	8.266	15.000

FORM VI VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Lab File ID: 0C04007-TUN159 BFB Injection Date: 03/04/10

Instrument ID: 5972HP59 BFB Injection Time: 2310

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.4
75	30.0 - 60.0% of mass 95	50.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	5.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	72.8
175	5.0 - 9.0% of mass 174	5.3 (7.2)1
176	95.0 - 101.0% of mass 174	71.5 (98.2)1
177	5.0 - 9.0% of mass 176	4.5 (6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	0C04007-CCV	0C04007-CCV159	03/04/10	2327
02	VBLKRN	0030414-BLK	0030414-BLK159	03/05/10	0004
03	VRNLCS	0030414-BS1	0030414-BS159	03/05/10	0031
04	VRNLCSD	0030414-BSD	0030414-BSD159	03/05/10	0059
05	IR69-SS02	1003030-01	1003030-0159	03/05/10	0127
06	IR69-SS02MS	0030414-MS1	0030414-MS159	03/05/10	0154
07	IR69-SS02MSD	0030414-MSD	0030414-MSD159	03/05/10	0222
08					
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15					
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17					
18					
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20					
21					
22					

FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Instrument ID: 5972HP59 Calibration Date: 03/04/10 Time: 2327

Lab File ID: 0C04007-CCV159 Init. Calib. Date(s): 02/09/10 02/09/10

Init. Calib. Times: 1735 1953

GC Column: SPB-624 ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF50 or AMOUNT	CCAL RRF50	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dichlorodifluoromethane	0.3622400	0.3118093	0.3118093	0.001	-13.92	25.00	AVRG
Chloromethane	0.2423400	0.2513012	0.2513012	0.1	3.70	25.00	AVRG
Vinyl Chloride	0.2715000	0.2891258	0.2891258	0.001	6.49	20.00	AVRG
Bromomethane	0.2472000	0.2714451	0.2714451	0.001	9.81	25.00	AVRG
Chloroethane	0.1456800	0.1631153	0.1631153	0.001	11.97	25.00	AVRG
Trichlorofluoromethane	0.5191900	0.6413671	0.6413671	0.001	23.53	25.00	AVRG
1,1-Dichloroethene	0.1906700	0.1853421	0.1853421	0.001	-2.79	20.00	AVRG
Carbon disulfide	0.6284600	0.6715830	0.6715830	0.001	6.86	25.00	AVRG
1,1,2-trichloro-1,2,2-triflu	0.3368800	0.3492281	0.3492281	0.001	3.66	25.00	AVRG
Acetone	0.0612400	0.0660087	0.0660087	0.001	7.79	25.00	AVRG
Methylene Chloride	0.2868400	0.2769556	0.2769556	0.001	-3.44	25.00	AVRG
trans-1,2-Dichloroethene	0.2460300	0.2418880	0.2418880	0.001	-1.68	25.00	AVRG
Methyl-tert-butyl ether	0.7530600	0.7445889	0.7445889	0.001	-1.12	25.00	AVRG
1,1-Dichloroethane	0.4656800	0.4631329	0.4631329	0.1	-0.55	25.00	AVRG
s-1,2-Dichloroethene	0.2865100	0.2911391	0.2911391	0.001	1.62	25.00	AVRG
butanone	0.0840900	0.0884871	0.0884871	0.001	5.23	25.00	AVRG
Chloroform	0.6070000	0.6306263	0.6306263	0.001	3.89	20.00	AVRG
1,1,1-Trichloroethane	0.5340500	0.5605929	0.5605929	0.001	4.97	25.00	AVRG
Carbon Tetrachloride	0.4473000	0.4708740	0.4708740	0.001	5.27	25.00	AVRG
Benzene	0.9251100	0.9248823	0.9248823	0.001	-0.02	25.00	AVRG
1,2-Dichloroethane	0.4102600	0.4157152	0.4157152	0.001	1.33	25.00	AVRG
Trichloroethene	0.2792500	0.3036421	0.3036421	0.001	8.73	25.00	AVRG
1,2-Dichloropropane	0.1937900	0.1839042	0.1839042	0.001	5.10	20.00	AVRG
Bromodichloromethane	0.4672800	0.4976165	0.4976165	0.001	6.49	25.00	AVRG
cis-1,3-Dichloropropene	0.4565400	0.4892796	0.4892796	0.001	7.17	25.00	AVRG
4-Methyl-2-pentanone	0.2590700	0.2528949	0.2528949	0.001	-2.38	25.00	AVRG
Toluene	0.8651200	0.8180175	0.8180175	0.001	-5.44	20.00	AVRG
trans-1,3-Dichloropropene	0.5706300	0.5410970	0.5410970	0.001	-5.18	25.00	AVRG
1,1,2-Trichloroethane	0.2884300	0.2893824	0.2893824	0.001	0.33	25.00	AVRG
Tetrachloroethene	0.2895700	0.3218083	0.3218083	0.001	11.13	25.00	AVRG
2-hexanone	0.1870000	0.1830973	0.1830973	0.001	-2.09	25.00	AVRG
Dibromochloromethane	0.4118000	0.4266930	0.4266930	0.001	3.62	25.00	AVRG
1,2-Dibromoethane	0.3227400	0.3306818	0.3306818	0.001	2.46	25.00	AVRG
Chlorobenzene	0.8810000	0.8944376	0.8944376	0.3	1.52	25.00	AVRG
Ethylbenzene	0.4544700	0.4601605	0.4601605	0.001	1.25	20.00	AVRG
Styrene	0.9682800	0.8611293	0.8611293	0.001	-11.07	25.00	AVRG
Bromoform	0.2322500	0.2488334	0.2488334	0.1	7.14	25.00	AVRG
Isopropyl Benzene	1.6225800	1.6378656	1.6378656	0.001	0.94	25.00	AVRG
1,1,2,2-Tetrachloroethane	0.7708000	0.7669991	0.7669991	0.3	-0.49	25.00	AVRG
1,3-Dichlorobenzene	1.4566800	1.4709181	1.4709181	0.001	0.98	25.00	AVRG
1,4-Dichlorobenzene	1.4312200	1.4464003	1.4464003	0.001	1.06	25.00	AVRG
1,2-Dichlorobenzene	1.3656800	1.3510994	1.3510994	0.001	-1.07	25.00	AVRG

FORM 3
SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix Spike - Sample No.: IR69-SS02 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
1,1,2-Trichloroethane	27.06	0.0	27.68	102	60-125
Tetrachloroethene	27.06	0.0	29.73	110	65-140
2-hexanone	67.65	0.0	64.81	96	45-145
Dibromochloromethane	27.06	0.0	28.91	107	65-130
1,2-Dibromoethane	27.06	0.0	27.52	102	70-125
Chlorobenzene	27.06	0.0	27.65	102	75-125
Ethylbenzene	27.06	0.0	27.83	103	75-125
Styrene	27.06	0.0	22.2	82	75-125
Bromoform	27.06	0.0	24.65	91	55-135
Isopropyl Benzene	27.06	0.0	27.08	100	75-130
1,1,2,2-Tetrachloroetha	27.06	0.0	32.89	122	55-130
1,3-Dichlorobenzene	27.06	0.0	29.01	107	70-125
1,4-Dichlorobenzene	27.06	0.0	28.03	104	70-125
1,2-Dichlorobenzene	27.06	0.0	27.19	100	75-125
1,2-Dibromo-3-Chloropro	27.06	0.0	23.99	89	40-135
1,2,4-Trichlorobenzene	27.06	0.0	16.66	62*	65-130
Xylene (total)	81.17	0.0	79.8	98	50-150
Methyl acetate	27.06	87.47	138.5	189*	50-150
Cyclohexane	27.06	0.0	23.79	88	50-150

JNJ

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

FORM 3
SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix Spike - Sample No.: IR69-SS02 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1,2-Trichloroethane	36.89	37.15	101	29	30	60-125
Tetrachloroethene	36.89	39.15	106	27	30	65-140
2-hexanone	92.22	91.01	99	34*	30	45-145
Dibromochloromethane	36.89	38.08	103	27	30	65-130
1,2-Dibromoethane	36.89	37.88	103	32*	30	70-125
Chlorobenzene	36.89	35.2	95	24	30	75-125
Ethylbenzene	36.89	36.81	100	28	30	75-125
Styrene	36.89	27.8	75	22	30	75-125
Bromoform	36.89	34.32	93	33*	30	55-135
Isopropyl Benzene	36.89	33.9	92	22	30	75-130
1,1,2,2-Tetrachloroetha	36.89	47.5	129	36*	30	55-130
1,3-Dichlorobenzene	36.89	35.45	96	20	30	70-125
1,4-Dichlorobenzene	36.89	34.22	93	20	30	70-125
1,2-Dichlorobenzene	36.89	33.45	91	21	30	75-125
1,2-Dibromo-3-Chloropro	36.89	37.01	100	43*	30	40-135
1,2,4-Trichlorobenzene	36.89	18.52	50*	11	30	65-130
Xylene (total)	110.7	103.9	94	26	30	50-150
Methyl acetate	36.89	171.6	228*	21	30	50-150
Cyclohexane	36.89	30.69	83	25	30	50-150

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 9 out of 47 outside limits
Spike Recovery: 4 out of 94 outside limits

COMMENTS:

Initial Calibration Date: 2/9/2010

RRF and %RSD Calculations:

Compound Name: vinyl chloride
Lab Value: 0.2653

Area of Compound	532119
Area of Internal STD	501488
Conc. of Internal STD	250
Conc. of Compound	1000
Calculated RRF	0.2653

Compound Name: styrene
Lab Value: 11.33

RRF of STD 1	1.1268
RRF of STD 2	0.9596
RRF of STD 3	1.0496
RRF of STD 4	0.9589
RRF of STD 5	0.9002
RRF of STD 6	0.8146
Calculated % RSD	11.33

Continuing Calibration File ID: 3/4/2010

RRF and %D Calculations:

Compound Name: methylene chloride
Lab Value: 0.277

Area of Compound	163144
Area of Internal STD	589062
Conc. of Internal STD	250
Conc. of Compound	250
Calculated RRF	0.277

Compound Name: toluene
Lab Value: 5.4

Average RRF	0.865
Calibration Check RRF	0.818
Calculated % D	5.4

SAMPLE CALCULATION

Sample ID: IR69-SS02-10A
Standard ID: 2/9/2010
Compound: 2-butanone
Concnetration: 4.7 ug/L

	Water (ug/L)	Soil (ug/Kg)	Soil ug/Kg)
Area of Compound		6641	
Area of Internal STD		616708	
Conc. of Internal (ng)	250	250	
RRF of Compound		0.08409	
Dilution Factor	1	1	
Weight of Sample	NA	7.83	
Volume of Sample	25	NA	
% Moisture	NA	0.87	
Aliquot of sample	NA	NA	
Concentration	#DIV/0!	4.70	#DIV/0'

	RT of Internal STD	RT of Compound	RRT
Sample	10.861	9.767	0.899
Standard	10.860	9.767	0.899

CompuChem

A division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1003030
PROTOCOL: SW-846
SAMPLE IDENTIFICATION: IR69-SS02
REVISED

The 1 soil sample listed above was received intact, refrigerated at 0.7°C, with proper documentation, in sealed shipping containers, on March 4th, 2010. The soil sample was received from field/client in closed, pre-preserved VOA vials (sodium bisulfate/MeOH). The sample was scheduled for the requested analysis of the volatile fraction. SW-846, 3rd Edition, Update 3, 8260B was used to prepare and analyze the sample, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices for SDG 1003030 included in the sample data sections.

Analysis holding time requirement was met for the sample. Soil sample was received in ENCORE and transferred to closed system VOA vial and placed in the freezer. The percent moisture value of the sample was 13. There were volatile Project/Target Compound List (TCL) analytes above the Contract Required Quantitation Limit (CRQL) identified in the sample. All of the system monitoring compounds met recovery criteria in the analysis of the sample. All of the internal standards met response and retention time criteria in the analysis of the sample.

All Bromofluorobenzene (BFB) abundance criteria were met for tunes associated to this SDG. Overall QC criteria were met for all initial and continuing calibration standards associated to this SDG. Manual integrations were performed on ICAL file 0B09006-CAL1R59. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG. The associated method blank met all quality control criteria. The associated Laboratory Control Samples (VRNLCS/VRNLCSD) met all precision and accuracy criteria. Sample IR69-SS02 was requested for matrix spike/matrix spike duplicate (MS/MSD) for the volatile fraction with this SDG. The %Recovery was bias low for 1,2,4-Trichlorobenzene and high for Methyl Acetate for both matrix spikes. The %RPD bias high for Acetone, Methylene Chloride, 2-Butanone, 4-Methyl-2-pentanone, 2-Hexanone, 1,2-Dibromoethane, Bromoform, 1,1,2,2-Tetrachloroethane, and 1,2-Dibromo-3-chloropropane.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

L. Forrester for Preeti Khare

Preeti Khare
Analyst II
March 29, 2010

Data Completeness

The data package was received complete and intact. Resubmissions were not required. (SW846 Method 8270C) *All field sample and QC blank IDs were missing the first four (IR69) and or the last four (-10A) characters. The characters were added to the Form 1s in the DV reports by the data validator*

Laboratory: CompuChem

Holding Times

Sampling Date: 2 28 10
Received Date: 3 04 10
Extraction Date: 3 0910
Analysis Dates: 3 19 10
Cooler Temp: 0.7°C

All prep and analysis holding time requirements were met.

Calibrations

Mass assignments were verified by the injection of DFTPP.

The continuing calibrations required qualifications due to high %D values; see attached Form VIIs.

Internal Standards

All criteria met.

Blank Summary
Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying criteria.
- Qualification Action codes where applied as stated in table below:

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Field	Detects	Not detected	No qualifications
	CRQL*	CRQL*	Report CRQL value with a U
		CRQL*	Use professional judgment
		CRQL*	Report CRQL value with a U
	CRQL*	CRQL* and blank concentration	Report the concentration for the sample with a U, or qualify the data as unusable R
		CRQL* and blank concentration	Use professional judgment
	CRQL*	CRQL*	Report CRQL value with a U
		CRQL*	Use professional judgment
	Gross contamination	Detects	Qualify results as unusable R

*5x the CRQL for bis(2-ethylhexyl)phthalate

Method blank contamination was exhibited- qualifications were required. The associated field QC for this data package was: IR69-FB01-030410-SS (no positive results)-equipment blank; IR69-FB01-030310 - field blank.

Blank Contamination and Qualification Summaries

Blank ID	Compound	Concentration	Reporting Limit
VBLKLV-SIM	naphthalene	1.4J ug/Kg	8.3 ug/Kg
	2-methylnaphthalene	0.83J	8.3
IR69-FB01-030310	bis(2-ethylhexyl)phthalate	6.5	5.0
	di-n-octylphthalate	1.8J	5.0

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Qual Code
IR69-SS02-10A	naphthalene	U at RL	MBL
IR69-SS02-10A	2-methylnaphthalene	U at RL	MBL

Surrogates

All criteria were met.

Laboratory Control Sample

No qualifications were required.

Matrix Spike/Spike Duplicate Samples

An MS/MSD was submitted for sample IR69-SS02-10A; the following compounds exhibited non-compliant recoveries, qualifications were applied to the associated sample as stated in the table below.

MS/MSD Associated Sample ID	Non-compliant Spiked Compound	MS % Rec	MSD % Rec	QC Limit	Qualifier	Q-Code
IR69-SS02-10A	4-chloroaniline	11	7	26-129	J UJ	MSL
	3-nitroaniline	31	16	43-100	J UJ	
	4-nitroaniline	29	17	42-100	J UJ	
	3,3-dichlorobenzidine	0	0	21-100	J R	

Field Duplicate Sample

A field duplicate was not submitted for this data package.

Specific Comments:

All sample results were reported within the calibration range of the instruments.

Detection limits were acceptable. Raw data and calculations were verified.

We have limited the supporting documentation, found with these worksheets, to those forms that indicate qualifications were required.

Validator Signature: _____ **Date:** 7/20/10

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Lab File ID: 0C18007-TUN1A70 DFTPP Injection Date: 03/18/10

Instrument ID: 5972HP70 DFTPP Injection Time: 1736

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	40.9
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	56.3
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	25.0 - 75.0% of mass 198	46.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	23.6
365	Greater than 0.75% of mass 198	3.93
441	Present, but less than mass 443	17.1
442	40.0 - 110.0% of mass 198	95.9
443	15.0 - 24.0% of mass 442	19.1 (19.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050MX	0C18007-CCV1	0C18007-CCV1A7	03/18/10	1759
02	SBLKLV	0030902-BLK1	0030902-BLK1A7	03/18/10	2349
03	SLVLCS	0030902-BS1	0030902-BS1A70	03/19/10	0040
04	IR69-SS02	1003030-01	1003030-01A70	03/19/10	0400
05	IR69-SS02MS	0030902-MS1	0030902-MS1A70	03/19/10	0450
06					
07					
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FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Instrument ID: 5972HP70 Calibration Date: 03/18/10 Time: 1759

Lab File ID: 0C18007-CCV1A7 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1501 1820

GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzaldehyde	0.8340000	0.8134385	0.01	2.46	50.00	AVRG
Phenol	1.3110000	1.1907547	0.01	-9.17	20.00	AVRG
Bis(2-chloroethyl)ether	1.0880000	0.9988209	0.01	-8.20	50.00	AVRG
2-Chlorophenol	1.0800000	1.0091890	0.01	-6.56	50.00	AVRG
2-Methylphenol	0.9860000	0.9230782	0.01	-6.38	50.00	AVRG
2,2'-oxybis(1-Chloropropane)	1.7770000	1.7374658	0.01	-2.22	50.00	AVRG
Acetophenone	1.6440000	1.6102591	0.01	-2.05	50.00	AVRG
4-Methylphenol	1.0780000	1.0673221	0.01	-0.99	50.00	AVRG
N-Nitroso-di-N-propylamine	0.9210000	0.9248111	0.05	0.41	50.00	AVRG
Hexachloroethane	0.6820000	0.6471805	0.01	-5.10	50.00	AVRG
Nitrobenzene	0.3740000	0.3407954	0.01	-8.88	50.00	AVRG
Isophorone	0.6830000	0.6750503	0.01	-1.16	50.00	AVRG
2-Nitrophenol	0.1880000	0.1782575	0.01	-5.18	20.00	AVRG
4-Dimethylphenol	0.2260000	0.2139903	0.01	-5.31	50.00	AVRG
s(2-chloroethoxy)methane	0.3960000	0.3811208	0.01	-3.76	50.00	AVRG
2,4-Dichlorophenol	0.2560000	0.2458838	0.01	-3.95	20.00	AVRG
Naphthalene	0.8750000	0.8646167	0.01	-1.19	50.00	AVRG
4-Chloroaniline	0.3490000	0.3397863	0.01	-2.64	50.00	AVRG
Hexachlorobutadiene	0.1980000	0.1969100	0.01	-0.55	20.00	AVRG
Caprolactam	0.0620000	0.0771250	0.01	24.40	50.00	AVRG
4-Chloro-3-methylphenol	0.2970000	0.2987809	0.01	0.60	20.00	AVRG
2-Methylnaphthalene	0.5320000	0.5034078	0.01	-5.37	50.00	AVRG
Hexachlorocyclopentadiene	0.4430000	0.4158890	0.05	-6.12	50.00	AVRG
2,4,6-Trichlorophenol	0.3660000	0.3558415	0.01	-2.78	20.00	AVRG
2,4,5-Trichlorophenol	0.3820000	0.4044217	0.01	5.87	50.00	AVRG
1,1'-Biphenyl	1.2390000	1.2018862	0.01	-3.00	50.00	AVRG
2-Chloronaphthalene	1.0350000	0.9965010	0.01	-3.72	50.00	AVRG
2-Nitroaniline	0.4070000	0.3921437	0.01	-3.65	50.00	AVRG
Dimethylphthalate	1.3010000	1.2685234	0.01	-2.50	50.00	AVRG
2,6-Dinitrotoluene	0.3140000	0.3072972	0.01	-2.13	50.00	AVRG
Acenaphthylene	1.6650000	1.6252925	0.01	-2.38	50.00	AVRG
3-Nitroaniline	0.3570000	0.3542891	0.01	-0.76	50.00	AVRG
Acenaphthene	0.9400000	0.9182023	0.01	-2.32	20.00	AVRG
2,4-Dinitrophenol	0.2350000	0.2216366	0.05	-5.69	50.00	AVRG
4-Nitrophenol	0.2320000	0.1924289	0.05	-17.06	50.00	AVRG
2,4-Dinitrotoluene	0.4310000	0.4306356	0.01	-0.08	50.00	AVRG
Dibenzofuran	1.4690000	1.4340535	0.01	-2.38	50.00	AVRG
Diethylphthalate	1.4290000	1.3941225	0.01	-2.44	50.00	AVRG
4-Chlorophenyl-phenylether	0.5720000	0.5540576	0.01	-3.14	50.00	AVRG
Fluorene	1.1560000	1.1392585	0.01	-1.45	50.00	AVRG
4-Nitroaniline	0.3390000	0.3317705	0.01	-2.13	50.00	AVRG
4,6-Dinitro-2-methylphenol	0.1760000	0.1691670	0.01	-3.88	50.00	AVRG

FORM VII SV

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO

SBLKLV

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Lab File ID: 0030902-BLK1C60 Lab Sample ID: 0030902-BLK1

Instrument ID: 5972HP60 Date Extracted: 03/09/10

Matrix: (soil/water) SOIL Date Analyzed: 03/23/10

Level:(low/med) LOW Time Analyzed: 1104

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	IR69-SS02	1003030-01	1003030-01C6	03/23/10
02	SLWLCSD	0030902-BSD2	0030902-BSD2	03/23/10
03	SLWLCS	0030902-BS2	0030902-BS2J	03/23/10
04				
05				
06				
07				
08				
09				
10				
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22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS: Naphthalene 1.4J (8.0) ug/Kg
2-methylnaphthalene 0.83J

page 1 of 1

FORM IV SV

FORM 3
SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix Spike - Sample No.: IR69-SS02 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Benzaldehyde	1533	37.99	844	53	20-100
Phenol	1533	0	1361	89	38-112
Bis(2-chloroethyl)ether	1533	0	994.2	65	30-112
2-Chlorophenol	1533	0	1252	82	30-100
2-Methylphenol	1533	0	1559	102	42-110
2,2'-oxybis(1-Chloropro	1533	0	1122	73	24-107
Acetophenone	1533	0	1211	79	32-105
4-Methylphenol	1533	0	1512	99	38-114
N-Nitroso-di-N-prop.(1)	1533	0	1282	84	23-130
Hexachloroethane	1533	0	861.3	56	20-105
Nitrobenzene	1533	0	1002	65	20-135
Isophorone	1533	0	1275	83	39-114
2-Nitrophenol	1533	0	1188	77	33-119
2,4-Dimethylphenol	1533	0	1758	115	43-117
Bis(2-chloroethoxy)meth	1533	0	1275	83	39-107
2,4-Dichlorophenol	1533	0	1517	99	42-119
Naphthalene	1533	0	1106	72	38-118
4-Chloroaniline	1533	0	167.4	11*	26-129
Hexachlorobutadiene	1533	0	1165	76	31-118
Caprolactam	1533	0	2897	189*	45-122
4-Chloro-3-methylphenol	1533	0	1551	101	46-120
2-Methylnaphthalene	1533	0	1214	79	39-111
Hexachlorocyclopentadie	1533	0	763.4	50	20-134
2,4,6-Trichlorophenol	1533	0	1625	106	46-127
2,4,5-Trichlorophenol	1533	0	1665	109	52-122
1,1'-Biphenyl	1533	0	1213	79	42-116
2-Chloronaphthalene	1533	0	1250	82	11-112
2-Nitroaniline	1533	0	1473	96	50-109

J/UJ

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS:

FORM 3
SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix Spike - Sample No.: IR69-SS02 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.	
Dimethylphthalate	1533	0	1375	90	50-120	
2,6-Dinitrotoluene	1533	0	1457	95	47-119	
Acenaphthylene	1533	0	1370	89	50-125	
3-Nitroaniline	1533	0	479.8	31*	43-100	J/UJ
Acenaphthene	1533	0	1362	89	50-126	
2,4-Dinitrophenol	1533	0	1513	99	20-121	
4-Nitrophenol	1533	0	1182	77	26-145	
2,4-Dinitrotoluene	1533	0	1416	92	50-125	
Dibenzofuran	1533	0	1393	91	47-116	
Diethylphthalate	1533	0	1404	92	51-123	
4-Chlorophenyl-phenylet	1533	0	1393	91	52-123	
Fluorene	1533	0	1457	95	52-128	
4-Nitroaniline	1533	0	451.6	29*	42-100	J/UJ
4,6-Dinitro-2-methylphe	1533	0	1282	84	32-127	
N-Nitrosodiphenylamine	1533	0	1738	113	46-125	
4-Bromophenyl-phenyleth	1533	0	1360	89	53-122	
Hexachlorobenzene	1533	0	1378	90	49-126	
Atrazine	1533	0	1194	78	22-100	
Pentachlorophenol	1533	0	1607	105	35-132	
Phenanthrene	1533	0	1420	93	51-129	
Anthracene	1533	0	1382	90	53-136	
Carbazole	1533	0	1333	87	45-135	
Di-n-butylphthalate	1533	0	1344	88	49-121	
Fluoranthene	1533	0	1311	86	56-134	
Pyrene	1533	0	1690	110	48-136	
Butylbenzylphthalate	1533	0	1601	104	42-137	
3,3'-Dichlorobenzidine	1533	0	0	0*	21-100	J/R
bis(2-ethylhexyl)Phthal	1533	0	1501	98	37-133	

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS:

FORM 3
SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix Spike - Sample No.: IR69-SS02 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzaldehyde	1533	926.1	58	9	30	20-100
Phenol	1533	1155	75	16	30	38-112
Bis(2-chloroethyl)ether	1533	910.5	59	9	30	30-112
2-Chlorophenol	1533	1204	79	4	30	30-100
2-Methylphenol	1533	1408	92	10	30	42-110
2,2'-oxybis(1-Chloropro	1533	1027	67	9	30	24-107
Acetophenone	1533	1149	75	5	30	32-105
4-Methylphenol	1533	1376	90	9	30	38-114
N-Nitroso-di-N-prop.(1)	1533	1183	77	8	30	23-130
Hexachloroethane	1533	947.7	62	10	30	20-105
Nitrobenzene	1533	1027	67	2	30	20-135
Isophorone	1533	1195	78	6	30	39-114
2-Nitrophenol	1533	1173	77	1	30	33-119
2,4-Dimethylphenol	1533	1655	108	6	30	43-117
Bis(2-chloroethoxy)meth	1533	1283	84	1	30	39-107
2,4-Dichlorophenol	1533	1441	94	5	30	42-119
Naphthalene	1533	1084	71	2	30	38-118
4-Chloroaniline	1533	101.5	7*	49*	30	26-129
Hexachlorobutadiene	1533	1265	83	8	30	31-118
Caprolactam	1533	2375	155*	20	30	45-122
4-Chloro-3-methylphenol	1533	1505	98	3	30	46-120
2-Methylnaphthalene	1533	1143	75	6	30	39-111
Hexachlorocyclopentadie	1533	898.7	59	16	30	20-134
2,4,6-Trichlorophenol	1533	1462	95	10	30	46-127
2,4,5-Trichlorophenol	1533	1551	101	7	30	52-122
1,1'-Biphenyl	1533	1141	74	6	30	42-116
2-Chloronaphthalene	1533	1157	75	8	30	11-112
2-Nitroaniline	1533	1422	93	4	30	50-109

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS:

FORM 3
SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix Spike - Sample No.: IR69-SS02 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Dimethylphthalate	1533	1274	83	8	30	50-120
2,6-Dinitrotoluene	1533	1333	87	9	30	47-119
Acenaphthylene	1533	1240	81	10	30	50-125
3-Nitroaniline	1533	249	16*	63*	30	43-100
Acenaphthene	1533	1270	83	7	30	50-126
2,4-Dinitrophenol	1533	1471	96	3	30	20-121
4-Nitrophenol	1533	1428	93	19	30	26-145
2,4-Dinitrotoluene	1533	1283	84	10	30	50-125
Dibenzofuran	1533	1281	84	8	30	47-116
Diethylphthalate	1533	1300	85	8	30	51-123
4-Chlorophenyl-phenylet	1533	1274	83	9	30	52-123
Fluorene	1533	1320	86	10	30	52-128
4-Nitroaniline	1533	255.5	17*	55*	30	42-100
4,6-Dinitro-2-methylphe	1533	1362	89	6	30	32-127
N-Nitrosodiphenylamine	1533	1571	102	10	30	46-125
4-Bromophenyl-phenyleth	1533	1387	90	2	30	53-122
Hexachlorobenzene	1533	1317	86	4	30	49-126
Atrazine	1533	1227	80	3	30	22-100
Pentachlorophenol	1533	1633	107	2	30	35-132
Phenanthrene	1533	1331	87	6	30	51-129
Anthracene	1533	1315	86	5	30	53-136
Carbazole	1533	1318	86	1	30	45-135
Di-n-butylphthalate	1533	1234	80	8	30	49-121
Fluoranthene	1533	1344	88	2	30	56-134
Pyrene	1533	1379	90	20	30	48-136
Butylbenzylphthalate	1533	1422	93	12	30	42-137
3,3'-Dichlorobenzidine	1533	0	0*		30	21-100
bis(2-ethylhexyl)Phthal	1533	1361	89	10	30	37-133

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS:

Initial Calibration Date: 3/16/2010

RRF and %RSD Calculations:

Compound Name: phenol
Lab Value: 1.426

Area of Compound	301398
Area of Internal STD	422640
Conc. of Internal STD	40
Conc. of Compound	20
Calculated RRF	1.426

Compound Name: 2-methylphenol
Lab Value: 11.1

RRF of STD 1	1.055
RRF of STD 2	1.049
RRF of STD 3	0.906
RRF of STD 4	1.084
RRF of STD 5	0.834
Calculated % RSD	11.10

Continuing Calibration File ID: 3/18/2010

RRF and %D Calculations:

Compound Name: benzo(k)fluoranthene
Lab Value: 0.994

Area of Compound	2573129
Area of Internal STD	2069950
Conc. of Internal STD	40
Conc. of Compound	50
Calculated RRF	0.994

Compound Name: indeno(1,2,3-cd)pyrene
Lab Value: 3.0

Average RRF	0.852
Calibration Check RRF	0.8261552
Calculated % D	3.03

CompuChem

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SDG NARRATIVE
SDG #1003030
PROTOCOL: SW-846
SAMPLE IDENTIFICATION: IR69-SS02

The 1 solid sample listed above was received at 0.7°C, with proper documentation, in sealed shipping container, on March 4th, 2010. The sample was scheduled for the requested analysis of the semivolatile fraction. SW-846, 3rd Edition, Update 3, Separatory Funnel extraction (Method 3510C), and Method 8270C were used to prepare and analyze the sample, with the exceptions and/or additions requested by the client. This portion of the SDG narrative deals with the semivolatile fraction only.

Semivolatiles
Extraction and analysis holding time requirements were met for the sample.

The percent moisture value of the sample was 13.

There were no semivolatile target compound list (TCL) analytes identified above the Contract Required Quantitation Limit (CRQL) identified in the sample.

Manual integrations were performed on one sample file 1003030-01A70; ICAL files 0C16003-CAL1A70, 0C16003-CAL2A70, 0C16003-CAL3A70, 0C16003-CAL4A70, 0C16003-CAL5A70; CCAL files 0C18007-CCV1A70, 0C19004-CCV1A70; and QC files 0030902-BLK1A70, 0030902-BS1A70, 0030902-MS1A70, 0030902-MSD1JA70. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.

All decafluorotriphenylphosphine (DFTPP) abundance criteria were met for tunes associated to this SDG. Tailing factor criteria were met for pentachlorophenol and benzidine. The breakdown criterion was met for DDT. These three compounds have been added to the DFTPP solution and analyzed together.

Overall QC criteria were met for all initial and continuing calibration standards associated to this SDG.

The surrogates met recovery criteria in the analysis of the sample.

All of the internal standards met response and retention time criteria in the analysis of the sample.

The associated method blank met all quality control criteria

The associated Laboratory Control Sample (SLNLCS) failed the %Recovery for Caprolactam. There were no detects for the compound in the associated samples.

Sample IR69-SS02 was requested for matrix spike/matrix spike duplicate (MS/MSD) for the semi-volatile fraction with this SDG.

An uncertainty of these test results may be estimated from the recovery of the surrogates added to the sample prior to sample preparation or from the recovery of spiked compound(s) in the associated laboratory control sample. Further information is available upon request.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Preeti Khare
Data Reviewer I
April 18, 2010

Holding Times

Sampling Date: 2 28
Received Date: 3 4
Extraction Date: 3 9
Analysis Dates: 312, 3 19

All extraction and analysis holding times were met for the samples in this SDG. No qualifications were required. Sample receipt data is in order. Cooler temperature was within acceptable range.

Calibrations

Initial calibrations were performed according to the method with a five-point curve for the single component pesticides, toxaphene, chlordane and the PCB target compounds 1016 & 1660. Single points were included for the other Aroclors. Calibration factors were calculated. %RSDs were within QC limits. Continuing calibration standards were analyzed per the SW-846 methods requested. All PEM breakdown criteria were not met. Some continuing calibration criteria were outside QC limits for target compounds in associated standards in both the initial run of the sample spike pair and the RE run. The RE was excluded in favor of the initial run so all qualifications were based on the initial run. Column resolution was acceptable. The correct analytical sequence was run. All required instrument blanks were analyzed. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Any compound detected in the sample, and the associated blank, must be qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than five (5) times the blank concentration.
- Sample weight, volume or dilution factor must be taken into consideration when applying the 5X criteria.
- Apply the same data validation guidelines to any associated rinse and field blanks and all associated samples.
- Qualification Action codes:
-

No Action -	The sample result is greater than the RL and greater than five times (5X) the blank value.
U at RL-	The sample result is less than the RL when the blank contamination level is less than the RL.

No contamination that resulted in qualification of the data was noted in the associated method or instrument blanks or the submitted field QC blanks.

SURROGATE RECOVERIES

No qualifications were required due to surrogate recovery issues.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

The MS/MSD exhibited non-compliant recoveries and one non-compliant RPD. However, no qualifications were required because either the MS and or the MSD was correct for all compounds.

LABORATORY CONTROL SAMPLES

The submitted LCS samples exhibited acceptable recoveries. No qualifications were required.

FIELD DUPLICATE SAMPLE SUMMARY

Sample ID: none **Duplicate ID:**

Compound	Sample Conc.	Duplicate Conc.	RPD
			#DIV/0!

Comments:

SAMPLE RESULT VERIFICATION

Calculations were verified. All P flagged results were qualified as estimated J (column quantitation %Ds >40.)

Reviewer JACleveland **Date:** 7 / 23 / 10

CompuChem

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SDG NARRATIVE
SDG # 1003030
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS: IR69-SS02

The one soil sample listed above was received intact, refrigerated at 0.7°C, with proper documentation, in sealed shipping containers, on March 4, 2010. The sample was scheduled for the requested analysis of the Pesticide/PCB fraction. SW-846, 3rd Edition, Update 3, Method 8081A and 8082 were used to prepare and analyze the sample, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section and all pertinent Laboratory notices for SDG # 1003030 are included in the sample data sections.

Pesticide/PCB

Extraction and analysis holding time requirements were met for the samples. Sulfur cleanup was performed on each of the samples and QC for the first analysis. Due to failures within in the continuing calibrations, the sample was reanalyzed a second time. The second analysis was processed through GPC cleanup only. Both sets of data are reported, with the second analysis with the "RE" suffix.

Target analytes confirmed above the reporting limits in sample IR69-SS02.

All QC criteria were met for all initial calibration standards associated to this SDG. The following continuing calibration standards did not meet QC criteria: INDC3VL, INDC3VN, INDC3WJ, AR16603WJ, INDC3WL, PEMVL, PEMVN, PEMWJ, and PEMWL.

All surrogate recoveries were with the method specified limits, with the exception of Tetrachloro-m-xylene on the clpest2 column in samples IR69-SS02MS, IR69-SS02PCBMS, IR69-SS02MSD, IR69-SS02, IR69-SS02REMS, IR69-SS02REPCBMS, IR69-SS02REMSD, and IR69-SS02.

The method blank associated with the sample met all quality control criteria.

Duplicate matrix spikes were performed with sample IR69-SS02, and met recovery and precision criteria, with a few exceptions. The Laboratory Control Sample (LCS) prepared and analyzed with the sample met recovery criteria.

An uncertainty of these test results may be estimated from the recovery of the surrogates added to the sample prior to sample preparation or from the recovery of spiked compound(s) in the associated laboratory control sample. Further information is available upon request.

I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on CD has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

for Kathy Humphries
Teresa Amentt Jennings
GC/HPLC Data Reviewer
March 28, 2010

7F

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

GC Column: CLPEST ID: 0.32 (mm) Init. Calib. Date(s): 03/05/10 03/08/10

EPA Sample No.(PIBLK): PIBLKVK Date Analyzed :03/12/10

Lab Sample ID (PIBLK): PIBLKVKVL Time Analyzed :2023

EPA Sample No.(PEM): PEMVL Date Analyzed :03/12/10

Lab Sample ID (PEM): PEMVL Time Analyzed :2151

PEM COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	AREA
4,4'-DDD	15.64	15.57	15.71	4777
4,4'-DDE				
4,4'-DDT	16.24	16.17	16.31	1467
Endrin	15.49	15.42	15.56	9246
Endrin Aldehyde				
Endrin Ketone				

4,4'-DDT % breakdown (1): 76.5 Endrin % breakdown (1): 0.00

NJ - DDD/DDE
J/R - DDT

QC LIMITS:

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

FORM VII PEST-1

7F

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

GC Column: CLPEST2 ID: 0.32 (mm) Init. Calib. Date(s): 03/05/10 03/08/10

EPA Sample No.(PIBLK): PIBLKVL Date Analyzed :03/12/10

Lab Sample ID (PIBLK): PIBLKVKVL Time Analyzed :2023

EPA Sample No.(PEM): PEMVL Date Analyzed :03/12/10

Lab Sample ID (PEM): PEMVL Time Analyzed :2151

PEM COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	AREA
4,4'-DDD	15.52	15.45	15.59	3645
4,4'-DDE	14.28	14.21	14.35	87
4,4'-DDT	16.18	16.11	16.25	141
Endrin	15.23	15.17	15.31	6416
Endrin Aldehyde	16.42	16.35	16.49	51
Endrin Ketone	18.12	18.06	18.20	78

4,4'-DDT % breakdown (1): 96.4 Endrin % breakdown (1): 1.97

NJ - DDD/DDT
J/R - DDT

QC LIMITS:

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

FORM VII PEST-1

7F

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

GC Column: CLPEST ID: 0.32 (mm) Init. Calib. Date(s): 03/05/10 03/08/10

EPA Sample No.(PIBLK): PIBLKVM Date Analyzed :03/13/10

Lab Sample ID (PIBLK): PIBLKVMVN Time Analyzed :0015

EPA Sample No.(PEM): PEMVN Date Analyzed :03/13/10

Lab Sample ID (PEM): PEMVN Time Analyzed :0142

PEM COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	AREA
4,4'-DDD	15.64	15.57	15.71	4056
4,4'-DDE	14.34	14.27	14.40	119
4,4'-DDT	16.24	16.17	16.31	1505
Endrin	15.49	15.42	15.56	8922
Endrin Aldehyde				
Endrin Ketone	18.42	18.35	18.49	191

4,4'-DDT % breakdown (1): 73.5

Endrin % breakdown (1): 2.10

NJ - DDD/DDE

JR - DDT

QC LIMITS:

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

FORM VII PEST-1

7F

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

GC Column: CLPEST2 ID: 0.32 (mm) Init. Calib. Date(s): 03/05/10 03/08/10

EPA Sample No.(PIBLK): PIBLKVN Date Analyzed :03/13/10

Lab Sample ID (PIBLK): PIBLKVMVN Time Analyzed :0015

EPA Sample No.(PEM): PEMVN Date Analyzed :03/13/10

Lab Sample ID (PEM): PEMVN Time Analyzed :0142

PEM COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	AREA
4,4'-DDD	15.52	15.45	15.59	3212
4,4'-DDE	14.28	14.21	14.35	115
4,4'-DDT	16.18	16.11	16.25	223
Endrin	15.23	15.17	15.31	6092
Endrin Aldehyde	16.42	16.35	16.49	41
Endrin Ketone	18.12	18.06	18.20	87

4,4'-DDT % breakdown (1): 93.7

Endrin % breakdown (1): 2.06

NJ- DDD/DDE
JR- DDT

QC LIMITS:

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

FORM VII PEST-1

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Instrument ID: TRACEGC84 Calibration Date: 03/12/10 Time: 2121

Lab File ID: 206UINDC3VL Init. Calib. Date(s): 03/05/10 03/05/10

Init. Calib. Times: 1547 1744

GC Column: CLPEST ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	579172.50	583330.00	0.01	0.72	20.00	AVRG	
alpha-BHC	691067.50	695185.00	0.01	0.60	20.00	AVRG	
beta-BHC	283830.00	278435.00	0.01	-1.90	20.00	AVRG	
delta-BHC	613307.50	633970.00	0.01	3.37	20.00	AVRG	
gamma-BHC (Lindane)	665900.00	615295.00	0.01	-7.60	20.00	AVRG	
4,4'-DDD	381772.50	541800.00	0.01	41.92	20.00	AVRG	<- NQ - increase in response
4,4'-DDE	503307.50	508463.75	0.01	1.02	20.00	AVRG	
4,4'-DDT	444732.50	35733.750	0.01	-91.96	20.00	AVRG	<- J/UJ R JC 12/10
Dieldrin	496771.25	496950.00	0.01	0.04	20.00	AVRG	
Endosulfan I	529862.50	533547.50	0.01	0.70	20.00	AVRG	
Endosulfan II	451598.75	437216.25	0.01	-3.18	20.00	AVRG	
Endosulfan sulfate	404451.25	379160.00	0.01	-6.25	20.00	AVRG	
Endrin	443647.50	425626.25	0.01	-4.06	20.00	AVRG	
Endrin Aldehyde	351362.50	349695.00	0.01	-0.47	20.00	AVRG	
Heptachlor	626617.50	476610.00	0.01	-23.94	20.00	AVRG	<- J/UJ
Heptachlor Epoxide	561227.50	560205.00	0.01	-0.18	20.00	AVRG	
Methoxychlor	195679.00	57758.250	0.01	-70.48	20.00	AVRG	<- J/UJ
Endrin Ketone	475307.50	294492.50	0.01	-38.04	20.00	AVRG	<- J/UJ
gamma-Chlordane	565707.50	548430.00	0.01	-3.05	20.00	AVRG	
alpha-Chlordane	491787.50	486225.00	0.01	-1.13	20.00	AVRG	
Decachlorobiphenyl	431712.50	422846.25	0.01	-2.05	20.00	AVRG	
Tetrachloro-m-Xylene	472792.50	468007.50	0.01	-1.01	20.00	AVRG	

1R69-SS02

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Instrument ID: TRACEGC85 Calibration Date: 03/12/10 Time: 2121

Lab File ID: 206UINDC3VL Init. Calib. Date(s): 03/05/10 03/05/10

Init. Calib. Times: 1547 1744

GC Column: CLPEST2 ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	408830.00	407285.00	0.01	-0.38	20.00	AVRG	
beta-BHC	207992.50	190965.00	0.01	-8.19	20.00	AVRG	
alpha-BHC	489947.50	483082.50	0.01	-1.40	20.00	AVRG	
delta-BHC	436310.00	441675.00	0.01	1.23	20.00	AVRG	
gamma-BHC (Lindane)	475640.00	420150.00	0.01	-11.67	20.00	AVRG	
4,4'-DDD	269131.25	380018.75	0.01	41.20	20.00	AVRG	<- NQ- increase in response
4,4'-DDE	366063.75	367215.00	0.01	0.31	20.00	AVRG	
4,4'-DDT	308780.00	2131.2500	0.01	-99.31	20.00	AVRG	<- J/UJR gac 3/2/10
Dieldrin	357921.25	358890.00	0.01	0.27	20.00	AVRG	
Endosulfan I	372447.50	368932.50	0.01	-0.94	20.00	AVRG	
Endosulfan II	324707.50	361906.25	0.01	11.46	20.00	AVRG	
Endosulfan sulfate	294692.50	270697.50	0.01	-8.14	20.00	AVRG	
Endrin	323160.00	300665.00	0.01	-6.96	20.00	AVRG	
Endrin Aldehyde	253240.00	244078.75	0.01	-3.62	20.00	AVRG	
eptachlor	427408.41	309562.50	0.01	-27.57	20.00	AVRG	<- J/UJ
eptachlor Epoxide	398407.50	389320.00	0.01	-2.28	20.00	AVRG	
Methoxychlor	143271.50	20863.000	0.01	-85.44	20.00	AVRG	<- J/UJ
Endrin Ketone	345835.00	168903.75	0.01	-51.16	20.00	AVRG	<- J/UJ
gamma-Chlordane	396727.50	387695.00	0.01	-2.28	20.00	AVRG	
alpha-Chlordane	345977.50	338802.50	0.01	-2.07	20.00	AVRG	
Decachlorobiphenyl	308857.50	292497.50	0.01	-5.30	20.00	AVRG	
Tetrachloro-m Xylene	344397.50	325292.50	0.01	-5.55	20.00	AVRG	

1R69-5502

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Instrument ID: TRACEGC84 Calibration Date: 03/13/10 Time: 0113

Lab File ID: 214UINDC3VN Init. Calib. Date(s): 03/05/10 03/05/10

Init. Calib. Times: 1547 1744

GC Column: CLPEST ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	579172.50	595100.00	0.01	2.75	20.00	AVRG	
alpha-BHC	691067.50	691350.00	0.01	0.04	20.00	AVRG	
beta-BHC	283830.00	280300.00	0.01	-1.24	20.00	AVRG	
delta-BHC	613307.50	630750.00	0.01	2.84	20.00	AVRG	
gamma-BHC (Lindane)	665900.00	603400.00	0.01	-9.38	20.00	AVRG	
4,4'-DDD	381772.50	555325.00	0.01	45.46	20.00	AVRG	<- NQ- increase in response
4,4'-DDE	503307.50	508700.00	0.01	1.07	20.00	AVRG	
4,4'-DDT	444732.50	36850.000	0.01	-91.71	20.00	AVRG	<- JHJR gac 72410
Dieldrin	496771.25	504650.00	0.01	1.58	20.00	AVRG	
Endosulfan I	529862.50	522950.00	0.01	-1.30	20.00	AVRG	
Endosulfan II	451598.75	445775.00	0.01	-1.29	20.00	AVRG	
Endosulfan sulfate	404451.25	381800.00	0.01	-5.60	20.00	AVRG	
Endrin	443647.50	429875.00	0.01	-3.10	20.00	AVRG	
Endrin Aldehyde	351362.50	342600.00	0.01	-2.49	20.00	AVRG	
eptachlor	626617.50	483150.00	0.01	-22.90	20.00	AVRG	<- JHJ
eptachlor Epoxide	561227.50	557150.00	0.01	-0.73	20.00	AVRG	
Methoxychlor	195679.00	62005.000	0.01	-68.31	20.00	AVRG	<- JHJ
Endrin Ketone	475307.50	303925.00	0.01	-36.06	20.00	AVRG	<- JHJ
gamma-Chlordane	565707.50	551200.00	0.01	-2.56	20.00	AVRG	
alpha-Chlordane	491787.50	492950.00	0.01	0.24	20.00	AVRG	
Decachlorobiphenyl	431712.50	425425.00	0.01	-1.46	20.00	AVRG	
Tetrachloro-m-Xylene	472792.50	462300.00	0.01	-2.22	20.00	AVRG	

1R69-5502

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Instrument ID: TRACEGC85 Calibration Date: 03/13/10 Time: 0113

Lab File ID: 214UINDC3VN Init. Calib. Date(s): 03/05/10 03/05/10

Init. Calib. Times: 1547 1744

GC Column: CLPEST2 ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	408830.00	404470.00	0.01	-1.07	20.00	AVRG	
beta-BHC	207992.50	193810.00	0.01	-6.82	20.00	AVRG	
alpha-BHC	489947.50	479945.00	0.01	-2.04	20.00	AVRG	
delta-BHC	436310.00	437752.50	0.01	0.33	20.00	AVRG	
gamma-BHC (Lindane)	475640.00	426297.50	0.01	-10.37	20.00	AVRG	
4,4'-DDD	269131.25	379197.50	0.01	40.90	20.00	AVRG	<- NQ - increase in response
4,4'-DDE	366063.75	367055.00	0.01	0.27	20.00	AVRG	
4,4'-DDT	308780.00	3260.0000	0.01	-98.94	20.00	AVRG	<- J/UJR gjc 72410
Dieldrin	357921.25	358595.00	0.01	0.19	20.00	AVRG	
Endosulfan I	372447.50	374970.00	0.01	0.68	20.00	AVRG	
Endosulfan II	324707.50	367966.25	0.01	13.32	20.00	AVRG	
Endosulfan sulfate	294692.50	270636.25	0.01	-8.16	20.00	AVRG	
Endrin	323160.00	300763.75	0.01	-6.93	20.00	AVRG	
Endrin Aldehyde	253240.00	242980.00	0.01	-4.05	20.00	AVRG	
Heptachlor	427408.41	318710.00	0.01	-25.43	20.00	AVRG	<- J/UJ
Heptachlor Epoxide	398407.50	389042.50	0.01	-2.35	20.00	AVRG	
Methoxychlor	143271.50	26473.750	0.01	-81.52	20.00	AVRG	<- J/UJ
Endrin Ketone	345835.00	184513.75	0.01	-46.65	20.00	AVRG	<- J/UJ
gamma-Chlordane	396727.50	387515.00	0.01	-2.32	20.00	AVRG	
alpha-Chlordane	345977.50	340337.50	0.01	-1.63	20.00	AVRG	
Decachlorobiphenyl	308857.50	293513.75	0.01	-4.97	20.00	AVRG	
Tetrachloro-m-Xylene	344397.50	325002.50	0.01	-5.63	20.00	AVRG	

1R69-SS02

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Instrument ID: TRACEGC84 Calibration Date: 03/20/10 Time: 0250

Lab File ID: 065WINDC3WJ Init. Calib. Date(s): 03/18/10 03/18/10

Init. Calib. Times: 1811 2007

GC Column: CLPEST ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	597902.50	548210.00	0.01	-8.31	20.00	AVRG	
alpha-BHC	713037.50	662420.00	0.01	-7.10	20.00	AVRG	
beta-BHC	288155.00	270795.00	0.01	-6.02	20.00	AVRG	
delta-BHC	625740.00	605737.50	0.01	-3.20	20.00	AVRG	
gamma-BHC (Lindane)	683767.50	591992.50	0.01	-13.42	20.00	AVRG	
4,4'-DDD	402792.50	470345.00	0.01	16.77	20.00	AVRG	
4,4'-DDE	528596.25	479491.25	0.01	-9.29	20.00	AVRG	
4,4'-DDT	455096.25	7532.5000	0.01	-98.34	20.00	AVRG	<-
Dieldrin	504626.25	464117.50	0.01	-8.03	20.00	AVRG	
Endosulfan I	539585.00	488275.00	0.01	-9.51	20.00	AVRG	
Endosulfan II	458277.50	405557.50	0.01	-11.50	20.00	AVRG	
Endosulfan sulfate	402275.00	339423.75	0.01	-15.62	20.00	AVRG	
Endrin	421351.25	390387.50	0.01	-7.35	20.00	AVRG	
Endrin Aldehyde	358455.00	310202.50	0.01	-13.46	20.00	AVRG	
eptachlor	642747.50	452570.00	0.01	-29.59	20.00	AVRG	<-
eptachlor Epoxide	575742.50	520635.00	0.01	-9.57	20.00	AVRG	
Methoxychlor	195953.50	42494.000	0.01	-78.31	20.00	AVRG	<-
Endrin Ketone	488890.00	262700.00	0.01	-46.27	20.00	AVRG	<-
gamma-Chlordane	581915.00	519455.00	0.01	-10.73	20.00	AVRG	
alpha-Chlordane	508945.00	458367.50	0.01	-9.94	20.00	AVRG	
Decachlorobiphenyl	433085.00	363341.25	0.01	-16.10	20.00	AVRG	
Tetrachloro-m-Xylene	471495.00	442625.00	0.01	-6.12	20.00	AVRG	

1R69-SS02RE -
no Quals this run is not being used

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Instrument ID: TRACEGC85 Calibration Date: 03/20/10 Time: 0250

Lab File ID: 065WINDC3WJ Init. Calib. Date(s): 03/18/10 03/18/10

Init. Calib. Times: 1811 2007

GC Column: CLPEST2 ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	432835.00	387575.00	0.01	-10.46	20.00	AVRG	
beta-BHC	217197.50	190850.00	0.01	-12.13	20.00	AVRG	
alpha-BHC	509757.50	454797.50	0.01	-10.78	20.00	AVRG	
delta-BHC	458130.00	414530.00	0.01	-9.52	20.00	AVRG	
gamma-BHC (Lindane)	496487.50	413552.50	0.01	-16.70	20.00	AVRG	
4,4'-DDD	286853.75	340660.00	0.01	18.76	20.00	AVRG	
4,4'-DDE	392666.25	352042.50	0.01	-10.34	20.00	AVRG	
4,4'-DDT	322847.50	4965.0000	0.01	-98.46	20.00	AVRG	<-
Dieldrin	373278.75	337761.25	0.01	-9.52	20.00	AVRG	
Endosulfan I	389227.50	351887.50	0.01	-9.59	20.00	AVRG	
Endosulfan II	336770.00	330876.25	0.01	-1.75	20.00	AVRG	
Endosulfan sulfate	297955.00	251478.75	0.01	-15.60	20.00	AVRG	
Endrin	312838.75	280857.50	0.01	-10.22	20.00	AVRG	
Endrin Aldehyde	263425.00	226920.00	0.01	-13.86	20.00	AVRG	
ptachlor	453215.68	309950.00	0.01	-31.61	20.00	AVRG	<-
ptachlor Epoxide	417855.00	370775.00	0.01	-11.27	20.00	AVRG	
Methoxychlor	145764.50	30039.500	0.01	-79.39	20.00	AVRG	<-
Endrin Ketone	360245.00	191326.25	0.01	-46.89	20.00	AVRG	<-
gamma-Chlordane	420805.00	370310.00	0.01	-12.00	20.00	AVRG	
alpha-Chlordane	366730.00	324557.50	0.01	-11.50	20.00	AVRG	
Decachlorobiphenyl	323012.50	272201.25	0.01	-15.73	20.00	AVRG	
Tetrachloro-m-Xylene	358237.50	318902.50	0.01	-10.98	20.00	AVRG	

1R69-SS02RE
No Quals

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Instrument ID: TRACEGC84 Calibration Date: 03/20/10 Time: 1003

Lab File ID: 080WINDC3WL Init. Calib. Date(s): 03/18/10 03/18/10

Init. Calib. Times: 1811 2007

GC Column: CLPEST ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	597902.50	550785.00	0.01	-7.88	20.00	AVRG	
alpha-BHC	713037.50	654375.00	0.01	-8.23	20.00	AVRG	
beta-BHC	288155.00	275035.00	0.01	-4.55	20.00	AVRG	
delta-BHC	625740.00	582670.00	0.01	-6.88	20.00	AVRG	
gamma-BHC (Lindane)	683767.50	618240.00	0.01	-9.58	20.00	AVRG	
4,4'-DDD	402792.50	418706.25	0.01	3.95	20.00	AVRG	
4,4'-DDE	528596.25	483858.75	0.01	-8.46	20.00	AVRG	
4,4'-DDT	455096.25	196383.75	0.01	-56.85	20.00	AVRG	<-
Dieldrin	504626.25	467780.00	0.01	-7.30	20.00	AVRG	
Endosulfan I	539585.00	498230.00	0.01	-7.66	20.00	AVRG	
Endosulfan II	458277.50	420333.75	0.01	-8.28	20.00	AVRG	
Endosulfan sulfate	402275.00	352365.00	0.01	-12.41	20.00	AVRG	
Endrin	421351.25	402582.50	0.01	-4.45	20.00	AVRG	
Endrin Aldehyde	358455.00	310342.50	0.01	-13.42	20.00	AVRG	
eptachlor	642747.50	547692.50	0.01	-14.79	20.00	AVRG	
eptachlor Epoxide	575742.50	530295.00	0.01	-7.89	20.00	AVRG	
Methoxychlor	195953.50	124609.75	0.01	-36.41	20.00	AVRG	<-
Endrin Ketone	488890.00	386147.50	0.01	-21.02	20.00	AVRG	<-
gamma-Chlordane	581915.00	528305.00	0.01	-9.21	20.00	AVRG	
alpha-Chlordane	508945.00	461907.50	0.01	-9.24	20.00	AVRG	
Decachlorobiphenyl	433085.00	376492.50	0.01	-13.07	20.00	AVRG	
Tetrachloro-m-Xylene	471495.00	445110.00	0.01	-5.60	20.00	AVRG	

1R69-5502RE
No Quals

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Instrument ID: TRACEGC85 Calibration Date: 03/20/10 Time: 1003

Lab File ID: 080WINDC3WL Init. Calib. Date(s): 03/18/10 03/18/10

Init. Calib. Times: 1811 2007

GC Column: CLPEST2 ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	432835.00	392847.50	0.01	-9.24	20.00	AVRG	
beta-BHC	217197.50	198250.00	0.01	-8.72	20.00	AVRG	
alpha-BHC	509757.50	459442.50	0.01	-9.87	20.00	AVRG	
delta-BHC	458130.00	411405.00	0.01	-10.20	20.00	AVRG	
gamma-BHC (Lindane)	496487.50	439280.00	0.01	-11.52	20.00	AVRG	
4,4'-DDD	286853.75	304212.50	0.01	6.05	20.00	AVRG	
4,4'-DDE	392666.25	358607.50	0.01	-8.67	20.00	AVRG	
4,4'-DDT	322847.50	155946.25	0.01	-51.70	20.00	AVRG	<-
Dieldrin	373278.75	342945.00	0.01	-8.13	20.00	AVRG	
Endosulfan I	389227.50	362510.00	0.01	-6.86	20.00	AVRG	
Endosulfan II	336770.00	321143.75	0.01	-4.64	20.00	AVRG	
Endosulfan sulfate	297955.00	262912.50	0.01	-11.76	20.00	AVRG	
Endrin	312838.75	300766.25	0.01	-3.86	20.00	AVRG	
Endrin Aldehyde	263425.00	234467.50	0.01	-10.99	20.00	AVRG	
ptachlor	453215.68	396595.00	0.01	-12.49	20.00	AVRG	
eptachlor Epoxide	417855.00	380245.00	0.01	-9.00	20.00	AVRG	
Methoxychlor	145764.50	94001.250	0.01	-35.51	20.00	AVRG	<-
Endrin Ketone	360245.00	291886.25	0.01	-18.98	20.00	AVRG	
gamma-Chlordane	420805.00	382165.00	0.01	-9.18	20.00	AVRG	
alpha-Chlordane	366730.00	335195.00	0.01	-8.60	20.00	AVRG	
Decachlorobiphenyl	323012.50	278915.00	0.01	-13.65	20.00	AVRG	
Tetrachloro-m-Xylene	358237.50	321672.50	0.01	-10.21	20.00	AVRG	

1R69-SS02RE
No Quals

FORM VII PEST

2F
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

GC Column(1): CLPEST ID: 0.32 (mm) GC Column(2): CLPEST2 ID: 0.32 (mm)

	EPA SAMPLE NO.	S1 1 %REC #	S1 2 %REC #	TCX 1 %REC #	TCX 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLKLT	80	80	82	93			0
02	PLTLCS	91	85	84	93			0
03	PLULCS	80	80	89	95			0
04	IR69-SS02MS	76	91	86	130*	NQ		1
05	IR69-SS02PCB	82	94	86	132*			1
06	IR69-SS02MSD	66	85	87	141*			1
07	IR69-SS02PCB	66	86	83	124			0
08	IR69-SS02	66	91	87	140*			1
09	PBLKTL	87	87	91	98			0
10	PTLLCS	99	87	96	102			0
11	PULLCS	85	88	96	99			0
12	IR69-SS02REM	74	85	91	140*	NQ		1
13	IR69-SS02REP	94	94	94	138*			1
14	IR69-SS02REM	83	79	95	146*			1
15	IR69-SS02REP	75	95	96	124			0
16	IR69-SS02RE	56	81	97	142*			1
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

		ADVISORY QC LIMITS
S1	= Decachlorobiphenyl	(55-130)
S2 (TCX)	= Tetrachloro-m-Xylene	(70-125)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix Spike - EPA Sample No.: IR69-SS02

COMPOUND	SPIKE ADDED (ug/Kg	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Aldrin	5.7	2.0	5.7	65	45-140
beta-BHC	5.7	0.0	3.6	63	60-125
alpha-BHC	5.7	0.0	5.0	88	60-125
delta-BHC	5.7	0.0	4.8	84	55-130
gamma-BHC (Lindane)	5.7	0.0	4.7	82	60-125
4,4'-DDD	14	0.0	12	86	30-135
4,4'-DDE	14	1.7	13	81	70-125
4,4'-DDT	14	0.0	8.6	61	45-140
Dieldrin	14	0.0	12	86	65-125
Endosulfan I	5.7	0.0	3.9	68	15-135
Endosulfan II	14	0.0	11	78	35-140
Endosulfan sulfate	14	2.8	11	58*	60-135 NQ
Endrin	14	0.0	11	78	60-135
Endrin Aldehyde	14	0.0	6.4	46	35-145
Heptachlor	5.7	1.4	7.7	110	50-140
Heptachlor Epoxide	5.7	0.0	5.0	88	65-130
Methoxychlor	14	0.0	11	78	55-145
Endrin Ketone	14	0.0	10	71	65-135
gamma-Chlordane	5.7	0.0	4.9	86	65-125
alpha-Chlordane	5.7	1.4	5.6	74	65-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

No Quals - either MS or MSD were acceptable

COMMENTS:

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix Spike - EPA Sample No.: IR69-SS02

COMPOUND	SPIKE ADDED (ug/Kg	MSD CONCENTRATION (ug/Kg	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.	
Aldrin	5.7	6.5	79	13	40	45-140	
beta-BHC	5.7	3.3	58*	9	40	60-125	NQ
alpha-BHC	5.7	5.0	88	0	40	60-125	
delta-BHC	5.7	5.0	88	4	40	55-130	
gamma-BHC (Lindane)	5.7	4.5	79	4	40	60-125	
4,4'-DDD	14	13	93	8	40	30-135	
4,4'-DDE	14	13	81	0	40	70-125	NQ
4,4'-DDT	14	4.1	29*	71*	40	45-140	
Dieldrin	14	12	86	0	40	65-125	
Endosulfan I	5.7	3.9	68	0	40	15-135	
Endosulfan II	14	11	78	0	40	35-140	
Endosulfan sulfate	14	12	66	9	40	60-135	
Endrin	14	11	78	0	40	60-135	
Endrin Aldehyde	14	6.9	49	8	40	35-145	
Heptachlor	5.7	5.7	75	30	40	50-140	
Heptachlor Epoxide	5.7	5.4	95	8	40	65-130	
Methoxychlor	14	0.0	0*		40	55-145	NQ
Endrin Ketone	14	8.3	59*	18	40	65-135	
gamma-Chlordane	5.7	4.7	82	4	40	65-125	
alpha-Chlordane	5.7	5.9	79	5	40	65-120	

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 1 out of 20 outside limits
Spike Recovery: 5 out of 40 outside limits

COMMENTS:

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix Spike - EPA Sample No.: IR69-SS02PCB

COMPOUND	SPIKE ADDED (ug/Kg	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Aroclor-1016	150	0.0	150	100	60-130
Aroclor-1260	150	0.0	150	100	40-140

COMPOUND	SPIKE ADDED (ug/Kg	MSD CONCENTRATION (ug/Kg	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor-1016	150	260	173*	54*	20	60-130
Aroclor-1260	150	150	100	0	20	40-140

No Quals

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 1 out of 2 outside limits
Spike Recovery: 1 out of 4 outside limits

COMMENTS:

FORM III PEST-2

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix Spike - EPA Sample No.: IR69-SS02RE

COMPOUND	SPIKE ADDED (ug/Kg	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Aldrin	5.7	0.0	5.5	96	45-140
beta-BHC	5.7	0.0	3.8	67	60-125
alpha-BHC	5.7	0.0	6.4	112	60-125
delta-BHC	5.7	0.0	4.9	86	55-130
gamma-BHC (Lindane)	5.7	0.0	4.9	86	60-125
4,4'-DDD	14	0.0	12	86	30-135
4,4'-DDE	14	0.0	12	86	70-125
4,4'-DDT	14	0.0	7.3	52	45-140
Dieldrin	14	0.0	12	86	65-125
Endosulfan I	5.7	0.0	4.0	70	15-135
Endosulfan II	14	0.0	11	78	35-140
Endosulfan sulfate	14	2.3	12	69	60-135
Endrin	14	0.0	12	86	60-135
Endrin Aldehyde	14	0.57	6.2	40	35-145
Heptachlor	5.7	1.6	7.1	96	50-140
Heptachlor Epoxide	5.7	0.0	5.4	95	65-130
Methoxychlor	14	0.0	8.4	60	55-145
Endrin Ketone	14	0.0	11	78	65-135
gamma-Chlordane	5.7	0.0	5.1	89	65-125
alpha-Chlordane	5.7	1.7	5.7	70	65-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Not used

COMMENTS:

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix Spike - EPA Sample No.: IR69-SS02RE

COMPOUND	SPIKE ADDED (ug/Kg	MSD CONCENTRATION (ug/Kg	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aldrin	5.7	4.8	84	14	40	45-140
beta-BHC	5.7	3.6	63	5	40	60-125
alpha-BHC	5.7	5.4	95	17	40	60-125
delta-BHC	5.7	4.9	86	0	40	55-130
gamma-BHC (Lindane)	5.7	4.8	84	2	40	60-125
4,4'-DDD	14	13	93	8	40	30-135
4,4'-DDE	14	13	93	8	40	70-125
4,4'-DDT	14	2.6	18*	95*	40	45-140
Dieldrin	14	12	86	0	40	65-125
Endosulfan I	5.7	3.9	68	2	40	15-135
Endosulfan II	14	12	86	9	40	35-140
Endosulfan sulfate	14	12	69	0	40	60-135
Endrin	14	12	86	0	40	60-135
Endrin Aldehyde	14	6.5	42	5	40	35-145
Heptachlor	5.7	5.9	75	18	40	50-140
Heptachlor Epoxide	5.7	5.7	100	5	40	65-130
Methoxychlor	14	5.0	36*	51*	40	55-145
Endrin Ketone	14	8.2	58*	29	40	65-135
gamma-Chlordane	5.7	5.1	89	0	40	65-125
alpha-Chlordane	5.7	5.9	74	3	40	65-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

No Quals - not used

RPD: 2 out of 20 outside limits
Spike Recovery: 3 out of 40 outside limits

COMMENTS:

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix Spike - EPA Sample No.: IR69-SS02REP

COMPOUND	SPIKE ADDED (ug/Kg	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Aroclor-1016	190	0.0	200	105	60-130
Aroclor-1260	190	0.0	150	79	40-140

COMPOUND	SPIKE ADDED (ug/Kg	MSD CONCENTRATION (ug/Kg	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor-1016	190	180	95	10	20	60-130
Aroclor-1260	190	140	74	7	20	40-140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 0 out of 4 outside limits

COMMENTS:

FORM III PEST-2

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-SS02

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Lab Sample ID: 1003030-01 Date(s) Analyzed: 03/12/10 03/12/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Aldrin	1	12.08	12.08	12.22	2.0	
	2	11.79	11.74	11.88	1.4	35.3
4,4'-DDE	1	14.34	14.27	14.40	0.45	
	2	14.24	14.21	14.35	1.7	116.3 J
Endosulfan sulfate	1	17.86	17.75	17.89	2.8	
	2	17.02	16.93	17.07	2.5	11.3
Heptachlor	1	11.41	11.36	11.50	0.36	
	2	11.02	11.00	11.14	1.4	118.2 J
alpha-Chlordane	1	14.18	14.08	14.22	0.47	
	2	13.91	13.81	13.95	1.4	99.5 J
	1					
	2					
	1					
	2					
	1					
	2					

page 1 of 1

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-SS02RE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Lab Sample ID: 1003030-01RE1 Date(s) Analyzed: 03/20/10 03/20/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Endosulfan sulfate	1	17.81	17.70	17.84	2.2	
	2	17.02	16.93	17.07	2.3	4.4
Endrin Aldehyde	1	16.78	16.76	16.90	0.43	
	2	16.45	16.34	16.48	0.57	28.0
Heptachlor	1	11.37	11.32	11.46	0.22	
	2	11.02	10.99	11.13	1.6	151.6 J
alpha-Chlordane	1	14.13	14.03	14.17	0.29	
	2	13.90	13.80	13.94	1.7	141.7 J
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

page 1 of 1

FORM X PEST-1

Initial Calibration Date: 3-5-8-10 on TraceGF84

RRF and %RSD Calculations:

Compound Name: Endrin in Level 3
Lab Value: 441125.0000

Area of Compound	17645
Conc. of Compound	0.04
Calculated RRF	441125.0000

Compound Name: Endrin
Lab Value: 9.6

RRF of STD 1	499200.0000
RRF of STD 2	471900.0000
RRF of STD 3	441125.0000
RRF of STD 4	409900.0000
RRF of STD 5	396112.5000
RRF of STD 6	
Calculated % RSD	9.62

Continuing Calibration File ID: 206UINDC3VL, CLPEST2

RRF and %D Calculations:

Compound Name: 4,4'-DDT
Lab Value: 2131.25000

Area of compound	85
Conc. Of compound	0.04
Calculated CF	2125.000

Compound Name: 4,4'-DDT
Lab Value: -99.3

Avg. CF from ICAL	308780.00000
CF of CCV	2125.00000
Calculated % D	99.3

rounding differences noted - no quals required

SAMPLE CALCULATION

Sample ID: IR69-SS02-10A (reported from column 2 (higher re:
Standard ID: ICAL curve 3/5-8/10
Compound: 4,4'-DDE
Concnetration: 1 7 ug/Kg

	Water (ug/L)	Soil (ug/Kg)
Area of Compound		3305
Calibration Factor of Compound		366064
Dilution Factor	1	1
Weight/Volume of Sample		30
Final Volume extract		5000
% Moisture	NA	0.87
conversion factor	1	1
Concentration	#DIV/0!	1.72959

Holding Times

Sampling Date: 2/28
Received Date: 3/4 at TestAmerica Cooler temps were within acceptable range.
Extraction Date: 3/8/10
Analysis Dates: 3/10/10

All extraction and analysis holding times were met for the samples in this SDG. Sample receipt data is in order. Cooler temperature was within acceptable range. This analysis was sub-contracted to Test America Savannah by Compuchem.

Calibrations

Initial calibrations were performed according to the method with a eight-point curve for the organophosphorus pesticide target compounds. Calibration factors were calculated or LR curves were plotted. %RSDs or correlation coefficients were within QC limits. Continuing calibration standards were analyzed per the SW-846 methods requested. All %D criteria were not met. Please see the report for necessary qualifications. Column resolution was acceptable. Retention time windows were provided, retention times were stable throughout the analytical sequence. All required instrument blanks were analyzed. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Any compound detected in the sample, and the associated blank, must be qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than five (5) times the blank concentration.
- Sample weight, volume or dilution factor must be taken into consideration when applying the 5X criteria.
- Apply the same data validation guidelines to any associated rinse and field blanks and all associated samples.
- Qualification Action codes:
-

No Action -	The sample result is greater than the RL and greater than five times (5X) the blank value.
U at RL-	The sample result is less than the RL when the blank contamination level is less than the RL.

No contamination that resulted in qualification of the data was noted in the associated method or instrument blanks or the submitted field QC blanks.

SURROGATE RECOVERIES

Surrogate recoveries were acceptable.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

The associated MS/MSD pair of sample IR69-SS02-10A exhibited 13%/0% in the MS/MSD for the compound monochrotophos. The compound was also recovered low (26%) in the associated LCS. The compound monochrotophos was flagged as estimated J/UJ in the native sample of the spike pair (IR69-SS02-10A) and was qualified as J/UJ in all other samples, with a caution that the reported results should be considered biased low. The compound demeton-s was rejected in the native sample only. The RPD was high for dimethoate (53%). No qualifications were required based on this RPD.

LABORATORY CONTROL SAMPLES

The submitted LCS/LCSD pair submitted exhibited acceptable recoveries with the exception of demeton-s, demeton-o and monochrotophos. See comments under Matrix Spike/Matrix Spike Duplicate for qualification specifics.

FIELD DUPLICATE SAMPLE SUMMARY

Sample ID: None **Duplicate ID:**

Compound	Sample Conc.	Duplicate Conc.	RPD
			#DIV/0!

Comments:

SAMPLE RESULT VERIFICATION

Raw data was verified. Calculations were verified. Resubmissions were required. Copies of all e-mail correspondence with the lab are included in these validation worksheets.

Reviewer JACleveland **Date:** 7/23/10

Test America Savannah
SDG 680-55553-2
OPP

Job Narrative
680-55553-2

Comments
No additional comments

Receipt
The Chains-of-Custody (COCs) were not properly filled out. The equipment blanks were not listed on the COCs using the nomenclature defined by the client. The client submitted revised chains of custody to reflect the proper identification of the equipment blanks.

All other samples were received in good condition within temperature requirements

GC Semi VOA
Method(s) 8141A: The capping continuing calibration verification (CCV) analyzed after sample analysis did not meet control limits for Naled. Sample matrix is suspected to have contributed to this failure

Method(s) 8141A: The laboratory control sample (LCS) for batch 680-162464 exceeded control limits for the following analyte(s): Monochrotophos. Monochrotophos has been identified as a poor performing analyte when analyzed using this method; therefore re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method(s) 8141A: The laboratory control sample (LCS) for batch 680-162464 exceeded control limits for the following analytes: Demeton-O and Demeton-S. The vendor purchased standard for these analytes is expressed as a the value of the total concentration not the concentration of the individual analytes. The ratio of the LCS standard differs from the rations present in the calibration standards. The % recovery of the total od Demeton-O and Demeton S was within limits

Method(s) 8141A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 680-162464 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria

No other analytical or quality issues were noted

General Chemistry
No analytical or quality issues were noted

Organic Prep
No analytical or quality issues were noted

FORM VII

GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah

SDG No.: CL[illegible]

Lab Sample ID: [illegible]

Calibration Date: [illegible]

Instrument ID: [illegible]

Date Start Date: [illegible]

GC Column: [illegible]

Date Fail Date: [illegible]

Lab File ID: [illegible]

ANALYTE	RF	AVG RRF	RRF	MIN RRF	% D AMOUNT	% D AMOUNT		MAX % D
[illegible]	[illegible]	[illegible]	[illegible]					
Monocrotophos	[illegible]	[illegible]	[illegible]					
Dimethoate	[illegible]	[illegible]	[illegible]					[illegible]
Phosphamidon	[illegible]	[illegible]	[illegible]					
Malathion	[illegible]	[illegible]	[illegible]					
Mevinphos	[illegible]	[illegible]	[illegible]					
Dimethoate-S	[illegible]	[illegible]	[illegible]					[illegible]
Parathion	[illegible]	[illegible]	[illegible]					[illegible]
Disulfoton	[illegible]	[illegible]	[illegible]					[illegible]
Methyl parathion	[illegible]	[illegible]	[illegible]					[illegible]
Ronnel	[illegible]	[illegible]	[illegible]					[illegible]
Chlorpyrifos	[illegible]	[illegible]	[illegible]					[illegible]
Trichloronate	[illegible]	[illegible]	[illegible]					[illegible]
Fenthion	[illegible]	[illegible]	[illegible]					[illegible]
Stirophos	[illegible]	[illegible]	[illegible]					[illegible]
Tokuthion	[illegible]	[illegible]	[illegible]					[illegible]
Phosphorothioate	[illegible]	[illegible]	[illegible]					[illegible]
Bolstar	[illegible]	[illegible]	[illegible]					[illegible]
Azinphos methyl	[illegible]	[illegible]	[illegible]					[illegible]
Coumaphos	[illegible]	[illegible]	[illegible]					[illegible]
Merphos	[illegible]	[illegible]	[illegible]					[illegible]

JT-NC

JTW

5502

FORM VII

SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: [illegible]

SDG No.: CLJ55553-1

Lab Sample ID: CCV [illegible] Calibration Date: [illegible]

Instrument ID: [illegible] Calib Start Date: [illegible]

GC Column: [illegible] ID: [illegible] Calib End Date: [illegible]

Lab File ID: [illegible] Conc. Units: [illegible]

ANALYTE	RTX/E RTP	A/B RRF	RRF	MIN RRF	CAL AM TR	DRIFT AM TR	%	MAX %
Triphenylamine	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

FORM VII

SV SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah

Job No.: [illegible]

SDG No.: CLC55553-2

Lab Sample ID: CCV [illegible]

Calibration Date: [illegible]

Instrument ID: [illegible]

Calib Start Date: [illegible]

GC Column: [illegible] ID: [illegible]

Calib Start Time: [illegible]

Lab File ID: [illegible]

Calib End Time: [illegible]

ANALYTE	RRF	AVE RRF	RF	MIN RRF	%D	MAX %D	
Thiophene	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Acetone	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	J+
Methacrylonitrile	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Dimethylamine	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Malononitrile	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	J+
Ethyl Methacrylate	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Camphor	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	J+
MTBE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Triphenylphosphine	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	J+

No Impact

Initial Calibration Date: 3 10 2010

RRF and %RSD Calculations:

Compound Name: fenthion in level 5
Lab Value: 7423361.0000

Area of Compound	5567521
Conc. of Compound	0.75
Calculated RRF	7423361.3333

Compound Name: fenthion
Lab Value: 6.8

RRF of STD 1	6978440.0000
RRF of STD 2	7724680.0000
RRF of STD 3	7940284.0000
RRF of STD 4	8285030.0000
RRF of STD 3	7423361.0000
RRF of STD 4	8414549.0000
RRF of STD 5	8392507.0000
RRF of STD 6	8421027.0000
Calculated % RSD	6.76

Continuing Calibration File ID: oc09058.d

RRF and %D Calculations:

Compound Name: dichloros
Lab Value: 9884828.00000

Area of compound	4942414
Conc. Of compound	0.5
Calculated CF	9884828.00000

Compound Name: dichloros
Lab Value: 19.3

Avg. CF from ICAL	8286343.00000
CF of CCV	9884828.00000
Calculated % D	-19.3

SAMPLE CALCULATION

Sample ID: IR69-SS02-10A MSD
Standard ID: ICAL curve3/10/10
Compound: EPN
Concnetration: 134 ug/Kg

	Water (ug/L)	Soil (ug/Kg)
Area of Compound		1626362
Calibration Factor of Compound		4621879
Dilution Factor	1	1
Weight/Volume of Sample		15.21
Final Volume extract		5000
% Moisture	NA	0.862
conversion factor	1	1
Concentration	#DIV/0!	134.19

Jacqueline Cleveland

From: Cathy Dover [cdover@compuchemlabs.com]
Sent: Friday, July 23, 2010 4:35 PM
To: cleve137@charter.net
Cc: dataqual@charter.net; Anita.Dodson@CH2M.com; Gwen.Buckley@CH2M.com; Rebekha.Shaw@CH2M.com
Subject: FW: CTO-81 Lejeune
Attachments: CLJ55553-2.pdf; CLJ22223-3.pdf

Importance: High

Here are the QC revised forms from Abbie @ Test America

Let me know if you need anything else

Have a great weekend!

Cathy

Cathy Dover
Supervisor of Project Management
Compuchem
501 Madison Ave.
Cary, N.C. 27513
(919)379-4089 office
(919)379-4050 fax

From: Yant, Abbie [mailto:Abbie.Yant@testamericainc.com]
Sent: Friday, July 23, 2010 5:30 PM
To: Cathy Dover
Subject: RE: CTO-81 Lejeune
Importance: High

Cathy – sorry it's after 5pm.

REV forms provided – now posted to TotalAccess

Thanks
Abbie

From: Cathy Dover [mailto:cdover@compuchemlabs.com]
Sent: Friday, July 23, 2010 2:30 PM
To: Yant, Abbie
Subject: FW: CTO-81 Lejeune
Importance: High

Hi Abbie,

Sorry! Here is another data inquiry for CLJ55553-2 & -3

I know it is late in the day, but is this something that maybe can be done today?

See e-mail below.

Thanks,

Cathy

Cathy Dover
Supervisor of Project Management
Compuchem
501 Madison Ave.
Cary, N.C. 27513
(919)379-4089 office
(919)379-4050 fax

From: Jacqueline Cleveland [mailto:cleve137@charter.net]
Sent: Friday, July 23, 2010 2:25 PM
To: Cathy Dover
Cc: 'DataQual'; Rebekha.Shaw@CH2M.com; Gwen.Buckley@CH2M.com; Anita.Dodson@CH2M.com
Subject: CTO-81 Lejeune
Importance: High

Hi Cathy,

I have another issue with the OPP data. In Savannah SDGs CLJ55553-2 & CLJ55553-3 there are several compounds missing from the summary forms for the LCSs and the MS/MSDs. The missing compounds include the compounds demeton-s and demeton-o. The forms need to be resubmitted as soon as possible! Thanks so much for your help!

Jackie

Jacqueline Cleveland
Vice President
DataQual, ES, LLC
636-352-9391
cleve137@charter.net

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FORM III
GC SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55553-2

SDG No.: CLJ55553-2

Matrix: Solid Level: Low Lab File ID: ec09038.d

Lab ID: 680-55553-8 MS Client ID: IR69-SS02-10A MS

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC LIMITS REC	#
Azinphos-methyl	154	38 U	109	71	30-130	
Bolstar	154	38 U	109	71	30-130	
Chlorpyrifos	154	38 U	112	73	30-130	
Coumaphos	154	38 U	122	79	30-130	
Demeton-O	154	96 U	361	235	30-130	J
Demeton-S	154	96 U	96 U	0	30-130	J
Diazinon	154	38 U	99.0	64	30-146	
Dichlorvos	154	78 U	125	81	30-130	
Disulfoton	154	78 U	91.6	60	30-130	
Ethoprop	154	38 U	107	70	30-130	
Fensulfothion	154	200 U	160 J	104	30-130	
Fenthion	154	38 U	103	67	30-130	
Merphos	154	58 U	120	78	30-130	
Methyl parathion	154	20 U	106	69	18-124	
Mevinphos	154	78 U	94.5	61	30-130	
Naled	154	200 U	136 J	88	30-130	
Phorate	154	38 U	78.3	51	30-130	
Ronnel	154	38 U	101	66	28-141	
Stirophos	154	38 U	114	74	30-130	
Tokuthion	154	38 U	110	71	30-130	
Trichloronate	154	38 U	95.6	62	30-130	

J+
J/R

Flag in native sample only

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55553-2

SDG No.: CLJ55553-2

Matrix: Solid Level: Low Lab File ID: cc09040.d

Lab ID: 680-55553-8 MS Client ID: IR69-SS02-10A MS

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC LIMITS REC	#
Dimethoate	152	78 U	85.0	56	30-130	
EPN	152	38 U	144	94	30-130	
Ethyl Parathion	152	38 U	138	90	35-134	
Famphur	152	78 U	130	85	30-130	
Malathion	152	38 U	131	86	30-130	
Monochrotophos	1520	380 U	198 J	13	30-130	J
Sulfotepp	152	20 U	132	87	30-130	
Thionazin	152	38 U	125	82	31-118	

JWJ

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55553-2

SDG No.: CLJ55553-2

Matrix: Solid Level: Low Lab File ID: oc09039.d

Lab ID: 680-55553-8 MSD Client ID: IR69-SS02-10A MSD

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Azinphos-methyl	152	109	72	0	50	30-130	
Bolstar	152	117	77	7	50	30-130	
Chlorpyrifos	152	124	81	10	50	30-130	
Coumaphos	152	130	85	6	50	30-130	
Demeton-O	152	384	252	6	50	30-130	J
Demeton-S	152	95 U	0	NC	50	30-130	J
Diazinon	152	111	73	12	50	30-146	
Dichlorvos	152	128	84	3	50	30-130	
Disulfoton	152	93.9	62	2	50	30-130	
Ethoprop	152	114	75	6	50	30-130	
Fensulfothion	152	140 J	92	13	50	30-130	
Fenthion	152	107	70	4	50	30-130	
Merphos	152	132	87	9	50	30-130	
Methyl parathion	152	121	79	13	50	18-124	
Mevinphos	152	102	67	7	50	30-130	
Naled	152	137 J	90	1	50	30-130	
Phorate	152	86.3	57	10	50	30-130	
Ronnel	152	111	73	9	50	28-141	
Stirophos	152	121	79	6	50	30-130	
Tokuthion	152	121	79	10	50	30-130	
Trichloronate	152	112	73	16	50	30-130	

J+
J/R

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55553-2

SDG No.: CLJ55553-2

Matrix: Solid Level: Low Lab File ID: oc09041.d

Lab ID: 680-55553-8 MSD Client ID: IR69-SS02-10A MSD

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Dimethoate	153	49.5 J	32	53	50	30-130	J
EPN	153	134	88	7	50	30-130	
Ethyl Parathion	153	124	82	10	50	35-134	
Famphur	153	112	73	15	50	30-130	
Malathion	153	120	79	9	50	30-130	
Monochrotophos	1530	380 U	0	NC	50	30-130	J
Sulfotepp	153	116	76	13	50	30-130	
Thionazin	153	109	72	14	50	31-118	

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55553-2

SDG No.: CLJ55553-2

Matrix: Solid Level: Low Lab File ID: oc09035.d

Lab ID: LCS 680-162464/8-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Azinphos-methyl	133	56.8	43	30-130	
Bolstar	133	116	87	30-130	
Chlorpyrifos	133	99.6	75	30-130	
Coumaphos	133	82.0	61	30-130	
Demeton-O	133	306	229	30-130	Q
Demeton-S	133	83 J	22	30-130	Q
Diazinon	133	91.2	68	30-146	
Dichlorvos	133	104	78	30-130	
Disulfoton	133	91.5	69	30-130	
Ethoprop	133	96.4	72	30-130	
Fensulfothion	133	170 U	46	30-130	
Fenthion	133	94.2	71	30-130	
Merphos	133	130	98	30-130	
Methyl parathion	133	73.6	55	18-124	
Mevinphos	133	54.9 J	41	30-130	
Naled	133	170 U	61	30-130	
Phorate	133	74.6	56	30-130	
Ronnel	133	91.3	69	28-141	
Stirophos	133	87.3	65	30-130	
Tokuthion	133	95.7	72	30-130	
Trichloronate	133	89.7	67	30-130	

J+
J/UJ

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55553-2

SDG No.: CLJ55553-2

Matrix: Solid Level: Low Lab File ID: sc09036.d

Lab ID: LCS 680-162464/13-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Dimethoate	133	91.0	68	30-130	
EPN	133	128	96	30-130	
Ethyl Parathion	133	127	95	35-134	
Famphur	133	116	87	30-130	
Malathion	133	124	93	30-130	
Monochrotophos	1330	350	26	30-130	Q
Sulfotepp	133	123	92	30-130	
Thionazin	133	112	84	31-118	

JWJ

Column to be used to flag recovery and RPD values

FORM III 8141A

This SDG contains select metals analysis using SW-846 6010B 7470A 7471A.

HOLDING TIMES

Sampling Date: 2 28
Received Date: 3 4 Cooler temps: OK
Prep. Dates: 3 16 ICP, 3 11 Hg
Analysis Dates: 3 16 ICP, 3 12 Hg
All holding time requirements were met.

CALIBRATIONS

All initial calibration criteria were met. Single point calibration was analyzed for ICP. Calibration verification criteria were met for all ICV and CCV standards. The RL standards were analyzed and met method (+ - 30%) or DV (50-150 for Sb, Pb & Tl) criteria for all analytes with the exception of Ni-67%. The reported non-detect result for Ni was qualified as estimated UJ. Interference check standards were analyzed and met criteria in all standards. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if an analyte is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying the criteria.
- Apply the same data validation guidelines to any associated calibration, preparation, and field QC blanks and all associated samples.
- Qualification Action codes:
  - No Action - The sample result is greater than the CRDL and greater than ten times (10X) the blank value.
  - U - The sample result is greater than or equal to the MDL but less than or equal to the RL, result is reported as non-detect at the RL.
  - R or J- The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator.

Blank Contamination and Qualification Summaries

Blank ID	Analyte	Concentration	Action Level	Q Flag	Q Code
ICB	magnesium	35.9B ug L	RL	U	MBL
PBS	calcium	3.764B mg Kg	RL	U	MBL

The concentration noted for the CCBs is the highest concentration in all the CCBs. However, when qualifying samples for CCB contamination, associated samples are those just prior to or just following a CCB. Therefore, not all analytes in all samples are flagged for noted CCB contamination. See worksheets for associations. Samples are qualified for field QC blank contamination based on QC tracking provided by CH2MHILL. Negative contamination in a prep blank or CCB, if less than the analyte CRDL, is qualified based on professional judgment.

Please note that based on the National Functional Guidelines, for contamination above the CRDL, results in the field samples that are greater than the RL up to 10X the blank contamination level should be qualified as estimated and considered biased high or they should be rejected. Associated samples and required qualifications are noted in the following table.

Sample ID	Analyte	Q Flag	Q Code
IR69-SS02-10A	calcium	U at RL	MBL
IR69-SS02-10A	magnesium	U at RL	MBL

MATRIX SPIKE/DUPLICATE SUMMARY

Spike recoveries were acceptable in the MS and MSD. One RPD was high (Mn at 34.3%) and the analyte was flagged as estimated in the field sample. All LCS recoveries and RPDs were acceptable.

SERIAL DILUTIONS

The serial dilution results were OK with the exception of barium (16.8%). Positive and non-detect results for Ba in the field samples are qualified as estimated J UJ.

SAMPLE CALCULATION

EPA SAMPLE ID: IR69-SS02-10A
ANALYTE: IRON
CONCENTRATION: 606 mg Kg
%Solids - 87.4
Prep Info - 1g to 100ml

Raw Data result: 5293.314 ug L

5293.314 ug L *0.10L 1g * 1 0.874 = 605.6423ug g * 1000g Kg * 1mg 1000ug = 606 mg Kg

FIELD DUPLICATE SAMPLE SUMMARY

Note: Field duplicate results are assessed only if both results are above the CRDL.

Sample ID: None **Duplicate Sample ID:** None

Analyte	Sample Conc.	Duplicate Conc.	RPD
aluminum			#DIV/0!
barium			#DIV/0!
calcium			#DIV/0!
chromium			#DIV/0!
iorn			#DIV/0!
lead			#DIV/0!
magnesium			#DIV/0!
manganese			#DIV/0!
nickel			#DIV/0!
zinc			#DIV/0!

Comments:

SAMPLE RESULT VERIFICATION

Specific Comments:

All sample results were reported within the calibration linear range of the instruments. Detection limits were acceptable. Raw data was verified. Positive results reported at concentrations between the IDL and the RL were qualified as estimated J by the laboratory. All field sample and QC blank IDs were missing either the first 4 or the last four characters. The characters (-10A) were added for the field samples and the characters IR69 were added for the field QC blanks to the Form 1s in the DV reports by the data validator.

Reviewer JACleveland **Date:** 72310

CompuChem
a Division of Liberty Analytical Corp.
501 Madison Avenue
Cary, NC 27513

SDG NARRATIVE
SDG # 1003030

The indicated Sample Delivery Group (SDG) consisting of one (1) solid sample was received into the laboratory information management system (LIMS) on March 4, 2010 intact and in good condition with Chain of Custody (COC) Records in order, unless otherwise noted in any attachments or Quality Assurance Notices. The temperature of the sample upon receipt was 0.7°C. Sample ID's reported in this data package are noted by the receiving department on the COC if they differ from those listed by the samplers on the COC.

The sample was prepared and analyzed in accordance with SW846 methodology for the requested TAL metals and mercury.

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (ICV & CCV) and blanks (ICB & CCB) associated with this data were confirmed to be within allowable limits.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verification (PBS & LCSS) was found to be within acceptable ranges and field sample was prepared and analyzed within the specified holding times.

MATRIX RELATED QUALITY CONTROL:

The sample matrix spikes, CCN = 1003030-01 ID IR69-SS02S and IR69-SS02SD were inside control limits for the requested analytes.

The sample matrix duplicate, CCN = 1003030-01 ID IR69-SS02D was inside control limits for the requested analytes except manganese.

CLP control limits for duplicate determinations are +/- 20% Relative Percent Difference (RPD) for concentrations greater than or equal to five times the CRDL in both the original and duplicate samples, and +/- the CRDL for concentrations less than five times the CRDL. The RPD is not calculated if both the original and duplicate values fall below the IDL.

A five-fold serial dilution of sample, CCN = 1003030-01 ID IR69-SS02L was performed in accordance with requirements for ICP and mercury analysis.

The adjusted sample concentration was inside control limits for the requested analytes except barium and calcium.

Control limits for serial dilution are defined as a deviation less than or equal to 10% in the dilution adjusted concentrations from the original values for all analyte concentrations greater than fifty (50) times their respective Instrument Detection Limit (IDL) in the original sample.

CompuChem
A Division Of
Liberty Analytical Corp.

Sample ID Cross Reference

LAB WO	Project	Sample #	Field ID	Sample Date	Receive Date	DueDate	Chain of Custody ID
1003030	CTO-081 SITE 69/289017.SA.DM/N624	1003030-01	IR69-SS02	02/28/2010	03/04/2010	03/29/2010	IR69-SS02-10A

SW846 - METALS

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: COMPUCHEM Contract: _____

Lab Code: LIBRTY Case No.: _____ SAS No.: _____ SDG No.: 1003030

AA CRDL Standard Source: HP0916320

ICP CRDL Standard Source: HP0916320

Concentration Units: ug/L

Analyte	True	Found	%R	CRDL Standard for ICP Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum				200.0	221.35	110.7		
Antimony				10.0	10.94	109.4		
Arsenic				10.0	10.58	105.8		
Barium				200.0	170.67	85.3		
Beryllium				5.0	5.55	111.0		
Cadmium				5.0	4.87	97.4		
Calcium				5.0	5042.11	100.8		
Chromium				10.0	8.75	87.5		
Cobalt				5.0	4.13	82.6		
Copper				5.0	4.51	90.2		
Iron				100.0	64.46	64.5	NQ - not Req	
Lead				3.0	2.83	94.3		
Magnesium				5000.0	4832.10	96.6		
Manganese				10.0	9.83	98.3		
Mercury	0.2	0.22	110.0					
Nickel				5.0	3.35	67.0	J/UJ up to 2X RL	
Potassium				5000.0	5083.87	101.7		
Selenium				5.0	5.25	105.0		
Silver				5.0	4.93	98.6		
Sodium				5000.0	4994.62	99.9		
Thallium				10.0	12.34	123.4		
Vanadium				20.0	20.50	102.5		
Zinc				20.0	20.25	101.2		

Control Limits: no limits have been established by EPA at this time

SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M	
Aluminum	48.4	B	200.0	U	200.0	U	200.0	U	20.000	U	P	
Antimony	10.0	U	10.0	U	10.0	U	10.0	U	1.000	U	P	
Arsenic	10.0	U	10.0	U	10.0	U	10.0	U	1.000	U	P	
Barium	200.0	U	200.0	U	200.0	U	200.0	U	20.000	U	P	
Beryllium	5.0	U	5.0	U	5.0	U	5.0	U	0.500	U	P	
Cadmium	5.0	U	5.0	U	5.0	U	5.0	U	-0.091	B	P	NQ
Calcium	35.0	B	5000.0	U	5000.0	U	5000.0	U	3.764	B	P	
Chromium	10.0	U	10.0	U	10.0	U	10.0	U	1.000	U	P	
Cobalt	5.0	U	5.0	U	5.0	U	5.0	U	-0.356	B	P	NQ
Copper	5.0	U	5.0	U	5.0	U	5.0	U	0.500	U	P	
Iron	100.0	U	100.0	U	100.0	U	100.0	U	10.000	U	P	
Lead	3.0	U	3.0	U	3.0	U	3.0	U	0.120	B	P	NQ
Magnesium	35.9	B	5000.0	U	5000.0	U	5000.0	U	500.000	U	P	
Manganese	10.0	U	10.0	U	10.0	U	10.0	U	1.000	U	P	
Mercury	0.200	U	0.200	U	0.200	U			0.033	U	CV	
Nickel	5.0	U	5.0	U	5.0	U	5.0	U	0.500	U	P	
Potassium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	500.000	U	P	
Selenium	5.0	U	5.0	U	5.0	U	5.0	U	0.500	U	P	
Silver	5.0	U	5.0	U	5.0	U	5.0	U	0.500	U	P	
Sodium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	500.000	U	P	
Thallium	10.0	U	10.0	U	10.0	U	10.0	U	1.000	U	P	
Vanadium	20.0	U	20.0	U	20.0	U	20.0	U	2.000	U	P	
Zinc	20.0	U	20.0	U	20.0	U	20.0	U	2.000	U	P	

none assoc

✓ flag as noted in report

SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum			200.0	U	200.0	U	200.0	U			P
Antimony			10.0	U	10.0	U	10.0	U			P
Arsenic			10.0	U	10.0	U	10.0	U			P
Barium			200.0	U	200.0	U	200.0	U			P
Beryllium			5.0	U	5.0	U	5.0	U			P
Cadmium			5.0	U	5.0	U	5.0	U			P
Calcium			5000.0	U	-21.3	B ND	-18.4	B			P
Chromium			10.0	U	10.0	U	10.0	U			P
Cobalt			5.0	U	5.0	U	5.0	U			P
Copper			5.0	U	5.0	U	5.0	U			P
Iron			100.0	U	100.0	U	100.0	U			P
Lead			3.0	U	3.0	U	3.0	U			P
Magnesium			5000.0	U	5000.0	U	5000.0	U			P
Manganese			10.0	U	10.0	U	10.0	U			P
Nickel			5.0	U	-2.2	B ND	5.0	U			P
Potassium			5000.0	U	5000.0	U	5000.0	U			P
Selenium			5.0	U	5.0	U	5.0	U			P
Silver			5.0	U	5.0	U	5.0	U			P
Sodium			5000.0	U	5000.0	U	5000.0	U			P
Thallium			10.0	U	10.0	U	10.0	U			P
Vanadium			20.0	U	20.0	U	20.0	U			P
Zinc			20.0	U	20.0	U	20.0	U			P

5502

none assoc

SW846 - METALS

6

DUPLICATES

SAMPLE NO.

IR69-SS02D

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 87.4 % Solids for Duplicate: 87.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		1102.4950		1126.0560		2.1		P
Antimony	1.1	1.0627	B	1.1743		10.0		P
Arsenic		1.1442	U	1.1442	U			P
Barium		4.6015	B	4.2275	B	8.5		P
Beryllium		0.5721	U	0.5721	U			P
Cadmium		0.5721	U	0.5721	U			P
Calcium		214.8581	B	186.9720	B	13.9		P
Chromium		0.9579	B	1.0424	B	8.4		P
Cobalt		0.5721	U	0.5721	U			P
Copper	0.6	0.9002		0.7445		18.9		P
Iron		605.6423		612.4753		1.1		P
Lead		3.8955		3.6603		6.2		P
Magnesium		55.4806	B	53.3167	B	4.0		P
Manganese		24.8034		17.5354		34.3	*	P
Mercury		0.0257	B	0.0280	B	8.6		CV
Nickel		0.5721	U	0.5721	U			P
Potassium		62.6236	B	59.8467	B	4.5		P
Selenium		0.5721	U	0.5721	U			P
Silver		0.5721	U	0.5721	U			P
Sodium		41.8020	B	33.9477	B	20.7		P
Thallium		1.1442	U	1.1442	U			P
Vanadium		2.0729	B	2.1723	B	4.7		P
Zinc		2.3060		1.9807	B	15.2		P

JW

SW846 - METALS

9
ICP SERIAL DILUTIONS

SAMPLE NO.

IR69-SS02L

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	9635.81		9746.50				P
Antimony	9.29	B	50.00	U	100.0		P
Arsenic	10.00	U	50.00	U			P
Barium	40.22	B	33.48	B	16.8	E	P J/UJ
Beryllium	5.00	U	25.00	U			P
Cadmium	5.00	U	25.00	U			P
Calcium	1877.86	B	2067.01	B	10.1	E	P J/UJ
Chromium	8.37	B	50.00	U	100.0		P
Cobalt	5.00	U	25.00	U			P
Copper	7.87		25.00	U			P
Iron	5293.31		5512.01				P
Lead	34.05		36.85				P
Magnesium	484.90	B	651.25	B	34.3		P
Manganese	216.78		220.12				P
Mercury	0.14	B	1.00	U	100.0		CV
Nickel	5.00	U	25.00	U			P
Potassium	547.33	B	525.79	B	3.9		P
Selenium	5.00	U	25.00	U			P
Silver	5.00	U	25.00	U			P
Sodium	365.35	B	25000.00	U	100.0		P
Thallium	10.00	U	50.00	U			P
Vanadium	18.12	B	19.47	B	7.5		P
Zinc	20.15		21.32	B			P

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS02-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix: (soil/water) SOIL Lab Sample ID: 1003030-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003030-01A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: 13 decanted: (Y/N) N Date Extracted: 03/09/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	38	J
108-95-2	Phenol	380	U
111-44-4	Bis(2-chloroethyl)ether	200	U
95-57-8	2-Chlorophenol	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	200	U
98-86-2	Acetophenone	200	U
106-44-5	4-Methylphenol	380	U
621-64-7	N-Nitroso-di-N-propylamine	200	U
67-72-1	Hexachloroethane	200	U
98-95-3	Nitrobenzene	200	U
78-59-1	Isophorone	200	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	Bis(2-chloroethoxy)methane	200	U
120-83-2	2,4-Dichlorophenol	380	U
91-20-3	Naphthalene	200	~~U~~ exclude RE
106-47-8	4-Chloroaniline	380	~~U~~ UJ MSL
87-68-3	Hexachlorobutadiene	200	U
105-60-2	Caprolactam	200	~~U~~ UJ CCH
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	200	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	200	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
92-52-4	1,1'-Biphenyl	200	U
91-58-7	2-Chloronaphthalene	200	U
88-74-4	2-Nitroaniline	380	U
131-11-3	Dimethylphthalate	200	U
606-20-2	2,6-Dinitrotoluene	200	U
208-96-8	Acenaphthylene	200	~~U~~ exclude RE
99-09-2	3-Nitroaniline	380	~~U~~ UJ MSL
83-32-9	Acenaphthene	200	~~U~~ exclude RE

FORM I SV 8270C

WM 032210

WM 072010

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS02-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003030

Matrix: (soil/water) SOIL Lab Sample ID: 1003030-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003030-01A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: 13 decanted: (Y/N) N Date Extracted: 03/09/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	380	U
100-02-7	4-Nitrophenol	380	U
121-14-2	2,4-Dinitrotoluene	200	U
132-64-9	Dibenzofuran	200	U
84-66-2	Diethylphthalate	200	U
7005-72-3	4-Chlorophenyl-phenylether	200	U
86-73-7	Fluorene	200	~~U~~ exclude RE
100-01-6	4-Nitroaniline	380	~~U~~ UJ MSL
534-52-1	4,6-Dinitro-2-methylphenol	380	U
86-30-6	N-Nitrosodiphenylamine (1)	200	U
101-55-3	4-Bromophenyl-phenylether	200	U
118-74-1	Hexachlorobenzene	200	U
1912-24-9	Atrazine	200	U
87-86-5	Pentachlorophenol	380	U
85-01-8	Phenanthrene	200	~~U~~ exclude RE
120-12-7	Anthracene	200	~~U~~ exclude RE
86-74-8	Carbazole	200	U
84-74-2	Di-n-butylphthalate	200	U
206-44-0	Fluoranthene	200	~~U~~ exclude RE
129-00-0	Pyrene	200	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	200	U
91-94-1	3,3'-Dichlorobenzidine	200	~~U~~ UJ MSL
117-81-7	bis(2-ethylhexyl)Phthalate	200	U
56-55-3	Benzo(a)anthracene	200	~~U~~ exclude RE
218-01-9	Chrysene	200	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	200	U
205-99-2	Benzo(b)fluoranthene	200	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	200	U
50-32-8	Benzo(a)pyrene	200	U
193-39-5	Indeno(1,2,3-cd)pyrene	200	U
53-70-3	Dibenzo(a,h)anthracene	200	U
191-24-2	Benzo(g,h,i)perylene	200	U

(1) - Cannot be separated from Diphenylamine

R
Xicoff JAC 81010

WM 08210

WM 07210

DataQual

Environmental Services, LLC

CH2M HILL
5700 Cleveland Street
Suite 101
Virginia Beach, VA 23462

July 30, 2010
CompuChem & Test America Savannah
SDG#s 1003031& CLJ55553-3
MCB Camp Lejeune, CTO-81 – Site 69

Dear Ms. Buckley,

The following Data Validation report is provided as requested for the parameters noted in the table below for SDG #s 1003031 & CLJ55553-3. The data validation was performed in accordance with the SW846 Methods 8260B for volatiles, 8270C and 8270C-SIM for semivolatiles and PAH, 8081A for pesticides, 8082 for PCBs, 8141A for organophosphorous pesticides (OPP) and 6010B/7470A/7471A for metals and mercury and good professional judgment. Also used in the validation of these samples were The National Functional Guidelines for Organic Data Review (June, 2008) and the National Functional Guidelines for Inorganic Data Review (October, 2004), as applicable. All areas of concern are discussed in the body of the report and a summary of data qualifications is provided.

Sample ID	Lab ID	Matrix	VOA	SVOA	LL PAH	Pest	PCBs	OPP	Metals
IR69-SB02-08-10-10A	1003031-01	soil	X	X	X	X	X	X	X
IR69-SB02-08-10-10A MS	1003031-01MS	soil	X	X		X	X	X	X
IR69-SB02-08 –10-10A MSD	1003031-01MSD	soil	X	X		X	X	X	X

The samples were evaluated based on the following criteria:

- Data Completeness *
- Technical Holding Times *
- GC/MS Tunes *
- GC Performance
- Initial/Continuing Calibrations
- CRI Standards
- Interference Check Sample *
- Blanks
- Internal Standards *
- Surrogates *
- Laboratory Control Samples *
- Matrix Spike Recoveries
- Matrix Duplicate RPDs *
- Post Digestion Spike Recoveries *

- Serial Dilutions
- Field Duplicates NA
- Identification/Quantitation
- Reporting Limits *
- Tentatively Identified Compounds NA

* - indicates that no qualifications were required based on this criteria

Overall Evaluation of Data/Potential Usability Issues

A summary of qualifications applied to the sample results are noted below for the fractions validated. Specific details regarding qualification of the data are addressed in the Specific Evaluation section of this narrative. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound analyte the validator has chosen the qualifier that best indicates possible bias in the results and flagged the data accordingly. However, information regarding all quality control issues is provided in the body of the report and on the qualification summary page. Please note that when a compound or analyte is flagged due to blank contamination the BL qualifier code takes precedence over all other qualifier codes except a code that explains rejected data.

VOA

Three sample compounds were qualified as estimated based on high %RSDs and %Ds which were exhibited in the initial and continuing calibrations.

Blank contamination was exhibited in the method and/or QC blanks that resulted in qualifications to the data.

SVOA

One sample compound was qualified as estimated based on high %Ds which was exhibited in the continuing calibration.

Blank contamination was exhibited in the method and/or QC blanks that resulted in qualifications to the data.

Pesticides/PCBs

The GC performance standards for compound breakdown exhibited non-compliant results for 4, 4'-DDT. Qualification/rejection of the data was required.

Several target compounds exhibited non-compliant %Ds in the associated continuing calibration standards. Qualification/rejection of the data was required.

The MS/MSD exhibited recoveries that required qualification/rejection in the field sample.

The field sample was cleaned up and reanalyzed due to non-compliant calibration %Ds & breakdowns. Results and calibration %Ds were similar in the RE analysis. The RE was excluded in favor of the results reported from the original analysis.

Some of the reported positive results exhibited column quantitation %Ds that were >40% (P flagged by the laboratory). These results were qualified as estimated J.

Organophosporous Pesticides (OPP)

Some of the target compounds were recovered below the QC limits in the MS/MSD pair and in the laboratory control samples. Qualifications were required in the sample.

Metals

The associated CRI standard exhibited a recovery for one analyte that was below the method QC limit of 70% to 130%. Qualification was required in the sample.

Qualifications were required in the sample due to laboratory blank contamination.

One analyte required qualification in the sample due to non-compliant matrix spike results.

One analyte required qualification in the sample due to non-compliant serial dilution %Ds.

All results reported between the MDL and the RL (B flagged by the laboratory) were qualified as estimated J.

Specific Evaluation of Data

Data Completeness

The OPP fraction required resubmissions due to missing compounds on the MS/MSD and LCS summary forms. Please note: All field sample and QC blank IDs were missing the first four (IR69) and/or the last four (-10A) characters. The characters were added to the Form 1s in the DV reports by the data validator.

Technical Holding Times

According to chain of custody records, sampling was performed on 2/28/10 and samples were received at the laboratory 3/04/10. All sample preparation and analysis was performed within method holding time requirements.

GC Performance

Pesticides/PCBs

The breakdown standards were non-compliant (>15%) for 4, 4'-DDT. The reported positive result for 4, 4'-DDD was qualified as NJ, presumptively present at an estimated concentration in the field sample. The reported non-detect result for 4, 4'-DDT was rejected R in the field sample. The qualifier code is OT.

Initial/Continuing Calibration

VOA

Calibration standards exhibited %Ds that were non-compliant. A summary of these non-compliances and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	RRF, %RSD, %D	Samples	Q Flag	Q Code
IC 2/09/10	1,2-dichloropropane	18.140	all samples	J UJ	ICH
CC 3/04/10	trichlorofluoromethane	23.53	all samples	J UJ	CCH

SVOA

Calibration standards exhibited %Ds that were non-compliant. A summary of these non-compliances and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	RRF, %RSD, %D	Samples	Q Flag	Q Code
CC 3/18/10	caprolactam	24.40	all samples	J UJ	CCH

Pesticides /PCBs

Calibration standards exhibited %Ds that were non-compliant due to a decrease in response. A summary of these non-compliances and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	RRF, %RSD, %D	Samples	Q Flag	Q Code
206UINDC3VL & 214UINDC3VN	4,4'-DDT*	-91.96 -99.31	IR69-SB02-08-10-10A	J R	CCL
	heptachlor methoxychlor** endrin ketone	-23.94 -22.90 -70.48 -68.31 -38.04 -36.06		J UJ	CCL
	4,4'-DDD	41.92/45.46		J-	CCH

*final qualifier code for 4, 4'-DDT and 4, 4'-DDD is OT **final qualifier code for methoxychlor is MSL

CRI Standards

Metals

The CRI standard associated with one of the field samples exhibited a low recovery for nickel (67%). The reported non-detect result in sample IR69-SB02-08-10-10A was qualified as estimated UJ with a qualifier code of OT.

Blanks

VOA

The associated method and/or QC blanks exhibited contamination as noted in the following table. Compounds for which there was no action required, are not included in the following table.

Blank ID	Compound	Concentration	Reporting Limit	Action Level	Q Flag
IR69-EB01-022810-SB	acetone	6.3 ug/L	2.5 ug/L	all soils < RL	U at RL

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Q Code
IR69-SB02-08-10-10A	acetone	U	EBL

SVOA

The associated method and/or QC blanks exhibited contamination as noted in the following table. Compounds for which there was no action required, are not included in the following table.

Blank ID	Compound	Concentration	Reporting Limit	Action Level	Q Flag
VBLKLV-SIM	naphthalene	1.4J ug/Kg	8.3 ug/Kg	all soils < RL	U at RL
	2-methylnaphthalene	0.83J	8.3	all soils < RL	U at RL

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Q Code
IR69-SB02-08-10-10A-SIM	naphthalene	U at RL	MBL
IR69-SB02-08-10-10A-SIM	2-methylnaphthalene	U at RL	MBL

Metals

Contamination was noted in associated blanks and qualification was required in the associated samples. Required action is noted in the following tables.

Blank ID	Analyte	Concentration	Action Level	Q Flag	Q Code
PBS	barium	0.021B mg Kg	RL	U	MBL
	calcium	3.695B mg Kg	RL	U	MBL
	sodium	17.499B mg Kg	RL	U	MBL
ICB	magnesium	35.9B ug L	RL	U	MBL

Associated samples and required qualifications are noted in the following table.

Sample ID	Analyte	Q Flag	Q Code
IR69-SB02-08-10-10A	barium calcium sodium	U at RL	MBL
IR69-SB02-08-10-10A	magnesium	U at RL	MBL

Laboratory Control Samples

OPP

The laboratory control sample associated with the samples in this SDG exhibited a low recovery for the compound demeton-s (22%) and for the compound monochrotophos (26%). These compounds are qualified as estimated J/UJ in the field sample with a qualifier code of BSL. Please note that MSL is the final qualifier code.

Matrix Spikes

Pesticides/PCBs

The matrix spike pairs exhibited non-compliant %Rs for one compound that required qualification in the samples. Specific action is noted in the following table.

MS/MSD	Compound	Samples Affected	%R	Q Flag	Q Code
IR69-SB02-08-10-10A	4,4'-DDT endrin ketone	IR69-SB02-08-10-10A	18.0 47.45	J UJ	MSL
	methoxychlor		0.0	J R	MSL

OPP

The MS/MSD pair of sample IR69-SB02-08-10-10A exhibited 0% recoveries for the compounds Demeton-s, naled and monochrotophos. These compounds are rejected in the native sample only with a MSL qualifier code.

Metals

The matrix spike analyses exhibited a non-compliant %R for one analyte. Specific action is noted in the following table.

MS	Analyte	Samples Affected	%R	Q Flag	Q Code
IR69-SB02-08-10-10A	antimony	IR69-SB02-08-10-10A	53.8 51.7	J UJ	MSL

Serial Dilution

Metals

The serial dilution analysis exhibited a non-compliant %D for one analyte. Specific action is noted in the following table.

SD	Analyte	Samples Affected	%D	Q Flag	Q Code
IR69-SB02-08-10-10A	barium	IR69-SB02-08-10-10A	16	J UJ	SD

Identification/Quantitation

Pesticides/PCBs

The RE of sample IR69-SB02-08-10-10A was excluded in favor of the results reported from the original analysis of the sample, qualifier code RE.

All positive results reported with a P flag to indicate column quantitation %Ds greater than 40% are qualified as estimated J with a qualifier code of 2C.

Metals

All mercury results reported between the IDL and the RL (B flagged by laboratory) were qualified as estimated J. No qualification code was required.

A summary of qualifications required is provided on the following page. Please do not hesitate to contact DataQual ES with any questions regarding this validation report.

Sincerely,

Laura Maschhoff
President

Jacqueline Cleveland
Vice-President

Summary of Data Qualifications

VOA

Sample ID	Compound	Results	Q-Flag	Q Code
all samples	1,2-dichloropropane	- -	J UJ	ICH
all samples	trichlorofluoromethane	- -	J UJ	CCH
IR69-SB02-08-10-10A	acetone	-	U	EBL

SVOA

Sample ID	Compound	Results	Q-Flag	Q Code
all samples	caprolactam	- -	J UJ	CCH
IR69-SB02-08-10-10A-SIM	naphthalene	-	U at RL	MBL
IR69-SB02-08-10-10A-SIM	2-methylnaphthalene	-	U at RL	MBL

Pesticides/PCBs

Sample ID	Compound	Results	Q-Flag	Q Code
IR69-SB02-08-10-10A	4,4'-DDD	-	NJ	OT
IR69-SB02-08-10-10A	4,4'-DDT	- -	J R	OT
IR69-SB02-08-10-10A	methoxychlor** endrin ketone heptachlor	- -	J UJ	CCL
IR69-SB02-08-10-10A	4,4'-DDT*	- -	J R	CCL
IR69-SB02-08-10-10A	4,4'-DDD*	- -	J-	CCH
IR69-SB02-08-10-10A	4,4'-DDT* endrin ketone	- -	J UJ	MSL
IR69-SB02-08-10-10A	methoxychlor	- -	J R	MSL
IR69-SB02-08-10-10ARE	all compounds	- -	exclude	RE
all samples	all compounds***	+P	J	2C

*final qualifier code for 4, 4'-DDT and 4, 4'-DDD is OT **final qualifier code for methoxychlor is MSL ***the 2C qualifier code was applied only if no other non-compliant QC criteria resulted in flagging

Organophosphorous Pesticides

Sample ID	Compound	Results	Q-Flag	Q Code
IR69-SB02-08-10-10A	demeton-s naled monochrotophos	-	R	MSL
IR69-SB02-08-10-10A	demeton-s monochrotophos	- -	J UJ	BSL*

*final qualifier code is MSL

Summary of Data Qualifications

Metals

Sample ID	Analyte	Results	Q-Flag	Q Code
IR69-SB02-08-10-10A	nickel	- -	J UJ	OT
IR69-SB02-08-10-10A	calcium	- B	U at RL	MBL
IR69-SB02-08-10-10A	barium calcium sodium	- B	U at RL	MBL
IR69-SB02-08-10-10A	magnesium	- B	U at RL	MBL
IR69-SB02-08-10-10A	antimony	- -	J UJ	MSL
IR69-SB02-08-10-10A	barium*	- -	J UJ	SD
all samples	all analytes	- B	J	

*barium was flagged U at the RL due to blank contamination and then J due to serial dilution non-compliance with a final qualifier code of MBL to indicate the change from a positive result to a non-detect result

Glossary of Qualification Flags and Abbreviations

Qualification Flags (Q-Flags)

U	not detected above the reported sample quantitation limit
J	estimated value
UJ	reported quantitation limit is qualified as estimated
R	result is rejected; the presence or absence of the analyte cannot be verified
D	result value is based on dilution analysis result
NJ	analyte has been tentatively identified, estimated value
L	analyte present, biased low
UL	not detected, quantitation limit is probably higher
K	analyte present, biased high

Inorganic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 10X the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL and the result is raised to the RL and flagged U.
R or J.	The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator. (see NFG, Rev. date 10/04, p. 17 for extracted blanks (PB))

Organic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 5X (10X for common laboratory contaminants) the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is raised to the RL and flagged U.
U	The sample result for the blank contaminant is greater than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is flagged U at the reported value.

General Abbreviations

RL / MDL	reporting limit/method detection limit
CRQL	contract required quantitation limit
Q Code	qualifier code
+	positive result
-	non-detect result

QUALIFIER CODE REFERENCE

Qualifier	Description
TN	Tune
BSL	Blank Spike LCS - High Recovery
BSH	Blank Spike LCS - Low Recovery
BD	Blank Spike Blank Spike Duplicate (LCS LCSD) Precision
BRL	Below Reporting Limit
ISL	Internal Standard - Low Recovery
ISH	Internal Standard - High Recovery
MSL	Matrix Spike and or Matrix Spike Duplicate - Low Recovery
MSH	Matrix Spike and or Matrix Spike Duplicate - High Recovery
MI	Matrix interference obscuring the raw data
MDP	Matrix Spike Matrix Spike Duplicate Precision
2S	Second Source - Bad reproducibility between tandem detectors
SSL	Spiked Surrogate - Low Recovery
SSH	Spiked Surrogate - High Recovery
SD	Serial Dilution Reproducibility
ICL	Initial Calibration - Low Relative Response Factors (RRF)
ICH	Initial Calibration - High Relative Response Factors (RRF)
ICB	Initial Calibration - Bad Linearity or Curve Function
CCL	Continuing Calibration - Low Recovery or %Difference
CCH	Continuing Calibration - High Recovery or %Difference
LD	Lab Duplicate Reproducibility
HT	Holding Time
PD	Pesticide Degradation
2C	Second Column - Poor Dual Column Reproducibility
LR	Concentration Exceeds Linear Range
BL	Blank Contamination (MBL, EBL, FBL, TBL)
RE	Redundant Result - due to Re-analysis or Re-extraction
DL	Redundant Result - due to Dilution
FD	Field Duplicate
OT	Other - explained in data validation report
%SOL	High moisture content

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SB02-08-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031 MM 072010

Matrix: (soil/water) SOIL Lab Sample ID: 1003031-01

Sample wt/vol: 12.01(g/mL) G Lab File ID: 1003031-0159

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. 17 Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	2.5	U
74-87-3	Chloromethane	2.5	U
75-01-4	Vinyl Chloride	2.5	U
74-83-9	Bromomethane	2.5	U
75-00-3	Chloroethane	2.5	U
75-69-4	Trichlorofluoromethane	2.5	~~U~~ UJ CCH
75-35-4	1,1-Dichloroethene	2.5	U
75-15-0	Carbon disulfide	2.5	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	2.5	U
67-64-1	Acetone	9.8	U EBL
75-09-2	Methylene Chloride	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
1634-04-4	Methyl-tert-butyl ether	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
78-93-3	2-butanone	6.3	U
67-66-3	Chloroform	2.5	U
71-55-6	1,1,1-Trichloroethane	2.5	U
56-23-5	Carbon Tetrachloride	2.5	U
71-43-2	Benzene	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U
78-87-5	1,2-Dichloropropane	2.5	~~U~~ UJ ICH
75-27-4	Bromodichloromethane	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U
108-10-1	4-Methyl-2-pentanone	6.3	U
108-88-3	Toluene	2.5	U
10061-02-6	trans-1,3-Dichloropropene	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
127-18-4	Tetrachloroethene	2.5	U
591-78-6	2-hexanone	6.3	U
124-48-1	Dibromochloromethane	2.5	U
106-93-4	1,2-Dibromoethane	2.5	U

FORM I VOA

MM 072010

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SB02-08-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031 MM 07200

Matrix: (soil/water) SOIL Lab Sample ID: 1003031-01

Sample wt/vol: 12.01(g/mL) G Lab File ID: 1003031-0159

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. 17 Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	2.5	U
100-41-4	Ethylbenzene	2.5	U
100-42-5	Styrene	2.5	U
75-25-2	Bromoform	2.5	U
98-82-8	Isopropyl Benzene	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
96-12-8	1,2-Dibromo-3-Chloropropane	2.5	U
120-82-1	1,2,4-Trichlorobenzene	2.5	U
1330-20-7	Xylene (total)	2.5	U
79-20-9	Methyl acetate	2.5	U
110-82-7	Cyclohexane	2.5	U
108-87-2	Methylcyclohexane	2.5	U
108-38-3	m,p-Xylene (part of total)	5.0	U
95-47-6	o-Xylene (part of total)	2.5	U

FORM I VOA

MM 07200

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SB0
2-08-10MS

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix: (soil/water) SOIL Lab Sample ID: 0030414-MS2

Sample wt/vol: 15.41(g/mL) G Lab File ID: 0030414-MS259

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. 17 Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	16	
74-87-3	Chloromethane	17	
75-01-4	Vinyl Chloride	18	
74-83-9	Bromomethane	19	
75-00-3	Chloroethane	19	
75-69-4	Trichlorofluoromethane	21	
75-35-4	1,1-Dichloroethene	17	
75-15-0	Carbon disulfide	19	
76-13-1	1,1,2-trichloro-1,2,2-triflu	17	
67-64-1	Acetone	55	
75-09-2	Methylene Chloride	18	
156-60-5	trans-1,2-Dichloroethene	17	
1634-04-4	Methyl-tert-butyl ether	20	
75-34-3	1,1-Dichloroethane	18	
156-59-2	cis-1,2-Dichloroethene	19	
78-93-3	2-butanone	52	
67-66-3	Chloroform	19	
71-55-6	1,1,1-Trichloroethane	19	
56-23-5	Carbon Tetrachloride	19	
71-43-2	Benzene	18	
107-06-2	1,2-Dichloroethane	20	
79-01-6	Trichloroethene	19	
78-87-5	1,2-Dichloropropane	17	
75-27-4	Bromodichloromethane	20	
10061-01-5	cis-1,3-Dichloropropene	20	
108-10-1	4-Methyl-2-pentanone	51	
108-88-3	Toluene	17	
10061-02-6	trans-1,3-Dichloropropene	18	
79-00-5	1,1,2-Trichloroethane	20	
127-18-4	Tetrachloroethene	18	
591-78-6	2-hexanone	50	
124-48-1	Dibromochloromethane	20	
106-93-4	1,2-Dibromoethane	20	

FORM I VOA

UM 07/2010

014

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SB0
2-08-10MS

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix: (soil/water) SOIL Lab Sample ID: 0030414-MS2

Sample wt/vol: 15.41(g/mL) G Lab File ID: 0030414-MS259

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. 17 Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	19	
100-41-4	Ethylbenzene	18	
100-42-5	Styrene	17	
75-25-2	Bromoform	20	
98-82-8	Isopropyl Benzene	18	
79-34-5	1,1,2,2-Tetrachloroethane	20	
541-73-1	1,3-Dichlorobenzene	18	
106-46-7	1,4-Dichlorobenzene	18	
95-50-1	1,2-Dichlorobenzene	18	
96-12-8	1,2-Dibromo-3-Chloropropane	21	
120-82-1	1,2,4-Trichlorobenzene	18	
1330-20-7	Xylene (total)	53	
79-20-9	Methyl acetate	19	
110-82-7	Cyclohexane	16	
108-87-2	Methylcyclohexane	17	
108-38-3	m,p-Xylene (part of total)	36	
95-47-6	o-Xylene (part of total)	17	

FORM I VOA

LM 07/2010

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SB02
-08-10MSD

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix: (soil/water) SOIL Lab Sample ID: 0030414-MSD2

Sample wt/vol: 16.23(g/mL) G Lab File ID: 0030414-MSD259

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. 17 Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	14	
74-87-3	Chloromethane	16	
75-01-4	Vinyl Chloride	17	
74-83-9	Bromomethane	18	
75-00-3	Chloroethane	17	
75-69-4	Trichlorofluoromethane	20	
75-35-4	1,1-Dichloroethene	16	
75-15-0	Carbon disulfide	17	
76-13-1	1,1,2-trichloro-1,2,2-triflu	16	
67-64-1	Acetone	51	
75-09-2	Methylene Chloride	17	
156-60-5	trans-1,2-Dichloroethene	15	
1634-04-4	Methyl-tert-butyl ether	19	
75-34-3	1,1-Dichloroethane	17	
156-59-2	cis-1,2-Dichloroethene	18	
78-93-3	2-butanone	47	
67-66-3	Chloroform	17	
71-55-6	1,1,1-Trichloroethane	17	
56-23-5	Carbon Tetrachloride	17	
71-43-2	Benzene	17	
107-06-2	1,2-Dichloroethane	18	
79-01-6	Trichloroethene	18	
78-87-5	1,2-Dichloropropane	16	
75-27-4	Bromodichloromethane	18	
10061-01-5	cis-1,3-Dichloropropene	19	
108-10-1	4-Methyl-2-pentanone	49	
108-88-3	Toluene	16	
10061-02-6	trans-1,3-Dichloropropene	17	
79-00-5	1,1,2-Trichloroethane	19	
127-18-4	Tetrachloroethene	17	
591-78-6	2-hexanone	48	
124-48-1	Dibromochloromethane	19	
106-93-4	1,2-Dibromoethane	19	

FORM I VOA

072010

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SB02
-08-10MSD

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix: (soil/water) SOIL Lab Sample ID: 0030414-MSD2

Sample wt/vol: 16.23(g/mL) G Lab File ID: 0030414-MSD259

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: not dec. 17 Date Analyzed: 03/05/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	17	
100-41-4	Ethylbenzene	17	
100-42-5	Styrene	15	
75-25-2	Bromoform	21	
98-82-8	Isopropyl Benzene	17	
79-34-5	1,1,2,2-Tetrachloroethane	19	
541-73-1	1,3-Dichlorobenzene	17	
106-46-7	1,4-Dichlorobenzene	17	
95-50-1	1,2-Dichlorobenzene	18	
96-12-8	1,2-Dibromo-3-Chloropropane	20	
120-82-1	1,2,4-Trichlorobenzene	16	
1330-20-7	Xylene (total)	50	
79-20-9	Methyl acetate	17	
110-82-7	Cyclohexane	15	
108-87-2	Methylcyclohexane	15	
108-38-3	m,p-Xylene (part of total)	34	
95-47-6	o-Xylene (part of total)	16	

FORM I VOA

017

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SB02-08-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031 WI 072010

Matrix: (soil/water) SOIL Lab Sample ID: 1003031-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003031-01A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: 17 decanted: (Y/N) N Date Extracted: 03/09/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	200	U
108-95-2	Phenol	400	U
111-44-4	Bis(2-chloroethyl)ether	200	U
95-57-8	2-Chlorophenol	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	200	U
98-86-2	Acetophenone	200	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-di-N-propylamine	200	U
67-72-1	Hexachloroethane	200	U
98-95-3	Nitrobenzene	200	U
78-59-1	Isophorone	200	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	Bis(2-chloroethoxy)methane	200	U
120-83-2	2,4-Dichlorophenol	400	U
91-20-3	Naphthalene	200	U
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	200	U
105-60-2	Caprolactam	200	~~U~~ VJ CCH
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	200	U
77-47-4	Hexachlorocyclopentadiene	200	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	400	U
92-52-4	1,1'-Biphenyl	200	U
91-58-7	2-Chloronaphthalene	200	U
88-74-4	2-Nitroaniline	400	U
131-11-3	Dimethylphthalate	200	U
606-20-2	2,6-Dinitrotoluene	200	U
208-96-8	Acenaphthylene	200	U
99-09-2	3-Nitroaniline	400	U
83-32-9	Acenaphthene	200	U

WI 072010

018

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SB02-08-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix: (soil/water) SOIL Lab Sample ID: 1003031-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003031-01A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: 17 decanted: (Y/N) N Date Extracted: 03/09/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	400	U
100-02-7	4-Nitrophenol	400	U
121-14-2	2,4-Dinitrotoluene	200	U
132-64-9	Dibenzofuran	200	U
84-66-2	Diethylphthalate	200	U
7005-72-3	4-Chlorophenyl-phenylether	200	U
86-73-7	Fluorene	200	U
100-01-6	4-Nitroaniline	400	U
534-52-1	4,6-Dinitro-2-methylphenol	400	U
86-30-6	N-Nitrosodiphenylamine (1)	200	U
101-55-3	4-Bromophenyl-phenylether	200	U
118-74-1	Hexachlorobenzene	200	U
1912-24-9	Atrazine	200	U
87-86-5	Pentachlorophenol	400	U
85-01-8	Phenanthrene	200	U
120-12-7	Anthracene	200	U
86-74-8	Carbazole	200	U
84-74-2	Di-n-butylphthalate	200	U
206-44-0	Fluoranthene	200	U
129-00-0	Pyrene	200	U
85-68-7	Butylbenzylphthalate	200	U
91-94-1	3,3'-Dichlorobenzidine	200	U
117-81-7	bis(2-ethylhexyl)Phthalate	200	U
56-55-3	Benzo(a)anthracene	200	U
218-01-9	Chrysene	200	U
117-84-0	Di-n-octylphthalate	200	U
205-99-2	Benzo(b)fluoranthene	200	U
207-08-9	Benzo(k)fluoranthene	200	U
50-32-8	Benzo(a)pyrene	200	U
193-39-5	Indeno(1,2,3-cd)pyrene	200	U
53-70-3	Dibenzo(a,h)anthracene	200	U
191-24-2	Benzo(g,h,i)perylene	200	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SB02-08-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031 LMM 072010

Matrix: (soil/water) SOIL Lab Sample ID: 1003031-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003031-01C60

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: 17 decanted: (Y/N) N Date Extracted: 03/09/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	10 ~~1.6~~	~~J~~ U MBL
91-57-6	2-Methylnaphthalene	10 ~~1.2~~	~~J~~ U MBL
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	1.7	J
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

FORM I SV

LMM 072010

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SB0
2-08-10MS

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix: (soil/water) SOIL Lab Sample ID: 0030902-MS2

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0030902-MS2A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: 17 decanted: (Y/N) N Date Extracted: 03/09/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	860	
108-95-2	Phenol	1100	
111-44-4	Bis(2-chloroethyl)ether	1000	
95-57-8	2-Chlorophenol	1100	
95-48-7	2-Methylphenol	1300	
108-60-1	2,2'-oxybis(1-Chloropropane)	1000	
98-86-2	Acetophenone	1100	
106-44-5	4-Methylphenol	1300	
621-64-7	N-Nitroso-di-N-propylamine	1200	
67-72-1	Hexachloroethane	730	
98-95-3	Nitrobenzene	1000	
78-59-1	Isophorone	1100	
88-75-5	2-Nitrophenol	1100	
105-67-9	2,4-Dimethylphenol	1300	
111-91-1	Bis(2-chloroethoxy)methane	1200	
120-83-2	2,4-Dichlorophenol	1200	
91-20-3	Naphthalene	940	
106-47-8	4-Chloroaniline	830	
87-68-3	Hexachlorobutadiene	930	
105-60-2	Caprolactam	2600	E
59-50-7	4-Chloro-3-methylphenol	1500	
91-57-6	2-Methylnaphthalene	1000	
77-47-4	Hexachlorocyclopentadiene	870	
88-06-2	2,4,6-Trichlorophenol	1300	
95-95-4	2,4,5-Trichlorophenol	1500	
92-52-4	1,1'-Biphenyl	950	
91-58-7	2-Chloronaphthalene	1000	
88-74-4	2-Nitroaniline	1400	
131-11-3	Dimethylphthalate	1400	
606-20-2	2,6-Dinitrotoluene	1400	
208-96-8	Acenaphthylene	1100	
99-09-2	3-Nitroaniline	1000	
83-32-9	Acenaphthene	1100	

MM 07200

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SB0
2-08-10MS

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix: (soil/water) SOIL Lab Sample ID: 0030902-MS2

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0030902-MS2A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: 17 decanted: (Y/N) N Date Extracted: 03/09/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1800	
100-02-7	4-Nitrophenol	1000	
121-14-2	2,4-Dinitrotoluene	1500	
132-64-9	Dibenzofuran	1200	
84-66-2	Diethylphthalate	1400	
7005-72-3	4-Chlorophenyl-phenylether	1200	
86-73-7	Fluorene	1300	
100-01-6	4-Nitroaniline	1400	
534-52-1	4,6-Dinitro-2-methylphenol	1600	
86-30-6	N-Nitrosodiphenylamine (1)	1700	
101-55-3	4-Bromophenyl-phenylether	1400	
118-74-1	Hexachlorobenzene	1400	
1912-24-9	Atrazine	1400	
87-86-5	Pentachlorophenol	1800	
85-01-8	Phenanthrene	1500	
120-12-7	Anthracene	1400	
86-74-8	Carbazole	1500	
84-74-2	Di-n-butylphthalate	1400	
206-44-0	Fluoranthene	1500	
129-00-0	Pyrene	1500	
85-68-7	Butylbenzylphthalate	1500	
91-94-1	3,3'-Dichlorobenzidine	690	
117-81-7	bis(2-ethylhexyl)Phthalate	1500	
56-55-3	Benzo(a)anthracene	1500	
218-01-9	Chrysene	1500	
117-84-0	Di-n-octylphthalate	1400	
205-99-2	Benzo(b)fluoranthene	1700	
207-08-9	Benzo(k)fluoranthene	1300	
50-32-8	Benzo(a)pyrene	1400	
193-39-5	Indeno(1,2,3-cd)pyrene	1600	
53-70-3	Dibenzo(a,h)anthracene	1500	
191-24-2	Benzo(g,h,i)perylene	1500	

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SB02
-08-10MSD

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix: (soil/water) SOIL Lab Sample ID: 0030902-MSD2

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0030902-MSD2A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: 17 decanted: (Y/N) N Date Extracted: 03/09/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	820	
108-95-2	Phenol	1200	
111-44-4	Bis(2-chloroethyl)ether	1000	
95-57-8	2-Chlorophenol	1100	
95-48-7	2-Methylphenol	1300	
108-60-1	2,2'-oxybis(1-Chloropropane)	1000	
98-86-2	Acetophenone	1200	
106-44-5	4-Methylphenol	1200	
621-64-7	N-Nitroso-di-N-propylamine	1200	
67-72-1	Hexachloroethane	660	
98-95-3	Nitrobenzene	1000	
78-59-1	Isophorone	1100	
88-75-5	2-Nitrophenol	1100	
105-67-9	2,4-Dimethylphenol	1400	
111-91-1	Bis(2-chloroethoxy)methane	1200	
120-83-2	2,4-Dichlorophenol	1200	
91-20-3	Naphthalene	960	
106-47-8	4-Chloroaniline	840	
87-68-3	Hexachlorobutadiene	910	
105-60-2	Caprolactam	2800	E
59-50-7	4-Chloro-3-methylphenol	1400	
91-57-6	2-Methylnaphthalene	1000	
77-47-4	Hexachlorocyclopentadiene	890	
88-06-2	2,4,6-Trichlorophenol	1300	
95-95-4	2,4,5-Trichlorophenol	1600	
92-52-4	1,1'-Biphenyl	1100	
91-58-7	2-Chloronaphthalene	1100	
88-74-4	2-Nitroaniline	1400	
131-11-3	Dimethylphthalate	1400	
606-20-2	2,6-Dinitrotoluene	1500	
208-96-8	Acenaphthylene	1200	
99-09-2	3-Nitroaniline	1200	
83-32-9	Acenaphthene	1200	

023

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
IR69-SB02
-08-10MSD

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix: (soil/water) SOIL Lab Sample ID: 0030902-MSD2

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0030902-MSD2A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: 17 decanted: (Y/N) N Date Extracted: 03/09/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1800	
100-02-7	4-Nitrophenol	1200	
121-14-2	2,4-Dinitrotoluene	1600	
132-64-9	Dibenzofuran	1200	
84-66-2	Diethylphthalate	1500	
7005-72-3	4-Chlorophenyl-phenylether	1300	
86-73-7	Fluorene	1400	
100-01-6	4-Nitroaniline	1400	
534-52-1	4,6-Dinitro-2-methylphenol	1500	
86-30-6	N-Nitrosodiphenylamine (1)	1600	
101-55-3	4-Bromophenyl-phenylether	1300	
118-74-1	Hexachlorobenzene	1400	
1912-24-9	Atrazine	1500	
87-86-5	Pentachlorophenol	1700	
85-01-8	Phenanthrene	1400	
120-12-7	Anthracene	1500	
86-74-8	Carbazole	1500	
84-74-2	Di-n-butylphthalate	1500	
206-44-0	Fluoranthene	1500	
129-00-0	Pyrene	1500	
85-68-7	Butylbenzylphthalate	1600	
91-94-1	3,3'-Dichlorobenzidine	870	
117-81-7	bis(2-ethylhexyl)Phthalate	1500	
56-55-3	Benzo(a)anthracene	1500	
218-01-9	Chrysene	1500	
117-84-0	Di-n-octylphthalate	1500	
205-99-2	Benzo(b)fluoranthene	1500	
207-08-9	Benzo(k)fluoranthene	1600	
50-32-8	Benzo(a)pyrene	1400	
193-39-5	Indeno(1,2,3-cd)pyrene	1600	
53-70-3	Dibenzo(a,h)anthracene	1500	
191-24-2	Benzo(g,h,i)perylene	1500	

(1) - Cannot be separated from Diphenylamine

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1R69-SB02-08-10-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix: (soil/water) SOIL Lab Sample ID: 1003031-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 17 decanted: (Y/N) N Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/09/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/12/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
309-00-2	Aldrin	2.0	U	
319-85-7	beta-BHC	1.0	U	
319-84-6	alpha-BHC	2.0	U	
319-86-8	delta-BHC	2.0	U	
58-89-9	gamma-BHC (Lindane)	2.0	U	
72-54-8	4,4'-DDD	2.3	~~JP~~ NJ	OT
72-55-9	4,4'-DDE	4.0	U	
50-29-3	4,4'-DDT	4.0	~~U~~ R	OT
60-57-1	Dieldrin	4.0	U	
959-98-8	Endosulfan I	2.0	U	
33213-65-9	Endosulfan II	4.0	U	
1031-07-8	Endosulfan sulfate	4.0	U	
72-20-8	Endrin	1.1	J	
7421-93-4	Endrin Aldehyde	4.0	U	
76-44-8	Heptachlor	2.0	~~U~~ UJ	CCL
1024-57-3	Heptachlor Epoxide	2.0	U	
72-43-5	Methoxychlor	20	~~U~~ R	MSL
8001-35-2	Toxaphene	100	U	
12674-11-2	Aroclor-1016	29	U	
11104-28-2	Aroclor-1221	41	U	
11141-16-5	Aroclor-1232	20	U	
53469-21-9	Aroclor-1242	20	U	
12672-29-6	Aroclor-1248	20	U	
11097-69-1	Aroclor-1254	20	U	
11096-82-5	Aroclor-1260	20	U	
53494-70-5	Endrin Ketone	4.0	~~U~~ UJ	CCL
5103-74-2	gamma-Chlordane	2.0	U	
5103-71-9	alpha-Chlordane	2.0	U	

JAC 12410

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1RE9-SB02-08-10RE-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix: (soil/water) SOIL Lab Sample ID: 1003031-01RE1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 17 decanted: (Y/N) N Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/09/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/20/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	2.0	U
319-85-7	beta-BHC	1.0	U
319-84-6	alpha-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
72-54-8	4,4'-DDD	4.0	U
72-55-9	4,4'-DDE	4.0	U
50-29-3	4,4'-DDT	4.0	U
60-57-1	Dieldrin	4.0	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	4.0	U
1031-07-8	Endosulfan sulfate	4.0	U
72-20-8	Endrin	4.0	U
7421-93-4	Endrin Aldehyde	4.0	U
76-44-8	Heptachlor	0.27	J
1024-57-3	Heptachlor Epoxide	2.0	U
72-43-5	Methoxychlor	20	U
8001-35-2	Toxaphene	100	U
12674-11-2	Aroclor-1016	29	U
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	20	U
53494-70-5	Endrin Ketone	4.0	U
5103-74-2	gamma-Chlordane	2.0	U
5103-71-9	alpha-Chlordane	2.0	U

exclude RE

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1001-SB02-08-10MS-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix: (soil/water) SOIL Lab Sample ID: 0030901-MS3

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 17 decanted: (Y/N) N Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/09/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/12/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	4.5	
319-85-7	beta-BHC	4.2	
319-84-6	alpha-BHC	5.4	
319-86-8	delta-BHC	5.4	
58-89-9	gamma-BHC (Lindane)	4.6	
72-54-8	4,4'-DDD	17	
72-55-9	4,4'-DDE	12	
50-29-3	4,4'-DDT	2.7	JP
60-57-1	Dieldrin	13	
959-98-8	Endosulfan I	4.5	
33213-65-9	Endosulfan II	7.7	
1031-07-8	Endosulfan sulfate	4.3	
72-20-8	Endrin	12	
7421-93-4	Endrin Aldehyde	7.1	
76-44-8	Heptachlor	4.8	
1024-57-3	Heptachlor Epoxide	5.1	
72-43-5	Methoxychlor	20	U
8001-35-2	Toxaphene	100	U
12674-11-2	Aroclor-1016	29	U
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	20	U
53494-70-5	Endrin Ketone	7.0	
5103-74-2	gamma-Chlordane	4.8	
5103-71-9	alpha-Chlordane	5.4	

FORM I PEST

JC 32410

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1R9-SB02-08-10REMS-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix: (soil/water) SOIL Lab Sample ID: 0030901-MS7

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 17 decanted: (Y/N) N Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/09/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/19/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	4.5	
319-85-7	beta-BHC	4.4	
319-84-6	alpha-BHC	5.5	
319-86-8	delta-BHC	5.7	
58-89-9	gamma-BHC (Lindane)	4.8	
72-54-8	4,4'-DDD	17	
72-55-9	4,4'-DDE	12	
50-29-3	4,4'-DDT	4.0	U
60-57-1	Dieldrin	14	
959-98-8	Endosulfan I	4.6	
33213-65-9	Endosulfan II	8.2	
1031-07-8	Endosulfan sulfate	5.7	
72-20-8	Endrin	16	
7421-93-4	Endrin Aldehyde	7.0	
76-44-8	Heptachlor	4.9	
1024-57-3	Heptachlor Epoxide	5.7	
72-43-5	Methoxychlor	20	U
8001-35-2	Toxaphene	100	U
12674-11-2	Aroclor-1016	29	U
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	20	U
53494-70-5	Endrin Ketone	8.0	
5103-74-2	gamma-Chlordane	4.7	
5103-71-9	alpha-Chlordane	5.4	

FORM I PEST

028

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1069 SB02-08-10MSD-1 DA JC 72410

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix: (soil/water) SOIL Lab Sample ID: 0030901-MSD3

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 17 decanted: (Y/N) N Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/09/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/12/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	4.4	
319-85-7	beta-BHC	4.4	
319-84-6	alpha-BHC	5.4	
319-86-8	delta-BHC	5.7	
58-89-9	gamma-BHC (Lindane)	4.5	
72-54-8	4,4'-DDD	18	
72-55-9	4,4'-DDE	12	
50-29-3	4,4'-DDT	4.0	U
60-57-1	Dieldrin	13	
959-98-8	Endosulfan I	4.4	
33213-65-9	Endosulfan II	13	
1031-07-8	Endosulfan sulfate	9.6	
72-20-8	Endrin	12	
7421-93-4	Endrin Aldehyde	7.6	
76-44-8	Heptachlor	4.8	
1024-57-3	Heptachlor Epoxide	5.5	
72-43-5	Methoxychlor	20	U
8001-35-2	Toxaphene	100	U
12674-11-2	Aroclor-1016	29	U
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor 1260	20	U
53494-70-5	Endrin Ketone	6.8	
5103-74-2	gamma-Chlordane	4.7	
5103-71-9	alpha-Chlordane	5.2	

JC 72410

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1R69-SB02-08-10REMSD-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix: (soil/water) SOIL Lab Sample ID: 0030901-MSD7

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 17 decanted: (Y/N) N Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/09/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/20/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	4.5	
319-85-7	beta-BHC	4.7	
319-84-6	alpha-BHC	5.5	
319-86-8	delta-BHC	6.1	
58-89-9	gamma-BHC (Lindane)	4.8	
72-54-8	4,4'-DDD	19	
72-55-9	4,4'-DDE	13	
50-29-3	4,4'-DDT	4.0	U
60-57-1	Dieldrin	15	
959-98-8	Endosulfan I	4.7	
33213-65-9	Endosulfan II	14	
1031-07-8	Endosulfan sulfate	11	
72-20-8	Endrin	15	
7421-93-4	Endrin Aldehyde	7.7	
76-44-8	Heptachlor	4.8	
1024-57-3	Heptachlor Epoxide	5.7	
72-43-5	Methoxychlor	20	U
8001-35-2	Toxaphene	100	U
12674-11-2	Aroclor-1016	29	U
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	20	U
53494-70-5	Endrin Ketone	6.8	
5103-74-2	gamma-Chlordane	5.1	
5103-71-9	alpha-Chlordane	5.5	

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB02-08-10PCBMS

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix: (soil/water) SOIL Lab Sample ID: 0030901-MS4

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 17 decanted: (Y/N) N Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/09/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/12/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	2.0	U
319-85-7	beta-BHC	1.0	U
319-84-6	alpha-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
72-54-8	4,4'-DDD	4.0	U
72-55-9	4,4'-DDE	4.0	U
50-29-3	4,4'-DDT	4.0	U
60-57-1	Dieldrin	4.0	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	4.0	U
1031-07-8	Endosulfan sulfate	4.0	U
72-20-8	Endrin	3.2	JP
7421-93-4	Endrin Aldehyde	4.0	U
76-44-8	Heptachlor	2.0	U
1024-57-3	Heptachlor Epoxide	2.0	U
72-43-5	Methoxychlor	20	U
8001-35-2	Toxaphene	100	U
12674-11-2	Aroclor-1016	180	
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	170	
53494-70-5	Endrin Ketone	4.0	U
5103-74-2	gamma-Chlordane	2.0	U
5103-71-9	alpha-Chlordane	2.0	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1R69-SB02-08-10REPCBMS-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix: (soil/water) SOIL Lab Sample ID: 0030901-MS8

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 17 decanted: (Y/N) N Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/09/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/19/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	2.0	U
319-85-7	beta-BHC	1.0	U
319-84-6	alpha-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
72-54-8	4,4'-DDD	4.0	U
72-55-9	4,4'-DDE	4.0	U
50-29-3	4,4'-DDT	4.0	U
60-57-1	Dieldrin	4.0	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	4.0	U
1031-07-8	Endosulfan sulfate	4.0	U
72-20-8	Endrin	4.0	U
7421-93-4	Endrin Aldehyde	4.0	U
76-44-8	Heptachlor	2.0	U
1024-57-3	Heptachlor Epoxide	2.0	U
72-43-5	Methoxychlor	20	U
8001-35-2	Toxaphene	100	U
12674-11-2	Aroclor-1016	190	
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	170	
53494-70-5	Endrin Ketone	4.0	U
5103-74-2	gamma-Chlordane	2.0	U
5103-71-9	alpha-Chlordane	2.0	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
1R69-SB02-08-10PCBMSD-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix: (soil/water) SOIL Lab Sample ID: 0030901-MSD4

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 17 decanted: (Y/N) N Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/09/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/12/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	2.0	U
319-85-7	beta-BHC	1.0	U
319-84-6	alpha-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
72-54-8	4,4'-DDD	4.0	U
72-55-9	4,4'-DDE	4.0	U
50-29-3	4,4'-DDT	4.0	U
60-57-1	Dieldrin	4.0	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	4.0	U
1031-07-8	Endosulfan sulfate	4.0	U
72-20-8	Endrin	2.7	J
7421-93-4	Endrin Aldehyde	4.0	U
76-44-8	Heptachlor	2.0	U
1024-57-3	Heptachlor Epoxide	2.0	U
72-43-5	Methoxychlor	20	U
8001-35-2	Toxaphene	100	U
12674-11-2	Aroclor-1016	180	
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	170	
53494-70-5	Endrin Ketone	4.0	U
5103-74-2	gamma-Chlordane	2.0	U
5103-71-9	alpha-Chlordane	2.0	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB02-08-1
OREPCBMSD

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix: (soil/water) SOIL Lab Sample ID: 0030901-MSD8

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

% Moisture: 17 decanted: (Y/N) N Date Received: 03/04/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/09/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/20/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00 2-	Aldrin	2.0	U
319-85-7	beta-BHC	1.0	U
319-84-6	alpha-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
72-54-8	4,4'-DDD	4.0	U
72-55-9	4,4'-DDE	4.0	U
50-29-3	4,4'-DDT	4.0	U
60-57-1	Dieldrin	4.0	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	4.0	U
1031-07-8	Endosulfan sulfate	4.0	U
72-20-8	Endrin	4.0	U
7421-93-4	Endrin Aldehyde	4.0	U
76-44-8	Heptachlor	2.0	U
1024-57-3	Heptachlor Epoxide	2.0	U
72-43-5	Methoxychlor	20	U
8001-35-2	Toxaphene	100	U
12674-11-2	Aroclor-1016	200	
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	180	
53494-70-5	Endrin Ketone	4.0	U
5103-74-2	gamma-Chlordane	2.0	U
5103-71-9	alpha-Chlordane	2.0	U

FORM I PEST

FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah — Job No.: 680-55553-3

SDG No.: CLJ55553-3

Client Sample ID: IR69-SB02-08-10-10A — Lab Sample ID: 680-55553-9

Matrix: Solid — Lab File ID: 6c09042.d

Analysis Method: 8141A — Date Collected: 02/28/2010 10:30

Extraction Method: 3550B — Date Extracted: 03/08/2010 16:50

Sample wt/vol: 15.35 g — Date Analyzed: 03/10/2010 11:10

Con. Extract Vol.: 5(mL) — Dilution Factor: 1

Injection Volume: 2(uL) — GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 17.7 — GPC Cleanup:(Y/N) N

Analysis Batch No.: 142946 — Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	39	U	39	20
35400-43-2	Bolstar	39	U	39	20
2921-88-2	Chlorpyrifos	39	U	39	20
56-72-4	Coumaphos	39	U	39	20
298-03-3	Demeton-O	39	U	39	20
126-75-0	Demeton-S	99	U	99	50
333-41-5	Diazinon	39	U	39	20
62-73-7	Dichlorvos	80	U	80	40
60-51-5	Dimethoate	80	U	80	40
298-04-4	Disulfoton	80	U	80	40
2104-64-5	EPN	39	U	39	20
13194-48-4	Ethoprop	20	U	20	10
56-38-2	Ethyl Parathion	39	U	39	20
52-85-7	Famphur	80	U	80	40
115-90-2	Fensulfothion	200	U	200	100
55-38-9	Fenthion	39	U	39	20
121-75-5	Malathion	39	U	39	20
150-50-5	Merphos	59	U	59	30
298-00-0	Methyl parathion	20	U	20	10
7786-34-7	Mevinphos	80	U	80	40
6923-22-4	Monocrotophos	390	U	390	200
300-76-5	Naled	200	U	200	100
298-02-2	Phorate	39	U	39	20
299-84-3	Ronnel	39	U	39	20
22248-79-9	Stirophos	39	U	39	20
3689-24-5	Sulfotepp	20	U	20	10
297-97-2	Thionazin	39	U	39	20
34643-46-4	Tokuthion	39	U	39	20
327-98-0	Trichloronate	39	U	39	20

R MSL

R MSL

R MSL

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	76	42-128	

FORM I 8141A

06/15/2010

FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55553-3

SDG No.: CLJ55553-3

Client Sample ID: IR69-SB02-08-10-10A MS | Lab Sample ID: 680-55553-9 MS

Matrix: Solid | Lab File ID: [illegible]009043.d

Analysis Method: 8141A | Date Collected: 02/28/2010 10:30

Extraction Method: 3550B | Date Extracted: 03/08/2010 14:50

Sample wt/vol: 15.26(g) | Date Analyzed: 03/10/2010 11:05

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 17.7 | GPC Cleanup: (Y/N) N

Analysis Batch No.: 162946 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	[illegible]		[illegible]	20
35400-43-2	Bolstar	[illegible]		[illegible]	20
2921-88-2	Chlorpyrifos	[illegible]		[illegible]	20
56-72-4	Coumaphos	139		39	20
298-03-3	Demeton-O	[illegible]		[illegible]	50
126-75-0	Demeton-S	99	U	99	50
333-41-5	Diazinon	[illegible]		[illegible]	20
62-73-7	Dichlorvos	155		60	41
298-04-4	Disulfoton	121		60	41
13194-48-4	Ethoprop	[illegible]		[illegible]	10
115-90-2	Fensulfothion	149	J	200	100
55-38-9	Fenthion	138		39	20
150-50-5	Merphos	166		60	30
298-00-0	Methyl parathion	119		20	10
7786-34-7	Mevinphos	87.5		80	41
300-76-5	Naled	200	U	200	100
298-02-2	Phorate	86.5		39	20
299-84-3	Ronnel	127		39	20
22248-79-9	Stirophos	130		39	20
34643-46-4	Tokuthion	127		39	20
327-98-0	Trichloronate	111		39	20

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	88	42-128	

JAC 72410

FORM I 8141A

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55553-3

SDG No.: CLJ55553-3

Client Sample ID: IR69-SB02-08-10-10A MS | Lab Sample ID: 680-55553-9 MS

Matrix: Solid | Lab File ID: cc09045.d

Analysis Method: 8141A | Date Collected: 02/28/2010 10:30

Extraction Method: 3550B | Date Extracted: 03/08/2010 16:50

Sample wt/vol: 15.42(g) | Date Analyzed: 03/10/2010 12:14

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 17.7 | GPC Cleanup: (Y/N) N

Analysis Batch No.: 162946 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
60-51-5	Dimethoate	50.6		9	40
2104-64-5	EPN	127		39	20
56-38-2	Ethyl Parathion	135		39	20
52-85-7	Famphur	102		9	40
121-75-5	Malathion	151		39	20
6923-22-4	Monochrotophos	390	U	390	200
3689-24-5	Sulfotepp	130		20	10
297-97-2	Thionazin	126		39	20

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	85	42-128	

QC 72410

FORM I 8141A

037

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55553-3

SDG No.: CLJ55553-3

Client Sample ID: IR69-SB02-08-10-10A MSD | Lab Sample ID: 680-55553-9 MSD

Matrix: Solid | Lab File ID: oc09044.d

Analysis Method: 8141A | Date Collected: 02/28/2010 10:30

Extraction Method: 3550B | Date Extracted: 03/08/2010 16:50

Sample wt/vol: 15.42(g) | Date Analyzed: 03/10/2010 11:49

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2.0(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 17.7 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 162946 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	125		[illegible]	20
35400-43-2	Bolstar	156		[illegible]	20
2921-88-2	Chlorpyrifos	147		[illegible]	20
56-72-4	Coumaphos	156		[illegible]	20
298-03-3	Demeton-S	532	J	[illegible]	50
126-75-0	Demeton-O	98	U J	[illegible]	50
333-41-5	Diazinon	112		[illegible]	20
62-73-7	Dichlorvos	175		[illegible]	40
298-04-4	Disulfoton	138		[illegible]	40
13194-48-4	Ethoprop	141		[illegible]	10
115-90-2	Fensulfothion	161	J	[illegible]	100
55-38-9	Fenthion	140		[illegible]	20
150-50-5	Merphos	181		[illegible]	30
298-00-0	Methyl parathion	129		[illegible]	10
7786-34-7	Mevinphos	95.2		[illegible]	40
300-76-5	Naled	200	U J	[illegible]	100
298-02-2	Phorate	113		[illegible]	20
299-84-3	Ronnel	142		[illegible]	20
22248-79-9	Stirophos	141		[illegible]	20
34643-46-4	Tokuthion	144		[illegible]	20
327-98-0	Trichloronate	125		[illegible]	20

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	97	42-128	

JAC 72410

FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55553-3

SDG No.: CLJ55553-3

Client Sample ID: IR69-SB02-08-10-10A MSD | Lab Sample ID: 680-55553-9 MSD

Matrix: Solid | Lab File ID: oc09046.d

Analysis Method: 8141A | Date Collected: 02/25/2010 11:30

Extraction Method: 3550B | Date Extracted: 03/08/2010 16:10

Sample wt/vol: 15.40(g) | Date Analyzed: 03/10/2010 12:39

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 17.2 | GPC Cleanup: (Y/N) N

Analysis Batch No.: 162946 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
60-51-5	Dimethoate	54.8		39	40
2104-64-5	EPN	151		39	20
56-38-2	Ethyl Parathion	149		39	20
52-85-7	Famphur	138		39	40
121-75-5	Malathion	144		39	20
6923-22-4	Monochrotophos	390	U	390	200
3689-24-5	Sulfotepp	143		20	10
297-97-2	Thionazin	135		39	20

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	102	42-128	

JAC 72410

FORM I 8141A

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-SB02-08-10.10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix (soil/water): SOIL Lab Sample ID: 1003031-01

Level (low/med): LOW Date Received: 3/4/2010

% Solids: 83.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	4100			P	
7440-36-0	Antimony	1.2	~~B~~	~~E~~ J	P	MSL
7440-38-2	Arsenic	2.8			P	
7440-39-3	Barium	24.1 ~~4.1~~	~~B~~	~~E~~ UJ	P	MBL
7440-41-7	Beryllium	0.10	~~B~~	J	P	
7440-43-9	Cadmium	0.60	U		P	
7440-70-2	Calcium	602 ~~39.0~~	~~B~~	U	P	MBL
7440-47-3	Chromium	8.7			P	
7440-48-4	Cobalt	0.60	U		P	
7440-50-8	Copper	1.0			P	
7439-89-6	Iron	5670			P	
7439-92-1	Lead	3.4			P	
7439-95-4	Magnesium	602 ~~155~~	~~B~~	U	P	MBL
7439-96-5	Manganese	3.9			P	
7439-97-6	Mercury	0.04	U		CV	
7440-02-0	Nickel	0.47	~~B~~	J	P	OT
7440-09-7	Potassium	262	~~B~~	J	P	
7782-49-2	Selenium	0.34	~~B~~	~~E~~ J	P	
7440-22-4	Silver	0.60	U		P	
7440-23-5	Sodium	602 ~~54.3~~	~~B~~	U	P	MBL
7440-28-0	Thallium	1.2	U		P	
7440-62-2	Vanadium	13.1			P	
7440-66-6	Zinc	4.3			P	

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

85

041

21867-A2

Page 1 of 2

CompuChem
a division of Liberty Analytical Corp.

CHAIN OF CUSTODY

501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd. Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Jessica High

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune, Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?
Are aqueous samples field filtered for metals? Y or N: Yes
Are high concentrations expected? Y or N? If yes, which ID(s)? No

Requested Analysis (include method and bottle type)

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No (Lab Use)	Field ID	Date	Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other X	8260B: VOCs GW: 3-40mL HCl VOAs Soil: 2-40mL Methanol, 1-40mL Water VOA, 1-2oz jar	RSK175: MSE 2-40mL HCl VOAs	TOC: 2-40mL H2SO4 VOAs	6010B: METALS GW: 500mL HNO3 poly Soil: 8oz jar	8270C/8270C-SIM: SVOCs/PAHs GW: 2-1L Ambers Soil: 8oz jar	8330B/8081A: OC Pesticides GW: 2-1L Ambers Soil: 8oz jar	8082: PCBs GW: 2-1L Ambers Soil: 8oz jar	CWNS & AIR: 1-250mL poly, unpres.	Sulfide: 1-500mL Znacetate NaOH poly	6010B: DISSOLVED METALS FIELD FILTERED 1-500mL HNO3 poly	pH / Sample Info (Lab Use)
1003030-01	IR69-SS02-10A	2/28/10	0900	Soil	2						2				X	X	X	X				
	IR69-SS02-10A-MS	2/28/10	0900	Soil	2						2				X	X	X	X				
	IR69-SS02-10A-SD	2/28/10	0900	Soil	2						2				X	X	X	X				
1003031-01	IR69-SB02-08-10-10A	2/28/10	1030	Soil	2						2				X	X	X	X				
	IR69-SB02-08-10-10A-MS	2/28/10	1030	Soil	2						2				X	X	X	X				
	IR69-SB02-08-10-10A-SD	2/28/10	1030	Soil	2						2				X	X	X	X				

Lab Use Only

Sample Unpacked By: Jennifer Dove
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:
Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Sample Custody

Relinquished by:	Date/Time: 3/3/10 1400	Received by:	Date/Time: 3/3/10 1400
Relinquished by:	Date/Time: 3/4/10 1020	Received by: Jennifer Dove	Date/Time: 3/4/10 1020
Subcontract? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 0.7 °C

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer

SN0010

CompuChem
A Division Of
Liberty Analytical Corp.

Sample ID Cross Reference

042

LAB WO	Project	Sample #	Field ID	Sample Date	Receive Date	DueDate	Chain of Custody ID
1003031	CTO-081 SITE 69/289017.SA.DM/N624	1003031-01	IR69-SB02-08-10	02/28/2010	03/04/2010	03/29/2010	IR69-SB02-08-10-10A

Data Completeness

The data package was received complete and intact. Resubmissions were not required. (SW846 Method 8260B)

Laboratory: CompuChem

Holding Times

Sampling Date: 2 28 10
Received Date: 3 04 10
Analysis Dates: 3 5 10

Cooler Temp: 0.7°C

All prep and analysis holding time requirements were met.

Calibrations

Mass assignments were verified by the injection of BFB.

The initial and continuing calibrations required qualifications due to high %D; see attached FormVI and VIIs.

Internal Standards

All criteria met.

Blank Summary

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying criteria.
- Qualification Action codes where applied as stated in table below:

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Storage, Field, Trip, Instrument	Detects	Not detected	No qualifications
	< CRQL*	< CRQL*	Report CRQL value with a U
		> CRQL*	Use professional judgment
	> CRQL*	< CRQL*	Report CRQL value with a U
		< CRQL* and < blank concentration	Report the concentration for the sample with a U, or qualify the data as unusable R
		> CRQL* and > blank concentration	Use professional judgment
	CRQL*	< CRQL*	Report CRQL value with a U
		> CRQL*	Use professional judgment
	Gross contamination	Detects	Qualify results as unusable R

*2x the CRQL for methylene chloride, 2-butanone and acetone

Method blank contamination was not exhibited- no qualifications were required. The associated field QC for this data package was: IR69-TB01-030310 - trip blank; IR69-EB01-022810-Sb-equipment blank; IR69-FB01-030310 - field blank.

Blank Contamination and Qualification Summaries

Blank ID	Compound	Concentration	Reporting Limit
IR69-TB01-030310	acetone	2.4J ug/L	2.5 ug/L
IR69-EB01-022810-SB	acetone	6.3	2.5
	methylene chloride	19	0.5
	chloroform	1.8	0.5
	benzene	0.36J	0.5
	1,2-dichloroethane	0.54	0.5
	toluene	1.7	0.5
	ethylbenzene	0.26J	0.5
	m,p-xylene	0.84J	0.5
	o-xylene	0.34J	0.5
	isopropyl benzene	0.13J	0.5
	xylene (total)	1.2	0.5
IR69-FB01-030310	acetone	4.1	2.5
	methylene chloride	13	0.5
	chloroform	0.31J	0.5
	toluene	4.1	0.5
	chlorobenzene	0.47J	0.5

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Qual Code
IR69-SB02-08-10A	acetone	U	EBL

Surrogates

All criteria were met.

Laboratory Control Sample

All criteria were met.

Matrix Spike/Spike Duplicate Samples

An MS/MSD was submitted for sample IR69-SB02-08-10A; all criteria met.

Field Duplicate Sample

A field duplicate was not submitted for this data package.

Specific Comments:

All sample results were reported within the calibration range of the instruments.

Detection limits were acceptable. Raw data and calculations were verified.

We have limited the supporting documentation, found with these worksheets, to those forms that indicate qualifications were required.

Validator Signature: L Mascello **Date:** 7/14/10

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Lab File ID: 0B09006-TUN159 BFB Injection Date: 02/09/10

Instrument ID: 5972HP59 BFB Injection Time: 1622

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.5
75	30.0 - 60.0% of mass 95	51.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	74.7
175	5.0 - 9.0% of mass 174	5.3 (7.1)1
176	95.0 - 101.0% of mass 174	74.7 (99.9)1
177	5.0 - 9.0% of mass 176	5.0 (6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005	0B09006-CAL	0B09006-CAL1R5	02/09/10	1735
02	VSTD010	0B09006-CAL	0B09006-CAL2R5	02/09/10	1802
03	VSTD020	0B09006-CAL	0B09006-CAL359	02/09/10	1830
04	VSTD200	0B09006-CAL	0B09006-CAL659	02/09/10	1858
05	VSTD100	0B09006-CAL	0B09006-CAL559	02/09/10	1925
06	VSTD050	0B09006-CAL	0B09006-CAL459	02/09/10	1953
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Instrument ID: 5972HP59 Calibration Date(s): 02/09/10 02/09/10

Column: SPB-624 ID: 0.32 (mm) Calibration Time(s): 1735 1953

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2	MAX %RSD OR R^2
Dichlorodifluoromethane	AVRG		0.36223956	3.697	15.000
Chloromethane	AVRG		0.24233564	4.243	15.000
Vinyl Chloride	AVRG		0.27149637	5.187	30.000
Bromomethane	AVRG		0.24720750	5.299	15.000
Chloroethane	AVRG		0.14568642	7.720	15.000
Trichlorofluoromethane	AVRG		0.51919338	4.825	15.000
1,1-Dichloroethene	AVRG		0.19066989	6.292	30.000
Carbon disulfide	AVRG		0.62845630	6.091	15.000
1,1,2-trichloro-1,2,2-triflu	AVRG		0.33687776	9.085	15.000
Acetone	AVRG		0.06124325	8.471	15.000
Methylene Chloride	AVRG		0.28684016	7.205	15.000
trans-1,2-Dichloroethene	AVRG		0.24603374	7.392	15.000
Methyl-tert-butyl ether	AVRG		0.75306200	3.957	15.000
1,1-Dichloroethane	AVRG		0.46567981	9.573	15.000
cis-1,2-Dichloroethene	AVRG		0.28650964	6.701	15.000
2-butanone	AVRG		0.08409555	7.749	15.000
Chloroform	AVRG		0.60700085	6.151	30.000
1,1-Trichloroethane	AVRG		0.53404775	5.938	15.000
rbon Tetrachloride	AVRG		0.44729750	6.204	15.000
Benzene	AVRG		0.92510984	8.481	15.000
1,2-Dichloroethane	AVRG		0.41025724	4.068	15.000
Trichloroethene	AVRG		0.27925571	4.738	15.000
1,2-Dichloropropane	AVRG		0.19378755	18.140	30.000
Bromodichloromethane	AVRG		0.46728535	3.674	15.000
cis-1,3-Dichloropropene	AVRG		0.45653702	4.184	15.000
4-Methyl-2-pentanone	AVRG		0.25907498	5.823	15.000
Toluene	AVRG		0.86512275	6.152	30.000
trans-1,3-Dichloropropene	AVRG		0.57063499	8.293	15.000
1,1,2-Trichloroethane	AVRG		0.28843443	2.430	15.000
Tetrachloroethene	AVRG		0.28957103	7.080	15.000
2-hexanone	AVRG		0.18700542	4.248	15.000
Dibromochloromethane	AVRG		0.41180279	6.267	15.000
1,2-Dibromoethane	AVRG		0.32273442	2.532	15.000
Chlorobenzene	AVRG		0.88099987	5.170	15.000
Ethylbenzene	AVRG		0.45447133	5.704	30.000
Styrene	AVRG		0.96827758	11.328	15.000
Bromoform	AVRG		0.23224965	9.332	15.000
Isopropyl Benzene	AVRG		1.62258312	8.230	15.000
1,1,2,2-Tetrachloroethane	AVRG		0.77080388	3.478	15.000
1,3-Dichlorobenzene	AVRG		1.45668578	6.697	15.000
1,4-Dichlorobenzene	AVRG		1.43122186	4.011	15.000
1,2-Dichlorobenzene	AVRG		1.36567887	4.372	15.000
1,2-Dibromo-3-Chloropropane	AVRG		0.14889516	12.264	15.000
1,2,4-Trichlorobenzene	AVRG		0.94494333	8.266	15.000

FORM VI VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Lab File ID: 0C04007-TUN159 BFB Injection Date: 03/04/10

Instrument ID: 5972HP59 BFB Injection Time: 2310

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.4
75	30.0 - 60.0% of mass 95	50.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	5.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	72.8
175	5.0 - 9.0% of mass 174	5.3 (7.2)1
176	95.0 - 101.0% of mass 174	71.5 (98.2)1
177	5.0 - 9.0% of mass 176	4.5 (6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	0C04007-CCV	0C04007-CCV159	03/04/10	2327
02	VBLKRN	0030414-BLK	0030414-BLK159	03/05/10	0004
03	VRNLCS	0030414-BS1	0030414-BS159	03/05/10	0031
04	VRNLCSD	0030414-BSD	0030414-BSD159	03/05/10	0059
05	IR69-SB02-08-10	1003031-01	1003031-0159	03/05/10	0249
06	IR69-SB02-08-10MS	0030414-MS2	0030414-MS259	03/05/10	0317
07	IR69-SB02-08-10MSD	0030414-MSD	0030414-MSD259	03/05/10	0344
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FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Instrument ID: 5972HP59 Calibration Date: 03/04/10 Time: 2327

Lab File ID: 0C04007-CCV159 Init. Calib. Date(s): 02/09/10 02/09/10

Init. Calib. Times: 1735 1953

GC Column: SPB-624 ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF50 or AMOUNT	CCAL RRF50	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dichlorodifluoromethane	0.3622400	0.3118093	0.3118093	0.001	-13.92	25.00	AVRG
Chloromethane	0.2423400	0.2513012	0.2513012	0.1	3.70	25.00	AVRG
Vinyl Chloride	0.2715000	0.2891258	0.2891258	0.001	6.49	20.00	AVRG
Bromomethane	0.2472000	0.2714451	0.2714451	0.001	9.81	25.00	AVRG
Chloroethane	0.1456800	0.1631153	0.1631153	0.001	11.97	25.00	AVRG
Trichlorofluoromethane	0.5191900	0.6413671	0.6413671	0.001	23.53	25.00	AVRG
1,1-Dichloroethene	0.1906700	0.1853421	0.1853421	0.001	-2.79	20.00	AVRG
Carbon disulfide	0.6284600	0.6715830	0.6715830	0.001	6.86	25.00	AVRG
1,1,2-trichloro-1,2,2-triflu	0.3368800	0.3492281	0.3492281	0.001	3.66	25.00	AVRG
Acetone	0.0612400	0.0660087	0.0660087	0.001	7.79	25.00	AVRG
Methylene Chloride	0.2868400	0.2769556	0.2769556	0.001	-3.44	25.00	AVRG
trans-1,2-Dichloroethene	0.2460300	0.2418880	0.2418880	0.001	-1.68	25.00	AVRG
Methyl-tert-butyl ether	0.7530600	0.7445889	0.7445889	0.001	-1.12	25.00	AVRG
1,1-Dichloroethane	0.4656800	0.4631329	0.4631329	0.1	-0.55	25.00	AVRG
s-1,2-Dichloroethene	0.2865100	0.2911391	0.2911391	0.001	1.62	25.00	AVRG
butanone	0.0840900	0.0884871	0.0884871	0.001	5.23	25.00	AVRG
Chloroform	0.6070000	0.6306263	0.6306263	0.001	3.89	20.00	AVRG
1,1,1-Trichloroethane	0.5340500	0.5605929	0.5605929	0.001	4.97	25.00	AVRG
Carbon Tetrachloride	0.4473000	0.4708740	0.4708740	0.001	5.27	25.00	AVRG
Benzene	0.9251100	0.9248823	0.9248823	0.001	-0.02	25.00	AVRG
1,2-Dichloroethane	0.4102600	0.4157152	0.4157152	0.001	1.33	25.00	AVRG
Trichloroethene	0.2792500	0.3036421	0.3036421	0.001	8.73	25.00	AVRG
1,2-Dichloropropane	0.1937900	0.1839042	0.1839042	0.001	-5.10	20.00	AVRG
Bromodichloromethane	0.4672800	0.4976165	0.4976165	0.001	6.49	25.00	AVRG
cis-1,3-Dichloropropene	0.4565400	0.4892796	0.4892796	0.001	7.17	25.00	AVRG
4-Methyl-2-pentanone	0.2590700	0.2528949	0.2528949	0.001	-2.38	25.00	AVRG
Toluene	0.8651200	0.8180175	0.8180175	0.001	-5.44	20.00	AVRG
trans-1,3-Dichloropropene	0.5706300	0.5410970	0.5410970	0.001	-5.18	25.00	AVRG
1,1,2-Trichloroethane	0.2884300	0.2893824	0.2893824	0.001	0.33	25.00	AVRG
Tetrachloroethene	0.2895700	0.3218083	0.3218083	0.001	11.13	25.00	AVRG
2-hexanone	0.1870000	0.1830973	0.1830973	0.001	2.09	25.00	AVRG
Dibromochloromethane	0.4118000	0.4266930	0.4266930	0.001	3.62	25.00	AVRG
1,2-Dibromoethane	0.3227400	0.3306818	0.3306818	0.001	2.46	25.00	AVRG
Chlorobenzene	0.8810000	0.8944376	0.8944376	0.3	1.52	25.00	AVRG
Ethylbenzene	0.4544700	0.4601605	0.4601605	0.001	1.25	20.00	AVRG
Styrene	0.9682800	0.8611293	0.8611293	0.001	-11.07	25.00	AVRG
Bromoform	0.2322500	0.2488334	0.2488334	0.1	7.14	25.00	AVRG
Isopropyl Benzene	1.6225800	1.6378656	1.6378656	0.001	0.94	25.00	AVRG
1,1,2,2-Tetrachloroethane	0.7708000	0.7669991	0.7669991	0.3	-0.49	25.00	AVRG
1,3-Dichlorobenzene	1.4566800	1.4709181	1.4709181	0.001	0.98	25.00	AVRG
1,4-Dichlorobenzene	1.4312200	1.4464003	1.4464003	0.001	1.06	25.00	AVRG
1,2-Dichlorobenzene	1.3656800	1.3510994	1.3510994	0.001	-1.07	25.00	AVRG

FORM VII VOA

Initial Calibration Date: 2/9/2010

RRF and %RSD Calculations:

Compound Name: vinyl chloride
Lab Value: 0.2653

Area of Compound	532119
Area of Internal STD	501488
Conc. of Internal STD	250
Conc. of Compound	1000
Calculated RRF	0.2653

Compound Name: styrene
Lab Value: 11.33

RRF of STD 1	1.1268
RRF of STD 2	0.9596
RRF of STD 3	1.0496
RRF of STD 4	0.9589
RRF of STD 5	0.9002
RRF of STD 6	0.8146
Calculated % RSD	11.33

Continuing Calibration File ID: 3/4/2010

RRF and %D Calculations:

Compound Name: methylene chloride
Lab Value: 0.277

Area of Compound	163144
Area of Internal STD	589062
Conc. of Internal STD	250
Conc. of Compound	250
Calculated RRF	0.277

Compound Name: toluene
Lab Value: 5.4

Average RRF	0.865
Calibration Check RRF	0.818
Calculated % D	5.4

CompuChem

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SDG NARRATIVE
SDG # 1003031
PROTOCOL: SW-846
SAMPLE IDENTIFICATION: IR69-SB02-08-10
REVISED

The 1 soil sample listed above was received intact, refrigerated at 0.7°C, with proper documentation, in sealed shipping container, on March 4th, 2010. The soil sample was received from field/client in closed, pre-preserved VOA vials (sodium bisulfate/MeOH). The sample was scheduled for the requested analysis of the volatile fraction. SW-846, 3rd Edition, Update 3, 8260B was used to prepare and analyze the sample, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices for SDG 1003031 are included in the sample data sections.

Analysis holding time requirement was met for the sample. The percent moisture value of the sample was 17. There was a volatile Project/Target Compound List (TCL) analyte above the Contract Required Quantitation Limit (CRQL) identified in the sample. All of the system monitoring compounds met recovery criteria in the analysis of the sample. All of the internal standards met response and retention time criteria in the analysis of the sample.

All Bromofluorobenzene (BFB) abundance criteria were met for tunes associated to this SDG. Overall QC criteria were met for all initial and continuing calibration standards associated to this SDG. Manual integration was performed on ICAL file 0B09006-CAL1R59. The reason has been coded with explanations provided in the notice included in the narrative section of the SDG. The associated method blank met all quality control criteria. The associated Laboratory Control Samples (VRNLCS/VRNLCSD) met all accuracy and precision criteria. Sample IR69-SB02-08-10 was requested for matrix spike/matrix spike duplicate (MS/MSD) for the volatile fraction with this SDG.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

L. Forrester for Preeti Khare

Preeti Khare
Analyst II
March 19, 2010

Data Completeness

The data package was received complete and intact. Resubmissions were not required. (SW846 Method 8270C) *All field sample and QC blank IDs were missing the first four (IR69) and or the last four (-10A) characters. The characters were added to the Form 1s in the DV reports by the data validator*

Laboratory: CompuChem

Holding Times

Sampling Date: 2 28 10
Received Date: 3 04 10
Extraction Date: 3 0910
Analysis Dates: 3 19-23 10
Cooler Temp: 0.7°C

All prep and analysis holding time requirements were met.

Calibrations

Mass assignments were verified by the injection of DFTPP.

The continuing calibrations required qualifications due to high %D values; see attached Form VIIs.

Internal Standards

All criteria met.

Blank Summary
Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying criteria.
- Qualification Action codes where applied as stated in table below:

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Field	Detects	Not detected	No qualifications
	< CRQL*	< CRQL*	Report CRQL value with a U
		> CRQL*	Use professional judgment
	> CRQL*	< CRQL*	Report CRQL value with a U
		> CRQL* and < blank concentration	Report the concentration for the sample with a U, or qualify the data as unusable R
		> CRQL* and > blank concentration	Use professional judgment
	CRQL*	< CRQL*	Report CRQL value with a U
		> CRQL*	Use professional judgment
	Gross contamination	Detects	Qualify results as unusable R

*5x the CRQL for bis(2-ethylhexyl)phthalate

Method blank contamination was exhibited- qualifications were required. The associated field QC for this data package was: IR69-EB01-022810-SB-equipment blank; IR69-FB01-030310 - field blank.

Blank Contamination and Qualification Summaries

Blank ID	Compound	Concentration	Reporting Limit
VBLKLV-SIM	naphthalene	1.4J ug/Kg	8.3 ug/Kg
	2-methylnaphthalene	0.83J	8.3
IR69-EB01-022810-SB-SIM	naphthalene	0.038J	0.21
IR69-FB01-030310	bis(2-ethylhexyl)phthalate	6.5	5.0
	di-n-octylphthalate	1.8J	5.0

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Qual Code
IR69-SB02-08-10A-SIM	naphthalene	U at RL	MBL
IR69-SB02-08-10A-SIM	2-methylnaphthalene	U at RL	MBL

Surrogates

All criteria were met.

Laboratory Control Sample

No qualifications were required.

Matrix Spike/Spike Duplicate Samples

An MS/MSD was submitted for sample IR69-SB02-08-10A; no qualifications required.

Field Duplicate Sample

A field duplicate was not submitted for this data package.

Specific Comments:

All sample results were reported within the calibration range of the instruments.

Detection limits were acceptable. Raw data and calculations were verified.

We have limited the supporting documentation, found with these worksheets, to those forms that indicate qualifications were required.

Validator Signature: _____ **Date:** 7/20/10

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Lab File ID: 0C18007-TUN1A70 DFTPP Injection Date: 03/18/10

Instrument ID: 5972HP70 DFTPP Injection Time: 1736

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	40.9
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	56.3
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	25.0 - 75.0% of mass 198	46.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	23.6
365	Greater than 0.75% of mass 198	3.93
441	Present, but less than mass 443	17.1
442	40.0 - 110.0% of mass 198	95.9
443	15.0 - 24.0% of mass 442	19.1 (19.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050MX	0C18007-CCV1	0C18007-CCV1A7	03/18/10	1759
02	SBLKLV	0030902-BLK1	0030902-BLK1A7	03/18/10	2349
03	SLVLCS	0030902-BS1	0030902-BS1A70	03/19/10	0040
04	IR69-SB02-08-10	1003031-01	1003031-01A70	03/19/10	0130
05	IR69-SB02-08-10MS	0030902-MS2	0030902-MS2A70	03/19/10	0220
06	IR69-SB02-08-10MSD	0030902-MSD2	0030902-MSD2A7	03/19/10	0310
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Instrument ID: 5972HP70 Calibration Date: 03/18/10 Time: 1759

Lab File ID: 0C18007-CCV1A7 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1501 1820

GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzaldehyde	0.8340000	0.8134385	0.01	-2.46	50.00	AVRG
Phenol	1.3110000	1.1907547	0.01	-9.17	20.00	AVRG
Bis(2-chloroethyl)ether	1.0880000	0.9988209	0.01	-8.20	50.00	AVRG
2-Chlorophenol	1.0800000	1.0091890	0.01	-6.56	50.00	AVRG
2-Methylphenol	0.9860000	0.9230782	0.01	-6.38	50.00	AVRG
2,2'-oxybis(1-Chloropropane)	1.7770000	1.7374658	0.01	-2.22	50.00	AVRG
Acetophenone	1.6440000	1.6102591	0.01	-2.05	50.00	AVRG
4-Methylphenol	1.0780000	1.0673221	0.01	-0.99	50.00	AVRG
N-Nitroso-di-N-propylamine	0.9210000	0.9248111	0.05	0.41	50.00	AVRG
Hexachloroethane	0.6820000	0.6471805	0.01	-5.10	50.00	AVRG
Nitrobenzene	0.3740000	0.3407954	0.01	-8.88	50.00	AVRG
Isophorone	0.6830000	0.6750503	0.01	-1.16	50.00	AVRG
2-Nitrophenol	0.1880000	0.1782575	0.01	-5.18	20.00	AVRG
4-Dimethylphenol	0.2260000	0.2139903	0.01	-5.31	50.00	AVRG
s(2-chloroethoxy)methane	0.3960000	0.3811208	0.01	-3.76	50.00	AVRG
2,4-Dichlorophenol	0.2560000	0.2458838	0.01	3.95	20.00	AVRG
Naphthalene	0.8750000	0.8646167	0.01	-1.19	50.00	AVRG
4-Chloroaniline	0.3490000	0.3397863	0.01	-2.64	50.00	AVRG
Hexachlorobutadiene	0.1980000	0.1969100	0.01	-0.55	20.00	AVRG
Caprolactam	0.0620000	0.0771250	0.01	24.40	50.00	AVRG
4-Chloro-3-methylphenol	0.2970000	0.2987809	0.01	0.60	20.00	AVRG
2-Methylnaphthalene	0.5320000	0.5034078	0.01	-5.37	50.00	AVRG
Hexachlorocyclopentadiene	0.4430000	0.4158890	0.05	-6.12	50.00	AVRG
2,4,6-Trichlorophenol	0.3660000	0.3558415	0.01	-2.78	20.00	AVRG
2,4,5-Trichlorophenol	0.3820000	0.4044217	0.01	5.87	50.00	AVRG
1,1'-Biphenyl	1.2390000	1.2018862	0.01	-3.00	50.00	AVRG
2-Chloronaphthalene	1.0350000	0.9965010	0.01	-3.72	50.00	AVRG
2-Nitroaniline	0.4070000	0.3921437	0.01	-3.65	50.00	AVRG
Dimethylphthalate	1.3010000	1.2685234	0.01	-2.50	50.00	AVRG
2,6-Dinitrotoluene	0.3140000	0.3072972	0.01	-2.13	50.00	AVRG
Acenaphthylene	1.6650000	1.6252925	0.01	-2.38	50.00	AVRG
3-Nitroaniline	0.3570000	0.3542891	0.01	0.76	50.00	AVRG
Acenaphthene	0.9400000	0.9182023	0.01	-2.32	20.00	AVRG
2,4-Dinitrophenol	0.2350000	0.2216366	0.05	-5.69	50.00	AVRG
4-Nitrophenol	0.2320000	0.1924289	0.05	-17.06	50.00	AVRG
2,4-Dinitrotoluene	0.4310000	0.4306356	0.01	-0.08	50.00	AVRG
Dibenzofuran	1.4690000	1.4340535	0.01	-2.38	50.00	AVRG
Diethylphthalate	1.4290000	1.3941225	0.01	-2.44	50.00	AVRG
4-Chlorophenyl-phenylether	0.5720000	0.5540576	0.01	-3.14	50.00	AVRG
Fluorene	1.1560000	1.1392585	0.01	1.45	50.00	AVRG
4-Nitroaniline	0.3390000	0.3317705	0.01	-2.13	50.00	AVRG
4,6-Dinitro-2-methylphenol	0.1760000	0.1691670	0.01	3.88	50.00	AVRG

J/UJ

FORM VII SV

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO

SBLKLV

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Lab File ID: 0030902-BLK1C60 Lab Sample ID: 0030902-BLK1

Instrument ID: 5972HP60 Date Extracted: 03/09/10

Matrix: (soil/water) SOIL Date Analyzed: 03/23/10

Level: (low/med) LOW Time Analyzed: 1104

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	IR69-SB02-08-10	1003031-01	1003031-01C6	03/23/10
02	SLWLCSD	0030902-BSD2	0030902-BSD2	03/23/10
03	SLWLCS	0030902-BS2	0030902-BS2J	03/23/10
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COMMENTS: Naphthalene 1.4J ug/kg
2-Methylnaph 0.83J

FORM IV SV

Initial Calibration Date: 3/16/2010

RRF and %RSD Calculations:

Compound Name: phenol
Lab Value: 1.426

Area of Compound	301398
Area of Internal STD	422640
Conc. of Internal STD	40
Conc. of Compound	20
Calculated RRF	1.426

Compound Name: 2-methylphenol
Lab Value: 11.1

RRF of STD 1	1.055
RRF of STD 2	1.049
RRF of STD 3	0.906
RRF of STD 4	1.084
RRF of STD 5	0.834
Calculated % RSD	11.10

Continuing Calibration File ID: 3/18/2010

RRF and %D Calculations:

Compound Name: benzo(k)fluoranthene
Lab Value: 0.994

Area of Compound	2573129
Area of Internal STD	2069950
Conc. of Internal STD	40
Conc. of Compound	50
Calculated RRF	0.994

Compound Name: indeno(1,2,3-cd)pyrene
Lab Value: 3.0

Average RRF	0.852
Calibration Check RRF	0.8261552
Calculated % D	3.03

CompuChem

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SDG NARRATIVE
SDG #1003031
PROTOCOL: SW-846
SAMPLE IDENTIFICATION: IR69-SS02-08-10

The 1 solid sample listed above was received at 0.7°C, with proper documentation, in sealed shipping container, on March 4th, 2010. The sample was scheduled for the requested analysis of the semivolatile fraction. SW-846, 3rd Edition, Update 3, Separatory Funnel extraction (Method 3510C), and Method 8270C were used to prepare and analyze the sample, with the exceptions and/or additions requested by the client. This portion of the SDG narrative deals with the semivolatile fraction only.

Semivolatiles
Extraction and analysis holding time requirements were met for the sample.

The percent moisture value of the sample was 17.

There were no semivolatile target compound list (TCL) analytes identified above the Contract Required Quantitation Limit (CRQL) identified in the sample.

Manual integrations were performed on sample file 1003031-01A70; ICAL files 0C16003-CAL1A70, 0C16003-CAL2A70, 0C16003-CAL3A70, 0C16003-CAL4A70, 0C16003-CAL5A70; CCAL file 0C18007-CCV1A70; and QC files 0030902-BLK1A70, 0030902-BS1A70, 0030902-MS2A70, 0030902-MSD2A70. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.

All decafluorotriphenylphosphine (DFTPP) abundance criteria were met for tunes associated to this SDG. Tailing factor criteria were met for pentachlorophenol and benzidine. The breakdown criterion was met for DDT. These three compounds have been added to the DFTPP solution and analyzed together.

Overall QC criteria were met for all initial and continuing calibration standards associated to this SDG.

The surrogates met recovery criteria in the analysis of the sample.

All of the internal standards met response and retention time criteria in the analysis of the sample.

The associated method blank met all quality control criteria.

The associated Laboratory Control Sample (SLVLCS) failed the %Recovery for Caprolactam. There were no detects for the compound in the associated samples.

Sample IR69-SS02-08-10 was requested for matrix spike/matrix spike duplicate (MS/MSD) for the semi-volatile fraction with this SDG.

An uncertainty of these test results may be estimated from the recovery of the surrogates added to the sample prior to sample preparation or from the recovery of spiked compound(s) in the associated laboratory control sample. Further information is available upon request.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Preeti Khare
Data Reviewer I
April 18, 2010

CompuChem

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SDG NARRATIVE
SDG # 1003031
PROTOCOL: SW-846
SAMPLE IDENTIFICATION: IR69-SS02-08-10

The 1 solid sample listed above was received at 0.7°C, with proper documentation, in sealed shipping container, on March 4th, 2010. The samples were scheduled for the requested analysis of the semivolatile fraction. SW-846, 3rd Edition, Update 3. Separatory Funnel extraction (Method 3510C), and Method 8270C-SIM was used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. This portion of the SDG narrative deals with the semivolatile fraction (SIM) only.

Semivolatiles
Extraction and analysis holding time requirements were met for the sample.

The percent moisture value of the sample was 17.

There were no semivolatile target compound list (TCL) analytes identified above the Quantitation Limit (QL) for the SIM analysis in the sample.

Manual integrations were performed on QC file 0030902-BLK1C60. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.

Mass assignments were verified by the injections of perfluorotributylamine for the SIM analysis.

Overall QC criteria were met for all initial and continuing standards associated to this SDG.

All of the internal standards met response and retention time criteria in the analysis of the sample.

The associated method blank met all quality control criteria.

The associated Laboratory Control Samples (SLWLCS/SLWLCSD) were inadvertently double spiked. This higher value was used in assessing the percent recoveries for the LCS/LCSD. Benzo(b)fluoranthene bias high %Recovery; the compound was not detected in the associated sample.

An uncertainty of these test results may be estimated from the recovery of the surrogates added to the samples prior to sample preparation or from the recovery of spiked compound(s) in the associated laboratory control sample. Further information is available upon request.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Preeti Khare
Data Reviewer I
April 18th, 2010

Holding Times

Sampling Date: 2 28
Received Date: 3 4
Extraction Date: 3 9
Analysis Dates: 312, 3 20

All extraction and analysis holding times were met for the samples in this SDG. No qualifications were required. Sample receipt data is in order. Cooler temperature was within acceptable range.

Calibrations

Initial calibrations were performed according to the method with a five-point curve for the single component pesticides, toxaphene, chlordane and the PCB target compounds 1016 & 1660. Single points were included for the other Aroclors. Calibration factors were calculated. %RSDs were within QC limits. Continuing calibration standards were analyzed per the SW-846 methods requested. All PEM breakdown criteria were not met. Some continuing calibration criteria were outside QC limits for target compounds in associated standards in both the initial run of the sample spike pair and the RE run. The RE was excluded in favor of the initial run so all qualifications were based on the initial run. Column resolution was acceptable. The correct analytical sequence was run. All required instrument blanks were analyzed. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Any compound detected in the sample, and the associated blank, must be qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than five (5) times the blank concentration.
- Sample weight, volume or dilution factor must be taken into consideration when applying the 5X criteria.
- Apply the same data validation guidelines to any associated rinse and field blanks and all associated samples.
- Qualification Action codes:
-

No Action -	The sample result is greater than the RL and greater than five times (5X) the blank value.
U at RL-	The sample result is less than the RL when the blank contamination level is less than the RL.

No contamination that resulted in qualification of the data was noted in the associated method or instrument blanks or the submitted field QC blanks.

SURROGATE RECOVERIES

No qualifications were required due to surrogate recovery issues.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

The MS MSD exhibited non-compliant recoveries and two non-compliant RPDs. Qualifications were required as follows: DDT J UJ, methoxychlor J R and endrin ketone J UJ.

LABORATORY CONTROL SAMPLES

The submitted LCS samples exhibited acceptable recoveries. No qualifications were required.

FIELD DUPLICATE SAMPLE SUMMARY

Sample ID: none **Duplicate ID:**

Compound	Sample Conc.	Duplicate Conc.	RPD
			#DIV/0!

Comments:

SAMPLE RESULT VERIFICATION

Calculations were verified. All P flagged results were qualified as estimated J (column quantitation %Ds >40.)

Reviewer JACleveland **Date:** 7/24/10

CompuChem

a division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1003031
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS: IR69-SB02-08-10

The one soil sample listed above was received intact, refrigerated at 0.7°C, with proper documentation, in sealed shipping containers, on March 4, 2010. The sample was scheduled for the requested analysis of the Pesticide/PCB fraction. SW-846, 3rd Edition, Update 3, Method 8081A and 8082 were used to prepare and analyze the sample, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section and all pertinent Laboratory notices for SDG # 1003031 are included in the sample data sections.

Pesticide/PCB

Extraction and analysis holding time requirements were met for the samples. Sulfur cleanup was performed on each of the samples and QC for the first analysis. Due to failures within in the continuing calibrations, the sample was reanalyzed a second time. The second analysis was processed through GPC cleanup only. Both sets of data are reported, with the second analysis with the "RE" suffix. Due limited characters available in the reporting software, the sample ID was shortened to SB02-08-10 for reporting reasons in this fraction only.

Target analytes confirmed above the reporting limits in sample IR69-SS02.

All QC criteria were met for all initial calibration standards associated to this SDG. The following continuing calibration standards did not meet QC criteria: INDC3VL, INDC3VN, INDC3WJ, AR16603WJ, INDC3WL, PEMVL, PEMVN, PEMWJ, and PEMWL.

All surrogate recoveries were with the method specified limits.

The method blank associated with the sample met all quality control criteria.

Duplicate matrix spikes were performed with sample IR69-SS02, and met recovery and precision criteria, with a few exceptions. The Laboratory Control Sample (LCS) prepared and analyzed with the sample met recovery criteria.

An uncertainty of these test results may be estimated from the recovery of the surrogates added to the sample prior to sample preparation or from the recovery of spiked compound(s) in the associated laboratory control sample. Further information is available upon request.

I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on CD has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

for Kathy Humphries

Teresa Amentt Jennings
GC/HPLC Data Reviewer
March 30, 2010

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Instrument ID: TRACEGC84 Calibration Date: 03/12/10 Time: 2121

Lab File ID: 206UINDC3VL Init. Calib. Date(s): 03/05/10 03/05/10

Init. Calib. Times: 1547 1744

GC Column: CLPEST ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	579172.50	583330.00	0.01	0.72	20.00	AVRG	
alpha-BHC	691067.50	695185.00	0.01	0.60	20.00	AVRG	
beta-BHC	283830.00	278435.00	0.01	-1.90	20.00	AVRG	
delta-BHC	613307.50	633970.00	0.01	3.37	20.00	AVRG	
gamma-BHC (Lindane)	665900.00	615295.00	0.01	-7.60	20.00	AVRG	
4,4'-DDD	381772.50	541800.00	0.01	41.92	20.00	AVRG	<- JIUJ
4,4'-DDE	503307.50	508463.75	0.01	1.02	20.00	AVRG	
4,4'-DDT	444732.50	35733.750	0.01	-91.96	20.00	AVRG	<- J/R
Dieldrin	496771.25	496950.00	0.01	0.04	20.00	AVRG	
Endosulfan I	529862.50	533547.50	0.01	0.70	20.00	AVRG	
Endosulfan II	451598.75	437216.25	0.01	-3.18	20.00	AVRG	
Endosulfan sulfate	404451.25	379160.00	0.01	-6.25	20.00	AVRG	
Endrin	443647.50	425626.25	0.01	-4.06	20.00	AVRG	
Endrin Aldehyde	351362.50	349695.00	0.01	-0.47	20.00	AVRG	
Heptachlor	626617.50	476610.00	0.01	-23.94	20.00	AVRG	<- JIUJ
Heptachlor Epoxide	561227.50	560205.00	0.01	-0.18	20.00	AVRG	
Methoxychlor	195679.00	57758.250	0.01	-70.48	20.00	AVRG	<- JIUJ
Endrin Ketone	475307.50	294492.50	0.01	-38.04	20.00	AVRG	<- JIUJ
gamma-Chlordane	565707.50	548430.00	0.01	-3.05	20.00	AVRG	
alpha-Chlordane	491787.50	486225.00	0.01	-1.13	20.00	AVRG	
Decachlorobiphenyl	431712.50	422846.25	0.01	-2.05	20.00	AVRG	
Tetrachloro-m-Xylene	472792.50	468007.50	0.01	-1.01	20.00	AVRG	

IR69-SB02-08-10-10A

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Instrument ID: TRACEGC85 Calibration Date: 03/12/10 Time: 2121

Lab File ID: 206UTNDC3VL Init. Calib. Date(s): 03/05/10 03/05/10

Init. Calib. Times: 1547 1744

GC Column: CLPEST2 ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	408830.00	407285.00	0.01	-0.38	20.00	AVRG	
beta-BHC	207992.50	190965.00	0.01	-8.19	20.00	AVRG	
alpha-BHC	489947.50	483082.50	0.01	-1.40	20.00	AVRG	
delta-BHC	436310.00	441675.00	0.01	1.23	20.00	AVRG	
gamma-BHC (Lindane)	475640.00	420150.00	0.01	-11.67	20.00	AVRG	
4,4'-DDD	269131.25	380018.75	0.01	41.20	20.00	AVRG	<- J/UJ
4,4'-DDE	366063.75	367215.00	0.01	0.31	20.00	AVRG	
4,4'-DDT	308780.00	2131.2500	0.01	-99.31	20.00	AVRG	<- J/R
Dieldrin	357921.25	358890.00	0.01	0.27	20.00	AVRG	
Endosulfan I	372447.50	368932.50	0.01	-0.94	20.00	AVRG	
Endosulfan II	324707.50	361906.25	0.01	11.46	20.00	AVRG	
Endosulfan sulfate	294692.50	270697.50	0.01	-8.14	20.00	AVRG	
Endrin	323160.00	300665.00	0.01	-6.96	20.00	AVRG	
Endrin Aldehyde	253240.00	244078.75	0.01	-3.62	20.00	AVRG	
Heptachlor	427408.41	309562.50	0.01	-27.57	20.00	AVRG	<- J/UJ
Heptachlor Epoxide	398407.50	389320.00	0.01	-2.28	20.00	AVRG	
Methoxychlor	143271.50	20863.000	0.01	-85.44	20.00	AVRG	<- J/UJ
Endrin Ketone	345835.00	168903.75	0.01	-51.16	20.00	AVRG	<- J/UJ
gamma-Chlordane	396727.50	387695.00	0.01	-2.28	20.00	AVRG	
alpha-Chlordane	345977.50	338802.50	0.01	-2.07	20.00	AVRG	
Decachlorobiphenyl	308857.50	292497.50	0.01	-5.30	20.00	AVRG	
Tetrachloro-m-Xylene	344397.50	325292.50	0.01	-5.55	20.00	AVRG	

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Instrument ID: TRACEGC84 Calibration Date: 03/13/10 Time: 0113

Lab File ID: 214UINDC3VN Init. Calib. Date(s): 03/05/10 03/05/10

Init. Calib. Times: 1547 1744

GC Column: CLPEST ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	579172.50	595100.00	0.01	2.75	20.00	AVRG	
alpha-BHC	691067.50	691350.00	0.01	0.04	20.00	AVRG	
beta-BHC	283830.00	280300.00	0.01	-1.24	20.00	AVRG	
delta-BHC	613307.50	630750.00	0.01	2.84	20.00	AVRG	
gamma-BHC (Lindane)	665900.00	603400.00	0.01	-9.38	20.00	AVRG	
4,4'-DDD	381772.50	555325.00	0.01	45.46	20.00	AVRG	<- JMJ
4,4'-DDE	503307.50	508700.00	0.01	1.07	20.00	AVRG	
4,4'-DDT	444732.50	36850.000	0.01	-91.71	20.00	AVRG	<- JMJ
Dieldrin	496771.25	504650.00	0.01	1.58	20.00	AVRG	
Endosulfan I	529862.50	522950.00	0.01	-1.30	20.00	AVRG	
Endosulfan II	451598.75	445775.00	0.01	-1.29	20.00	AVRG	
Endosulfan sulfate	404451.25	381800.00	0.01	-5.60	20.00	AVRG	
Endrin	443647.50	429875.00	0.01	-3.10	20.00	AVRG	
Endrin Aldehyde	351362.50	342600.00	0.01	-2.49	20.00	AVRG	
Heptachlor	626617.50	483150.00	0.01	-22.90	20.00	AVRG	<- JMJ
Heptachlor Epoxide	561227.50	557150.00	0.01	-0.73	20.00	AVRG	
Methoxychlor	195679.00	62005.000	0.01	-68.31	20.00	AVRG	<- JMJ
Endrin Ketone	475307.50	303925.00	0.01	-36.06	20.00	AVRG	<- JMJ
gamma-Chlordane	565707.50	551200.00	0.01	-2.56	20.00	AVRG	
alpha-Chlordane	491787.50	492950.00	0.01	0.24	20.00	AVRG	
Decachlorobiphenyl	431712.50	425425.00	0.01	-1.46	20.00	AVRG	
Tetrachloro-m-Xylene	472792.50	462300.00	0.01	-2.22	20.00	AVRG	

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Instrument ID: TRACEGC85 Calibration Date: 03/13/10 Time: 0113

Lab File ID: 214UINDC3VN Init. Calib. Date(s): 03/05/10 03/05/10

Init. Calib. Times: 1547 1744

GC Column: CLPEST2 ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	408830.00	404470.00	0.01	-1.07	20.00	AVRG	
beta-BHC	207992.50	193810.00	0.01	6.82	20.00	AVRG	
alpha-BHC	489947.50	479945.00	0.01	-2.04	20.00	AVRG	
delta-BHC	436310.00	437752.50	0.01	0.33	20.00	AVRG	
gamma-BHC (Lindane)	475640.00	426297.50	0.01	-10.37	20.00	AVRG	
4,4'-DDD	269131.25	379197.50	0.01	40.90	20.00	AVRG	<- JMJ
4,4'-DDE	366063.75	367055.00	0.01	0.27	20.00	AVRG	
4,4'-DDT	308780.00	3260.0000	0.01	-98.94	20.00	AVRG	<- JR
Dieldrin	357921.25	358595.00	0.01	0.19	20.00	AVRG	
Endosulfan I	372447.50	374970.00	0.01	0.68	20.00	AVRG	
Endosulfan II	324707.50	367966.25	0.01	13.32	20.00	AVRG	
Endosulfan sulfate	294692.50	270636.25	0.01	-8.16	20.00	AVRG	
Endrin	323160.00	300763.75	0.01	-6.93	20.00	AVRG	
Endrin Aldehyde	253240.00	242980.00	0.01	-4.05	20.00	AVRG	
Heptachlor	427408.41	318710.00	0.01	-25.43	20.00	AVRG	<- JMJ
Heptachlor Epoxide	398407.50	389042.50	0.01	-2.35	20.00	AVRG	
Methoxychlor	143271.50	26473.750	0.01	-81.52	20.00	AVRG	<- JMJ
Endrin Ketone	345835.00	184513.75	0.01	-46.65	20.00	AVRG	<- JMJ
gamma-Chlordane	396727.50	387515.00	0.01	-2.32	20.00	AVRG	
alpha-Chlordane	345977.50	340337.50	0.01	-1.63	20.00	AVRG	
Decachlorobiphenyl	308857.50	293513.75	0.01	-4.97	20.00	AVRG	
Tetrachloro-m-Xylene	344397.50	325002.50	0.01	-5.63	20.00	AVRG	

FORM VII PEST

7F

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

GC Column: CLPEST ID: 0.32 (mm) Init. Calib. Date(s): 03/05/10 03/08/10

EPA Sample No.(PIBLK): PIBLKVK Date Analyzed :03/12/10

Lab Sample ID (PIBLK): PIBLKVKVL Time Analyzed :2023

EPA Sample No.(PEM): PEMVL Date Analyzed :03/12/10

Lab Sample ID (PEM): PEMVL Time Analyzed :2151

PEM COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	AREA
4,4'-DDD	15.64	15.57	15.71	4777
4,4'-DDE				
4,4'-DDT	16.24	16.17	16.31	1467
Endrin	15.49	15.42	15.56	9246
Endrin Aldehyde				
Endrin Ketone				

4,4'-DDT % breakdown (1): 76.5 Endrin % breakdown (1): 0.00

Flag DDD /DDE NJ if + DDT J/R

QC LIMITS:

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

FORM VII PEST-1

7F

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

GC Column: CLPEST2 ID: 0.32 (mm) Init. Calib. Date(s): 03/05/10 03/08/10

EPA Sample No.(PIBLK): PIBLKVL Date Analyzed :03/12/10

Lab Sample ID (PIBLK): PIBLKVKVL Time Analyzed :2023

EPA Sample No.(PEM): PEMVL Date Analyzed :03/12/10

Lab Sample ID (PEM): PEMVL Time Analyzed :2151

PEM COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	AREA
4,4'-DDD	15.52	15.45	15.59	3645
4,4'-DDE	14.28	14.21	14.35	87
4,4'-DDT	16.18	16.11	16.25	141
Endrin	15.23	15.17	15.31	6416
Endrin Aldehyde	16.42	16.35	16.49	51
Endrin Ketone	18.12	18.06	18.20	78

4,4'-DDT % breakdown (1): 96.4

Endrin % breakdown (1): 1.97

DDD/DDE NJ if +
DDT J/R

QC LIMITS:

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

FORM VII PEST-1

7F

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

GC Column: CLPEST ID: 0.32 (mm) Init. Calib. Date(s): 03/05/10 03/08/10

EPA Sample No.(PIBLK): PIBLKVM Date Analyzed :03/13/10

Lab Sample ID (PIBLK): PIBLKVMVN Time Analyzed :0015

EPA Sample No.(PEM): PEMVN Date Analyzed :03/13/10

Lab Sample ID (PEM): PEMVN Time Analyzed :0142

PEM COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	AREA
4,4'-DDD	15.64	15.57	15.71	4056
4,4'-DDE	14.34	14.27	14.40	119
4,4'-DDT	16.24	16.17	16.31	1505
Endrin	15.49	15.42	15.56	8922
Endrin Aldehyde				
Endrin Ketone	18.42	18.35	18.49	191

4,4'-DDT % breakdown (1): 73.5 Endrin % breakdown (1): 2.10

DDD/DDE NJif+
DDT J/R

QC LIMITS:

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

FORM VII PEST-1

7F

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

GC Column: CLPEST2 ID: 0.32 (mm) Init. Calib. Date(s): 03/05/10 03/08/10

EPA Sample No.(PIBLK): PIBLKVN Date Analyzed :03/13/10

Lab Sample ID (PIBLK): PIBLKVMVN Time Analyzed :0015

EPA Sample No.(PEM): PEMVN Date Analyzed :03/13/10

Lab Sample ID (PEM): PEMVN Time Analyzed :0142

PEM COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	AREA
4,4'-DDD	15.52	15.45	15.59	3212
4,4'-DDE	14.28	14.21	14.35	115
4,4'-DDT	16.18	16.11	16.25	223
Endrin	15.23	15.17	15.31	6092
Endrin Aldehyde	16.42	16.35	16.49	41
Endrin Ketone	18.12	18.06	18.20	87

4,4'-DDT % breakdown (1): 93.7

Endrin % breakdown (1): 2.06

DDD/DDE NJ if +
DDT J/R

QC LIMITS:

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

FORM VII PEST-1

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix Spike - EPA Sample No.: SB02-08-10

COMPOUND	SPIKE ADDED (ug/Kg	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.	
Aldrin	6.0	0.0	4.5	75	45-140	
beta-BHC	6.0	0.0	4.2	70	60-125	
alpha-BHC	6.0	0.0	5.4	90	60-125	
delta-BHC	6.0	0.0	5.4	90	55-130	
gamma-BHC (Lindane)	6.0	0.0	4.6	77	60-125	
4,4'-DDD	15	2.3	17	98	30-135	
4,4'-DDE	15	0.0	12	80	70-125	
4,4'-DDT	15	0.0	2.7	18*	45-140	JW
Dieldrin	15	0.0	13	87	65-125	
Endosulfan I	6.0	0.0	4.5	75	15-135	
Endosulfan II	15	0.0	7.7	51	35-140	
Endosulfan sulfate	15	0.0	4.3	29*	60-135	NQ
Endrin	15	1.1	12	73	60-135	
Endrin Aldehyde	15	0.0	7.1	47	35-145	
Heptachlor	6.0	0.0	4.8	80	50-140	
Heptachlor Epoxide	6.0	0.0	5.1	85	65-130	
Methoxychlor	15	0.0	0.0	0*	55-145	JR
Endrin Ketone	15	0.0	7.0	47*	65-135	JW
gamma-Chlordane	6.0	0.0	4.8	80	65-125	
alpha-Chlordane	6.0	0.0	5.4	90	65-120	

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

JC

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix Spike - EPA Sample No.: SB02-08-10

COMPOUND	SPIKE ADDED (ug/Kg	MSD CONCENTRATION (ug/Kg	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aldrin	6.0	4.4	73	2	40	45-140
beta-BHC	6.0	4.4	73	5	40	60-125
alpha-BHC	6.0	5.4	90	0	40	60-125
delta-BHC	6.0	5.7	95	5	40	55-130
gamma-BHC (Lindane)	6.0	4.5	75	2	40	60-125
4,4'-DDD	15	18	105	6	40	30-135
4,4'-DDE	15	12	80	0	40	70-125
4,4'-DDT	15	0.0	0* JMJ		40	45-140
Dieldrin	15	13	87	0	40	65-125
Endosulfan I	6.0	4.4	73	2	40	15-135
Endosulfan II	15	13	87	51* NQ	40	35-140
Endosulfan sulfate	15	9.6	64	76*	40	60-135
Endrin	15	12	73	0	40	60-135
Endrin Aldehyde	15	7.6	51	7	40	35-145
Heptachlor	6.0	4.8	80	0	40	50-140
Heptachlor Epoxide	6.0	5.5	92	8	40	65-130
Methoxychlor	15	0.0	0* JJR		40	55-145
Endrin Ketone	15	6.8	45* JJW	3	40	65-135
gamma-Chlordane	6.0	4.7	78	2	40	65-125
alpha-Chlordane	6.0	5.2	87	4	40	65-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 2 out of 20 outside limits
Spike Recovery: 7 out of 40 outside limits

COMMENTS:

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix Spike - EPA Sample No.: SB02-08-10RE

COMPOUND	SPIKE ADDED (ug/Kg	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Aldrin	6.0	0.0	4.5	75	45-140
beta-BHC	6.0	0.0	4.4	73	60-125
alpha-BHC	6.0	0.0	5.5	92	60-125
delta-BHC	6.0	0.0	5.7	95	55-130
gamma-BHC (Lindane)	6.0	0.0	4.8	80	60-125
4,4'-DDD	15	0.0	17	113	30-135
4,4'-DDE	15	0.0	12	80	70-125
4,4'-DDT	15	0.0	0.0	0*	45-140
Dieldrin	15	0.0	14	93	65-125
Endosulfan I	6.0	0.0	4.6	77	15-135
Endosulfan II	15	0.0	8.2	55	35-140
Endosulfan sulfate	15	0.0	5.7	38*	60-135
Endrin	15	0.0	16	107	60-135
Endrin Aldehyde	15	0.0	7.0	47	35-145
Heptachlor	6.0	0.27	4.9	77	50-140
Heptachlor Epoxide	6.0	0.0	5.7	95	65-130
Methoxychlor	15	0.0	0.0	0*	55-145
Endrin Ketone	15	0.0	8.0	53*	65-135
gamma-Chlordane	6.0	0.0	4.7	78	65-125
alpha-Chlordane	6.0	0.0	5.4	90	65-120

Not Used

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix Spike - EPA Sample No.: SB02-08-10RE

COMPOUND	SPIKE ADDED (ug/Kg	MSD CONCENTRATION (ug/Kg	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aldrin	6.0	4.5	75	0	40	45-140
beta-BHC	6.0	4.7	78	6	40	60-125
alpha-BHC	6.0	5.5	92	0	40	60-125
delta-BHC	6.0	6.1	102	7	40	55-130
gamma-BHC (Lindane)	6.0	4.8	80	0	40	60-125
4,4'-DDD	15	19	127	11	40	30-135
4,4'-DDE	15	13	87	8	40	70-125
4,4'-DDT	15	0.0	0*		40	45-140
Dieldrin	15	15	100	7	40	65-125
Endosulfan I	6.0	4.7	78	2	40	15-135
Endosulfan II	15	14	93	52*	40	35-140
Endosulfan sulfate	15	11	73	63*	40	60-135
Endrin	15	15	100	6	40	60-135
Endrin Aldehyde	15	7.7	51	10	40	35-145
Heptachlor	6.0	4.8	76	2	40	50-140
Heptachlor Epoxide	6.0	5.7	95	0	40	65-130
Methoxychlor	15	0.0	0*		40	55-145
Endrin Ketone	15	6.8	45*	16	40	65-135
gamma-Chlordane	6.0	5.1	85	8	40	65-125
alpha-Chlordane	6.0	5.5	92	2	40	65-120

Not Used

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 2 out of 20 outside limits
Spike Recovery: 7 out of 40 outside limits

COMMENTS:

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

SB02-08-10

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Lab Sample ID: 1003031-01 Date(s) Analyzed: 03/12/10 03/12/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
4,4'-DDD	1	15.58	15.57	15.71	2.3	
	2	15.51	15.45	15.59	0.81	95.8 J
Endrin	1	15.52	15.42	15.56	1.1	
	2	15.22	15.17	15.31	0.98	11.5
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

10A

PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

SB02-08-10RE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Lab Sample ID: 1003031-01RE1 Date(s) Analyzed: 03/20/10 03/20/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Heptachlor	1	11.41	11.32	11.46	0.27	
	2	11.06	10.99	11.13	0.22	20.4
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

page 1 of 1

FORM X PEST-1

Holding Times

Sampling Date: 2/28
Received Date: 3/4 at TestAmerica Cooler temps were within acceptable range.
Extraction Date: 3/8/10
Analysis Dates: 3/10/10

All extraction and analysis holding times were met for the samples in this SDG. Sample receipt data is in order. Cooler temperature was within acceptable range. This analysis was sub-contracted to Test America Savannah by Compuchem.

Calibrations

Initial calibrations were performed according to the method with a eight-point curve for the organophosphorous pesticide target compounds. Calibration factors were calculated or LR curves were plotted. %RSDs or correlation coefficients were within QC limits. Continuing calibration standards were analyzed per the SW-846 methods requested. All %D criteria were not met. Please see the report for necessary qualifications. Column resolution was acceptable. Retention time windows were provided, retention times were stable throughout the analytical sequence. All required instrument blanks were analyzed. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Any compound detected in the sample, and the associated blank, must be qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than five (5) times the blank concentration.
- Sample weight, volume or dilution factor must be taken into consideration when applying the 5X criteria.
- Apply the same data validation guidelines to any associated rinse and field blanks and all associated samples.
- Qualification Action codes:
-

No Action -	The sample result is greater than the RL and greater than five times (5X) the blank value.
U at RL -	The sample result is less than the RL when the blank contamination level is less than the RL.

No contamination that resulted in qualification of the data was noted in the associated method or instrument blanks or the submitted field QC blanks.

SURROGATE RECOVERIES

Surrogate recoveries were acceptable.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

The associated MS/MSD pair of sample IR69-SB02-08-10-10A exhibited 0/0 for the compounds demeton-s, naled and monochrotophos. The compounds demeton-s and monochrotophos were also recovered low in the associated LCS. The three compounds were rejected in the native field sample. Demeton-o was recovered high but no qualification was required because the reported result in the field sample was non-detect. The RPD was high for dimethoate (51%). No qualifications were required based on this RPD.

LABORATORY CONTROL SAMPLES

The submitted LCS/LCSD pair submitted exhibited acceptable recoveries with the exception of demeton-s, demeton-o and monochrotophos. See comments under Matrix Spike/Matrix Spike Duplicate for qualification specifics.

FIELD DUPLICATE SAMPLE SUMMARY

Sample ID: None **Duplicate ID:**

Compound	Sample Conc.	Duplicate Conc.	RPD
			#DIV/0!

Comments:

SAMPLE RESULT VERIFICATION

Raw data was verified. Calculations were verified. Resubmissions were required. Copies of all e-mail correspondence with the lab are included in these validation worksheets.

Reviewer HCleveland **Date:** 7/24/10

Test America Savannah
SDG 680-55553-3
OPP

Job Narrative
680-55553-3

Comments
No additional comments

Receipt
All samples were received in good condition within temperature requirements

GC Semi VOA
Method(s) 8141A: The capping continuing calibration verification (CCV) analyzed after sample analysis did not meet control limits for Naled. Sample matrix is suspected to have contributed to this failure

Method(s) 8141A. The laboratory control sample (LCS) for batch 680-162464 exceeded control limits for the following analyte(s): Monochrotophos. Monochrotophos has been identified as a poor performing analyte when analyzed using this method; therefore re-extraction/re-analysis was not performed. These results have been reported and qualified

Method(s) 8141A. The laboratory control sample (LCS) for batch 680-162464 exceeded control limits for the following analytes: Demeton-O and Demeton-S. The vendor purchased standard for these analytes is expressed as a the value of the total concentration not the concentration of the individual analytes. The ratio of the LCS standard differs from the rations present in the calibration standards. The % recovery of the total od Demeton-O and Demeton-S was within limits

Method(s) 8141A. The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 680-162464 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted

Note - MS/MSD cmpd Naled was not mentioned in the narrative - 0% R

General Chemistry
No analytical or quality issues were noted

Organic Prep
No analytical or quality issues were noted

Jacqueline Cleveland

From: Cathy Dover [cdover@compuchemlabs.com]
Sent: Friday, July 23, 2010 4:35 PM
To: cleve137@charter.net
Cc: dataqual@charter.net; Anita.Dodson@CH2M.com; Gwen.Buckley@CH2M.com; Rebekha.Shaw@CH2M.com
Subject: FW: CTO-81 Lejeune
Attachments: CLJ55553-2.pdf; CLJ22223-3.pdf

Importance: High

Here are the QC revised forms from Abbie @ Test America.

Let me know if you need anything else

Have a great weekend!

Cathy

Cathy Dover
Supervisor of Project Management
Compuchem
501 Madison Ave.
Cary, N.C. 27513
(919)379-4089 office
(919)379-4050 fax

From: Yant, Abbie [mailto:Abbie.Yant@testamericainc.com]
Sent: Friday, July 23, 2010 5:30 PM
To: Cathy Dover
Subject: RE: CTO-81 Lejeune
Importance: High

Cathy – sorry it's after 5pm.

REV forms provided – now posted to TotalAccess

Thanks
Abbie

From: Cathy Dover [mailto:cdover@compuchemlabs.com]
Sent: Friday, July 23, 2010 2:30 PM
To: Yant, Abbie
Subject: FW: CTO-81 Lejeune
Importance: High

Hi Abbie,

Sorry! Here is another data inquiry for CLJ55553-2 & -3.

I know it is late in the day, but is this something that maybe can be done today?

See e-mail below.

Thanks,

Cathy

Cathy Dover
Supervisor of Project Management
Compuchem
501 Madison Ave.
Cary, N.C. 27513
(919)379-4089 office
(919)379-4050 fax

From: Jacqueline Cleveland [mailto:cleve137@charter.net]
Sent: Friday, July 23, 2010 2:25 PM
To: Cathy Dover
Cc: 'DataQual'; Rebekha.Shaw@CH2M.com; Gwen.Buckley@CH2M.com; Anita.Dodson@CH2M.com
Subject: CTO-81 Lejeune
Importance: High

Hi Cathy,

I have another issue with the OPP data. In Savannah SDGs CLJ55553-2 & CLJ55553-3 there are several compounds missing from the summary forms for the LCSs and the MS/MSDs. The missing compounds include the compounds demeton-s and demeton-o. The forms need to be resubmitted as soon as possible! Thanks so much for your help!

Jackie

Jacqueline Cleveland
Vice-President
DataQual, ES, LLC
636-352-9391
cleve137@charter.net

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FORM VII

[illegible] CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah

Job No.: [illegible]

SDG No.: CLJ55553-3

Lab Sample ID: CCV [illegible]

Calibration Date: [illegible]

Instrument ID: [illegible]

Date Start Date: [illegible]

GC Column: [illegible]

Date End Date: [illegible]

Lab File ID: [illegible]

Time: [illegible]

ANALYTE	STDDEV (%)	AVG RRF	RRF	MIN RRF	CALC AMOUNT	STDD AMOUNT	%	MAX %	
Dichlorvos									NQ
Mevinphos									
Demeton									
Ethoprop									
Naled									
Phorate									
Demeton-S									
Diazinon									
Disulfoton									
Methyl parathion									
Ronnel									
Chlorpyrifos									
Tricholoronate									
Fenthion									
Stirophos									
Tokuthion									
Fensulfothion									
Bolstar									
Azinphos-methyl									
Coumaphos									
Merphos									

No Quals - all due to ↑ in response - Not

FORM VII

GC/SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: [illegible] Lab No.: [illegible]

SDG No.: [illegible]

Lab Sample ID: [illegible] Calibration Date: [illegible]

Instrument ID: [illegible] Calib Start Date: [illegible]

GC Column: [illegible] ID: [illegible] mm Calib End Date: [illegible]

Lab File ID: [illegible] Init. Calib: [illegible]

ANALYTE	RRF	AVE RRF	RRF	MIN RRF	CALC AMOUNT	STDD AMOUNT	%D	MAX %D	
Thiamin	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]		
Sulfanil	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	NQ
Mirex	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]		
Dimethoate	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	
Malathion	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	NQ
Ethyl Parathion	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	
Famphur	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	NQ
EPN	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	
Triphenylphosphate	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	NQ

No Quals - all due to 4 in response - not

FORM VII 8141B

SAMPLE CALCULATION

Sample ID: IR69-SB02-08-10-10A-MS
Standard ID: ICAL curve3/9-10/10
Compound: Tokuthion
Concnetration: 127 ug/Kg

	Water (ug/L)	Soil (ug/Kg)
Area of Compound		1605821
Calibration Factor of Compound		5021742
Dilution Factor	1	1
Weight/Volume of Sample		15.26
Final Volume extract		5
% Moisture	NA	0.823
conversion factor	1	1000
Concentration	#DIV/0!	127.31

Initial Calibration Date: 3-10-2010

RRF and %RSD Calculations:

Compound Name: fenthion in level 5

Lab Value: 7423361.0000

Area of Compound	5567521
Conc. of Compound	0.75
Calculated RRF	7423361.3333

Compound Name: fenthion

Lab Value: 6.8

RRF of STD 1	6978440.0000
RRF of STD 2	7724680.0000
RRF of STD 3	7940284.0000
RRF of STD 4	8285030.0000
RRF of STD 3	7423361.0000
RRF of STD 4	8414549.0000
RRF of STD 5	8392507.0000
RRF of STD 6	8421027.0000
Calculated % RSD	6.76

Continuing Calibration File ID: oc09058.d

RRF and %D Calculations:

Compound Name: dichloros

Lab Value: 9884828.00000

Area of compound	4942414
Conc. Of compound	0.5
Calculated CF	9884828.00000

Compound Name: dichloros

Lab Value: 19.3

Avg. CF from ICAL	8286343.00000
CF of CCV	9884828.00000
Calculated % D	-19.3

FORM III
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55553-3

SDG No.: CLJ55553-3

Matrix: Solid Level: Low Lab File ID: oc09035.d

Lab ID: LCS 680-162464/8-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Azinphos-methyl	133	56.8	43	30-130	
Bolstar	133	116	87	30-130	
Chlorpyrifos	133	99.6	75	30-130	
Coumaphos	133	82.0	61	30-130	
Demeton-O	133	306	229	30-130	Q
Demeton-S	133	83 J	22	30-130	Q
Diazinon	133	91.2	68	30-146	
Dichlorvos	133	104	78	30-130	
Disulfoton	133	91.5	69	30-130	
Ethoprop	133	96.4	72	30-130	
Fensulfothion	133	170 U	46	30-130	
Fenthion	133	94.2	71	30-130	
Merphos	133	130	98	30-130	
Methyl parathion	133	73.6	55	18-124	
Mevinphos	133	54.9 J	41	30-130	
Naled	133	170 U	61	30-130	
Phorate	133	74.6	56	30-130	
Ronnel	133	91.3	69	28-141	
Stirophos	133	87.3	65	30-130	
Tokuthion	133	95.7	72	30-130	
Trichloronate	133	89.7	67	30-130	

NQ
J7WJ

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55553-3

SDG No.: CLJ55553-3

Matrix: Solid Level: Low Lab File ID: oc09036.d

Lab ID: LCS 680-162464/13-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Dimethoate	133	91.0	68	30-130	
EPN	133	128	96	30-130	
Ethyl Parathion	133	127	95	35-134	
Famphur	133	116	87	30-130	
Malathion	133	124	93	30-130	
Monochrotophos	1330	350	26	30-130	Q
Sulfotepp	133	123	92	30-130	
Thionazin	133	112	84	31-118	

JMJ

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55553-3

SDG No.: CLJ55553-3

Matrix: Solid Level: Low Lab File ID: oc09043.d

Lab ID: 680-55553-9 MS Client ID: IR69-SB02-08-10-10A MS

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC LIMITS REC	#
Azinphos-methyl	159	39 U	110	69	30-130	
Bolstar	159	39 U	136	86	30-130	
Chlorpyrifos	159	39 U	136	85	30-130	
Coumaphos	159	39 U	139	87	30-130	
Demeton-O	159	99 U	463	291	30-130	J
Demeton-S	159	99 U	99 U	0	30-130	J
Diazinon	159	39 U	107	68	30-146	
Dichlorvos	159	80 U	155	97	30-130	
Disulfoton	159	80 U	121	76	30-130	
Ethoprop	159	20 U	128	80	30-130	
Fensulfothion	159	200 U	149 J	93	30-130	
Fenthion	159	39 U	138	87	30-130	~~M~~
Merphos	159	59 U	166	104	30-130	
Methyl parathion	159	20 U	119	75	18-124	
Mevinphos	159	80 U	87.5	55	30-130	
Naled	159	200 U	200 U	0	30-130	J
Phorate	159	39 U	96.9	61	30-130	
Ronnel	159	39 U	127	80	28-141	
Stirophos	159	39 U	130	82	30-130	
Tokuthion	159	39 U	127	80	30-130	
Trichloronate	159	39 U	111	70	30-130	~~M~~

No + NQ
JTR

JTR

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55553-3

SDG No.: CLJ55553-3

Matrix: Solid Level: Low Lab File ID: oc09045.d

Lab ID: 680-55553-9 MS Client ID: IR69-SB02-08-10-10A MS

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC LIMITS REC	#
Dimethoate	158	80 U	50.6 J	32	30-130	
EPN	158	39 U	127	81	30-130	
Ethyl Parathion	158	39 U	135	86	35-134	
Famphur	158	80 U	102	65	30-130	
Malathion	158	39 U	131	83	30-130	
Monochrotophos	1580	390 U	390 U	0	30-130	J
Sulfotepp	158	20 U	130	83	30-130	
Thionazin	158	39 U	126	80	31-118	

J/R

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55553-3

SDG No.: CLJ55553-3

Matrix: Solid Level: Low Lab File ID: oc09044.d

Lab ID: 680-55553-9 MSD Client ID: IR69-SB02-08-10-10A MSD

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Azinphos-methyl	158	125	80	13	50	30-130	
Bolstar	158	155	98	13	50	30-130	
Chlorpyrifos	158	147	93	8	50	30-130	
Coumaphos	158	156	99	12	50	30-130	
Demeton-O	158	532	336	14	50	30-130	J
Demeton-S	158	98 U	0	NC	50	30-130	J
Diazinon	158	112	71	5	50	30-146	
Dichlorvos	158	175	111	13	50	30-130	
Disulfoton	158	138	88	13	50	30-130	
Ethoprop	158	141	90	10	50	30-130	
Fensulfothion	158	161 J	102	8	50	30-130	
Fenthion	158	140	89	2	50	30-130	
Merphos	158	181	115	8	50	30-130	
Methyl parathion	158	129	82	8	50	18-124	
Mevinphos	158	95.2	60	8	50	30-130	
Naled	158	200 U	0	NC	50	30-130	J
Phorate	158	113	72	16	50	30-130	
Ronnel	158	142	90	11	50	28-141	
Stirophos	158	141	89	8	50	30-130	
Tokuthion	158	144	92	13	50	30-130	
Trichloronate	158	125	79	11	50	30-130	

No+ N
J/R

J/R

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55553-3

SDG No.: CLJ55553-3

Matrix: Solid Level: Low Lab File ID: oc09046.d

Lab ID: 680-55553-9 MSD Client ID: IR69-SB02-08-10-10A MSD

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Dimethoate	158	84.8	54	51	50	30-130	J
EPN	158	151	96	17	50	30-130	
Ethyl Parathion	158	149	95	10	50	35-134	
Famphur	158	138	88	31	50	30-130	
Malathion	158	144	92	10	50	30-130	
Monochrotophos	1580	390 U	0	NC	50	30-130	J
Sulfotepp	158	143	91	9	50	30-130	
Thionazin	158	135	86	8	50	31-118	

NQ

J/R

Column to be used to flag recovery and RPD values

FORM III 8141A

This SDG contains select metals analysis using SW-846 6010B 7470A 7471A.

HOLDING TIMES

Sampling Date: 2 28
Received Date: 3 4 Cooler temps: OK
Prep. Dates: 3 11 ICP, 3 11 Hg
Analysis Dates: 3 16 ICP, 3 12 Hg
All holding time requirements were met.

CALIBRATIONS

All initial calibration criteria were met. Single point calibration was analyzed for ICP. Calibration verification criteria were met for all ICV and CCV standards. The RL standards were analyzed and met method (+ - 30%) or DV (50-150 for Sb, Pb & Tl) criteria for all analytes with the exception of Ni-67%. The reported non-detect result for Ni was qualified as estimated UJ. Interference check standards were analyzed and met criteria in all standards. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if an analyte is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying the criteria.
- Apply the same data validation guidelines to any associated calibration, preparation, and field QC blanks and all associated samples.
- Qualification Action codes:
  - No Action - The sample result is greater than the CRDL and greater than ten times (10X) the blank value.
  - U - The sample result is greater than or equal to the MDL but less than or equal to the RL, result is reported as non-detect at the RL.
  - R or J. The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator.

Blank Contamination and Qualification Summaries

Blank ID	Analyte	Concentration	Action Level	Q Flag	Q Code
PBS	barium	0.021B mg Kg	RL	U	MBL
	calcium	3.695B mg Kg	RL	U	MBL
	sodium	17.499B mg Kg	RL	U	MBL
ICB	magnesium	35.9B ug L	RL	U	MBL

The concentration noted for the CCBs is the highest concentration in all the CCBs. However, when qualifying samples for CCB contamination, associated samples are those just prior to or just following a CCB. Therefore, not all analytes in all samples are flagged for noted CCB contamination. See worksheets for associations. Samples are qualified for field QC blank contamination based on QC tracking provided by CH2M HILL. Negative contamination in a prep blank or CCB, if less than the analyte CRDL is qualified based on professional judgment.

Please note that based on the National Functional Guidelines, for contamination above the CRDL, results in the field samples that are greater than the RL up to 10X the blank contamination level should be qualified as estimated and considered biased high or they should be rejected. Associated samples and required qualifications are noted in the following table.

Sample ID	Analyte	Q Flag	Q Code
IR69-SB02-08-10-10A	barium calcium sodium	U at RL	MBL
IR69-SB02-08-10-10A	magnesium	U at RL	MBL

MATRIX SPIKE/DUPLICATE SUMMARY

Spike recoveries were acceptable in the MS and MSD except for antimony in both the MS & MSD and selenium in the MSD. Antimony was qualified as estimated J UJ in the field sample. Selenium did not require qualification. All RPDs were OK.. All LCS recoveries and RPDs were acceptable.

SERIAL DILUTIONS

The serial dilution results were OK with the exception of barium (16.0%). Positive and non-detect results for Ba in the field sample are qualified as estimated J UJ.

SAMPLE CALCULATION

EPA SAMPLE ID: IR69-SB02-08-10-10A
ANALYTE: arsenic
CONCENTRATION: 2.8 mg Kg
%Solids 83.1
Prep Info - 1g to 100ml

Raw Data result: 22.88263 ug L

22.88263 ug L *0.10L 1g * 1 0.831 2.753626ug g * 1000g Kg * 1mg 1000ug 2.75 mg Kg

FIELD DUPLICATE SAMPLE SUMMARY

Note: Field duplicate results are assessed only if both results are above the CRDL.

Sample ID: None **Duplicate Sample ID:** None

Analyte	Sample Conc.	Duplicate Conc.	RPD
aluminum			#DIV/0!
barium			#DIV/0!
calcium			#DIV/0!
chromium			#DIV/0!
iorn			#DIV/0!
lead			#DIV/0!
magnesium			#DIV/0!
manganese			#DIV/0!
nickel			#DIV/0!
zinc			#DIV/0!

Comments:

SAMPLE RESULT VERIFICATION

Specific Comments:

All sample results were reported within the calibration linear range of the instruments. Detection limits were acceptable. Raw data was verified. Positive results reported at concentrations between the IDL and the RL were qualified as estimated J by the laboratory. All field sample and QC blank IDs were missing either the first 4 or the last four characters. The characters (-10A) were added for the field sample.

Reviewer JACleveland **Date:** 72410

CompuChem
a Division of Liberty Analytical Corp.
501 Madison Avenue
Cary, NC 27513

SDG NARRATIVE
SDG # 1003031

The indicated Sample Delivery Group (SDG) consisting of one (1) solid sample was received into the laboratory information management system (LIMS) on March 4, 2010 intact and in good condition with Chain of Custody (COC) Records in order, unless otherwise noted in any attachments or Quality Assurance Notices. The temperature of the sample upon receipt was 0.7°C. Sample ID's reported in this data package are noted by the receiving department on the COC if they differ from those listed by the samplers on the COC.

The sample was prepared and analyzed in accordance with SW846 methodology for the requested TAL metals and mercury.

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (ICV & CCV) and blanks (ICB & CCB) associated with this data were confirmed to be within allowable limits.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verification (PBS & LCSS) was found to be within acceptable ranges and field sample was prepared and analyzed within the specified holding times.

MATRIX RELATED QUALITY CONTROL:

The sample matrix spikes, CCN = 1003031-01 ID IR69-SB02-08-10S and IR69-SB02-08-10SD were inside control limits for the requested analytes except antimony and selenium. ✓

The sample matrix duplicate, CCN = 1003031-01 ID IR69-SB02-08-10D was inside control limits for the requested analytes.

CLP control limits for duplicate determinations are +/- 20% Relative Percent Difference (RPD) for concentrations greater than or equal to five times the CRDL in both the original and duplicate samples, and +/- the CRDL for concentrations less than five times the CRDL. The RPD is not calculated if both the original and duplicate values fall below the IDL.

A five-fold serial dilution of sample, CCN = 1003031-01 ID IR69-SB02-08-10L was performed in accordance with requirements for ICP and mercury analysis.

The adjusted sample concentration was inside control limits for the requested analytes except barium. ✓

Control limits for serial dilution are defined as a deviation less than or equal to 10% in the dilution adjusted concentrations from the original values for all analyte concentrations greater than fifty (50) times their respective Instrument Detection Limit (IDL) in the original sample.

The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice.

Kristi Chase for Susan Bass

Susan W. Bass
Senior Chemist
March 17, 2010

SW846 - METALS

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: COMPUCHEM Contract: _____

Lab Code: LIBRTY Case No.: _____ SAS No.: _____ SDG No.: 1003031

AA CRDL Standard Source: HP0916320

ICP CRDL Standard Source: HP0916320

Concentration Units: ug/L

Analyte	True	Found	%R	CRDL Standard for ICP Initial True	Initial Found	Initial %R	Final Found	Final %R
Antimony				10.0	10.94	109.4		
Arsenic				10.0	10.58	105.8		
Barium				200.0	170.67	85.3		
Beryllium				5.0	5.55	111.0		
Cadmium				5.0	4.87	97.4		
Chromium				10.0	8.75	87.5		
Cobalt				5.0	4.13	82.6		
Copper				5.0	4.51	90.2		
Lead				3.0	2.83	94.3		
Manganese				10.0	9.83	98.3		
Mercury	0.2	0.22	110.0					
Nickel				5.0	3.35	67.0		
Selenium				5.0	5.25	105.0		
Silver				5.0	4.93	98.6		
Thallium				10.0	12.34	123.4		
Vanadium				20.0	20.50	102.5		
Zinc				20.0	20.25	101.2		

JTUT up to 2x PL

Control Limits: no limits have been established by EPA at this time

SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum	48.4	B	200.0	U	200.0	U	200.0	U	20.000	U	P
Antimony	10.0	U	10.0	U	10.0	U	10.0	U	1.000	U	P
Arsenic	10.0	U	10.0	U	10.0	U	10.0	U	1.000	U	P
Barium	200.0	U	200.0	U	200.0	U	200.0	U	0.021	B	P
Beryllium	5.0	U	5.0	U	5.0	U	5.0	U	0.500	U	P
Cadmium	5.0	U	5.0	U	5.0	U	5.0	U	-0.057	B	P
Calcium	35.0	B	5000.0	U	5000.0	U	5000.0	U	3.695	B	P
Chromium	10.0	U	10.0	U	10.0	U	10.0	U	1.000	U	P
Cobalt	5.0	U	5.0	U	5.0	U	5.0	U	0.500	U	P
Copper	5.0	U	5.0	U	5.0	U	5.0	U	0.234	B	P
Iron	100.0	U	100.0	U	100.0	U	100.0	U	10.000	U	P
Lead	3.0	U	3.0	U	3.0	U	3.0	U	0.300	U	P
Magnesium	35.9	B	5000.0	U	5000.0	U	5000.0	U	500.000	U	P
Manganese	10.0	U	10.0	U	10.0	U	10.0	U	1.000	U	P
Mercury	0.200	U	0.200	U	0.200	U	0.200	U	0.033	U	CV
Nickel	40.0	U	40.0	U	40.0	U	40.0	U	4.000	U	P
Potassium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	500.000	U	P
Selenium	5.0	U	5.0	U	5.0	U	5.0	U	0.500	U	P
Silver	5.0	U	5.0	U	5.0	U	5.0	U	0.500	U	P
Sodium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	17.499	B	P
Thallium	10.0	U	10.0	U	10.0	U	10.0	U	1.000	U	P
Vanadium	20.0	U	20.0	U	20.0	U	20.0	U	2.000	U	P
Zinc	20.0	U	20.0	U	20.0	U	20.0	U	0.496	B	P

SB02-08-10

✓ flag as noted in report

SW846 - METALS

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

IR69-SB02-08-10S

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 83.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Antimony	75 - 125	33.5331		1.1848	B	60.17	53.8	N	P
Arsenic	75 - 125	7.2680		2.7536		4.81	93.9		P
Barium	75 - 125	264.0414		4.0691	B	240.67	108.0		P
Beryllium	75 - 125	5.8826		0.0975	B	6.02	96.1		P
Cadmium	75 - 125	5.6371		0.6017	U	6.02	93.6		P
Chromium	75 - 125	34.3456		8.6985		24.07	106.6		P
Cobalt	75 - 125	57.2204		0.6017	U	60.17	95.1		P
Copper	75 - 125	31.4549		1.0344		30.08	101.1		P
Lead	75 - 125	6.0318		3.4410		2.41	107.5		P
Manganese	75 - 125	61.7228		3.9379		60.17	96.0		P
Mercury	75 - 125	0.2106		0.0401	U	0.20	105.3		CV
Nickel	75 - 125	58.8279		0.4678	B	60.17	97.0		P
Selenium	75 - 125	1.2920		0.3425	B	1.20	79.1		P
Silver	75 - 125	5.7940		0.6017	U	6.02	96.2		P
Thallium	75 - 125	5.6198		1.2034	U	6.02	93.4		P
Vanadium	75 - 125	75.6920		13.1336		60.17	104.0		P
Zinc	75 - 125	61.6303		4.2982		60.17	95.3		P

J/UJ

Comments:

SW846 - METALS

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

IR69-SB02-08-10SD

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 83.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Antimony	75 - 125	32.2871		1.1848	B	60.17	51.7	N	P
Arsenic	75 - 125	6.8964		2.7536		4.81	86.1		P
Barium	75 - 125	264.0327		4.0691	B	240.67	108.0		P
Beryllium	75 - 125	5.8986		0.0975	B	6.02	96.4		P
Cadmium	75 - 125	5.6530		0.6017	U	6.02	93.9		P
Chromium	75 - 125	34.5459		8.6985		24.07	107.4		P
Cobalt	75 - 125	57.6543		0.6017	U	60.17	95.8		P
Copper	75 - 125	31.2361		1.0344		30.08	100.4		P
Lead	75 - 125	6.0334		3.4410		2.41	107.6		P
Manganese	75 - 125	62.5672		3.9379		60.17	97.4		P
Mercury	75 - 125	0.2046		0.0401	U	0.20	102.3		CV
Nickel	75 - 125	58.8939		0.4678	B	60.17	97.1		P
Selenium	75 - 125	1.0319		0.3425	B	1.20	57.4	N	P
Silver	75 - 125	5.7278		0.6017	U	6.02	95.1		P
Thallium	75 - 125	5.2301		1.2034	U	6.02	86.9		P
Vanadium	75 - 125	75.9535		13.1336		60.17	104.4		P
Zinc	75 - 125	61.1832		4.2982		60.17	94.5		P

JWJ

NQ

Comments:

SW846 - METALS

5B

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

IR69-SB02-08-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Antimony		125.60		9.85	B	120.0	96.5		P
Selenium		10.24		2.85	B	10.0	73.9		P

Comments:

SW846 - METALS

9
ICP SERIAL DILUTIONS

SAMPLE NO.

IR69-SB02-08-10L

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	34103.12		34114.20		0.0		P
Antimony	9.85	B	50.00	U	100.0		P
Arsenic	22.88		50.00	U	100.0		P
Barium	33.81	B	28.41	B	16.0	E	P
Beryllium	0.81	B	25.00	U	100.0		P
Cadmium	5.00	U	25.00	U			P
Calcium	323.76	B	236.60	B	26.9		P
Chromium	72.28		64.70		10.5		P
Cobalt	5.00	U	25.00	U			P
Copper	8.60		25.00	U	100.0		P
Iron	47078.94		47009.91		0.1		P
Lead	28.59		29.09		1.7		P
Magnesium	1287.43	B	1283.97	B	0.3		P
Manganese	32.72		31.33	B	4.2		P
Mercury	0.20	U	1.00	U			CV
Nickel	3.89	B	200.00	U	100.0		P
Potassium	2178.32	B	2035.66	B	6.5		P
Selenium	2.85	B	25.00	U	100.0		P
Silver	5.00	U	25.00	U			P
Sodium	450.85	B	25000.00	U	100.0		P
Thallium	10.00	U	50.00	U			P
Vanadium	109.14		107.22		1.8		P
Zinc	35.72		38.65	B	8.2		P

J/UJ

MS	Analyte	Samples Affected	%R	Q Flag	Q Code
IR69-SB02-08-10-10A	antimony	IR69-SB02-08-10-10A	53.8/51.7	J/UJ	MSL

Serial Dilution

Metals

The serial dilution analysis exhibited a non-compliant %D for one analyte. Specific action is noted in the following table.

SD	Analyte	Samples Affected	%D	Q Flag	Q Code
IR69-SB02-08-10-10A	barium	IR69-SB02-08-10-10A	16	J/UJ	SD

Identification/Quantitation

SVOA

All SVOA compounds that were also analyzed by SVOA-SIM were excluded due to redundant analysis, qualifier code: RE.

Pesticides/PCBs

The RE of sample IR69-SB02-08-10-10A was excluded in favor of the results reported from the original analysis of the sample, qualifier code RE.

All positive results reported with a P flag to indicate column quantitation %Ds greater than 40% are qualified as estimated J with a qualifier code of 2C.

Metals

All mercury results reported between the IDL and the RL (B flagged by laboratory) were qualified as estimated J. No qualification code was required.

A summary of qualifications required is provided on the following page. Please do not hesitate to contact DataQual ES with any questions regarding this validation report.

Sincerely,

Laura Maschhoff

Laura Maschhoff
President

Jacqueline Cleveland

Jacqueline Cleveland
Vice-President

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SB02-08-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031 WW 072010

Matrix: (soil/water) SOIL Lab Sample ID: 1003031-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003031-01A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: 17 decanted: (Y/N) N Date Extracted: 03/09/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	200	U
108-95-2	Phenol	400	U
111-44-4	Bis(2-chloroethyl)ether	200	U
95-57-8	2-Chlorophenol	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	200	U
98-86-2	Acetophenone	200	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-di-N-propylamine	200	U
67-72-1	Hexachloroethane	200	U
98-95-3	Nitrobenzene	200	U
78-59-1	Isophorone	200	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	Bis(2-chloroethoxy)methane	200	U
120-83-2	2,4-Dichlorophenol	400	U
91-20-3	Naphthalene	200	~~U~~ exclude RE
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	200	U
105-60-2	Caprolactam	200	~~U~~ UJ CCH
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	200	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	200	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	400	U
92-52-4	1,1'-Biphenyl	200	U
91-58-7	2-Chloronaphthalene	200	U
88-74-4	2-Nitroaniline	400	U
131-11-3	Dimethylphthalate	200	U
606-20-2	2,6-Dinitrotoluene	200	U
208-96-8	Acenaphthylene	200	~~U~~ exclude RE
99-09-2	3-Nitroaniline	400	U
83-32-9	Acenaphthene	200	~~U~~ exclude RE

WW 081210

WW 072010

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SB02-08-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003031 WM 072010

Matrix: (soil/water) SOIL Lab Sample ID: 1003031-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003031-01A70

Level: (low/med) LOW Date Received: 03/04/10

% Moisture: 17 decanted: (Y/N) N Date Extracted: 03/09/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/19/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	400	U
100-02-7	4-Nitrophenol	400	U
121-14-2	2,4-Dinitrotoluene	200	U
132-64-9	Dibenzofuran	200	U
84-66-2	Diethylphthalate	200	U
7005-72-3	4-Chlorophenyl-phenylether	200	U
86-73-7	Fluorene	200	~~U~~ exclude RE
100-01-6	4-Nitroaniline	400	U
534-52-1	4,6-Dinitro-2-methylphenol	400	U
86-30-6	N-Nitrosodiphenylamine (1)	200	U
101-55-3	4-Bromophenyl-phenylether	200	U
118-74-1	Hexachlorobenzene	200	U
1912-24-9	Atrazine	200	U
87-86-5	Pentachlorophenol	400	U
85-01-8	Phenanthrene	200	~~U~~ exclude RE
120-12-7	Anthracene	200	~~U~~ exclude RE
86-74-8	Carbazole	200	U
84-74-2	Di-n-butylphthalate	200	U
206-44-0	Fluoranthene	200	~~U~~ exclude RE
129-00-0	Pyrene	200	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	200	U
91-94-1	3,3'-Dichlorobenzidine	200	U
117-81-7	bis(2-ethylhexyl)Phthalate	200	U
56-55-3	Benzo(a)anthracene	200	~~U~~ exclude RE
218-01-9	Chrysene	200	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	200	U
205-99-2	Benzo(b)fluoranthene	200	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	200	U
50-32-8	Benzo(a)pyrene	200	U
193-39-5	Indeno(1,2,3-cd)pyrene	200	U
53-70-3	Dibenzo(a,h)anthracene	200	U
191-24-2	Benzo(g,h,i)perylene	200	U

(1) - Cannot be separated from Diphenylamine

WM 081210

WM 072010

DataQual

Environmental Services, LLC

CH2M HILL
5700 Cleveland Street
Suite 101
Virginia Beach, VA 23462

July 29, 2010
CompuChem
SDG# 1003032

MCB Camp Lejeune, CTO-81 – Site 69

Dear Ms. Buckley,

The following Data Validation report is provided as requested for the parameters noted in the table below for SDG # 1003032. The data validation was performed in accordance with the SW846 Methods 6010B/7470A for dissolved metals and mercury and good professional judgment. Also used in the validation of these samples were the National Functional Guidelines for Inorganic Data Review (October, 2004), as applicable. All areas of concern are discussed in the body of the report and a summary of data qualifications is provided.

Sample ID	Lab ID	Matrix	D Metals
IR69-EB01-022710-GW	1003032-02	water	X
IR69-EB01-030110-GW	1003032-06	water	X
IR69-GW09-10A	1003032-03	water	X
IR69-GW11-10A	1003032-04	water	X
IR69-GW12-10A	1003032-01	water	X
IR69-GW13-10A	1003032-05	water	X

The following quality control samples were provided with this SDG: samples IR69-EB01-022710-GW and IR69-EB01-030110-GW.

The samples were evaluated based on the following criteria:

- Data Completeness *
- Technical Holding Times *
- Initial/Continuing Calibrations *
- CRI Standards *
- Interference Check Sample *
- Blanks
- Laboratory Control Samples *
- Matrix Spike Recoveries NA
- Matrix Duplicate RPDs NA
- Post Digestion Spike Recoveries *
- Serial Dilutions

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- Field Duplicates NA
- Identification/Quantitation
- Reporting Limits *

* - indicates that no qualifications were required based on this criteria

Overall Evaluation of Data/Potential Usability Issues

A summary of qualifications applied to the sample results are noted below for the fractions validated. Specific details regarding qualification of the data are addressed in the Specific Evaluation section of this narrative. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte the validator has chosen the qualifier that best indicates possible bias in the results and flagged the data accordingly. However, information regarding all quality control issues is provided in the body of the report and on the qualification summary page. Please note that when a compound or analyte is flagged due to blank contamination the BL qualifier code takes precedence over all other qualifier codes except a code that explains rejected data.

Dissolved Metals

Qualifications were required in the samples due to laboratory and field blank contamination.

One analyte required qualification in the samples due to non-compliant serial dilution %Ds.

All results reported between the MDL and the RL (B flagged by the laboratory) were qualified as estimated J.

Specific Evaluation of Data

Data Completeness

The dissolved metals fraction required resubmission due to unexplained RE samples. Please note: All field sample and QC blank IDs were missing the first four (IR69) and/or the last four (-10A) characters. The characters were added to the Form 1s in the DV reports by the data validator.

Technical Holding Times

According to chain of custody records, sampling was performed on 2/27/10 - 3/1/10 and samples were received at the laboratory 3/04-5/10. All sample preparation and analysis was performed within method holding time requirements.

Blanks

Dissolved Metals

Contamination was noted in associated blanks and qualification was required in the associated samples. Required action is noted in the following tables.

Blank ID	Analyte	Concentration	Action Level	Q Flag	Q Code
PBW	beryllium	0.255B ug/L	RL	U	MBL
	iron	30.6B ug/L	RL	U	MBL
	zinc	0.555B ug/L	RL	U	MBL
ICB	vanadium	0.9B ug/L	RL	U	MBL
	magnesium	10.3B ug/L	RL	U	MBL
CCB	cobalt	0.9B ug/L	RL	U	MBL
IR69-EB01-022710-GW	chromium	1.1B ug/L	RL	U	EBL
	lead	2.0B ug/L	RL	U	EBL
IR69-EB01-030110-GW	calcium	158B ug/L	RL	U	EBL

Associated samples and required qualifications are noted in the following table.

Sample ID	Analyte	Q Flag	Q Code
IR69-GW11-10A, IR69-GW12-10A	beryllium	U at RL	MBL
IR69-GW09-10A	iron	U at RL	MBL
IR69-GW09-10A, IR69-GW11-10A, IR69-GW13-10A	zinc	U at RL	MBL
IR69-GW12-10A, IR69-GW13-10A	vanadium	U at RL	MBL
all field samples	magnesium	U at RL	MBL
IR69-GW09-10A, IR69-GW11-10A, IR69-GW12-10A	cobalt	U at RL	MBL
IR69-GW12-10A	chromium	U at RL	EBL
IR69-GW12-10A	lead	U at RL	EBL
IR69-GW09-10A, IR69-GW11-10A, IR69-GW13-10A	calcium	U at RL	EBL

Serial Dilution

Dissolved Metals

The serial dilution analysis exhibited a non-compliant %D for one analyte. Specific action is noted in the following table.

SD	Analyte	Samples Affected	%D	Q Flag	Q Code
IR69-GW12-10A	manganese	all field samples	37.1	J/UJ	SD

Identification/Quantitation

Dissolved Metals

All results reported between the IDL and the RL (B flagged by laboratory) were qualified as estimated J. No qualification code was required.

A summary of qualifications required is provided on the following page. Please do not hesitate to contact DataQual ES with any questions regarding this validation report.

Sincerely,

Jacqueline Cleveland

Jacqueline Cleveland
Vice-President

Summary of Data Qualifications

Dissolved Metals

Sample ID	Analyte	Results	Q-Flag	Q Code
IR69-GW11-10A, IR69-GW12-10A	beryllium	+B	U at RL	MBL
IR69-GW09-10A	iron	+B	U at RL	MBL
IR69-GW09-10A, IR69-GW11-10A, IR69-GW13-10A	zinc	+B	U at RL	MBL
IR69-GW12-10A, IR69-GW13-10A	vanadium	+B	U at RL	MBL
all field samples	magnesium	+B	U at RL	MBL
IR69-GW09-10A, IR69-GW11-10A, IR69-GW12-10A	cobalt	+B	U at RL	MBL
IR69-GW12-10A	chromium	+B	U at RL	EBL
IR69-GW12-10A	lead	+B	U at RL	EBL
IR69-GW09-10A, IR69-GW11-10A, IR69-GW13-10A	calcium	+B	U at RL	EBL
all field samples	manganese	+/-	J/UJ	SD
all samples	all analytes	+B	J	

Glossary of Qualification Flags and Abbreviations

Qualification Flags (Q-Flags)

U	not detected above the reported sample quantitation limit
J	estimated value
UJ	reported quantitation limit is qualified as estimated
R	result is rejected; the presence or absence of the analyte cannot be verified
D	result value is based on dilution analysis result
NJ	analyte has been tentatively identified, estimated value
L	analyte present, biased low
UL	not detected, quantitation limit is probably higher
K	analyte present, biased high

Inorganic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 10X the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL and the result is raised to the RL and flagged U.
R or J_+	The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator. (see NFG, Rev. date 10/04, p. 17 for extracted blanks (PB))

Organic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 5X (10X for common laboratory contaminants) the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is raised to the RL and flagged U.
U	The sample result for the blank contaminant is greater than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is flagged U at the reported value.

General Abbreviations

RL / MDL	reporting limit/method detection limit
CRQL	contract required quantitation limit
Q Code	qualifier code
+	positive result
-	non-detect result

QUALIFIER CODE REFERENCE

Qualifier	Description
TN	Tune
BSL	Blank Spike/LCS - High Recovery
BSH	Blank Spike/LCS - Low Recovery
BD	Blank Spike/Blank Spike Duplicate (LCS/LCSD) Precision
BRL	Below Reporting Limit
ISL	Internal Standard - Low Recovery
ISH	Internal Standard - High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate - Low Recovery
MSH	Matrix Spike and/or Matrix Spike Duplicate - High Recovery
MI	Matrix interference obscuring the raw data
MDP	Matrix Spike/Matrix Spike Duplicate Precision
2S	Second Source - Bad reproducibility between tandem detectors
SSL	Spiked Surrogate - Low Recovery
SSH	Spiked Surrogate - High Recovery
SD	Serial Dilution Reproducibility
ICL	Initial Calibration - Low Relative Response Factors (RRF)
ICH	Initial Calibration - High Relative Response Factors (RRF)
ICB	Initial Calibration - Bad Linearity or Curve Function
CCL	Continuing Calibration - Low Recovery or %Difference
CCH	Continuing Calibration - High Recovery or %Difference
LD	Lab Duplicate Reproducibility
HT	Holding Time
PD	Pesticide Degradation
2C	Second Column - Poor Dual Column Reproducibility
LR	Concentration Exceeds Linear Range
BL	Blank Contamination (MBL, EBL, FBL, TBL)
RE	Redundant Result - due to Re-analysis or Re-extraction
DL	Redundant Result - due to Dilution
FD	Field Duplicate
OT	Other - explained in data validation report
%SOL	High moisture content

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW09-10A JAC 7/9/10

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003032

Matrix (soil/water): WATER Lab Sample ID: 1003032-03

Level (low/med): LOW Date Received: 3/5/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200	U		P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	34.1	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	5000 ~~4530~~	~~B~~	U	P	EBL
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0 ~~1.6~~	~~B~~	U	P	MBL
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	100 ~~30.6~~	~~B~~	U	P	MBL
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~1900~~	~~B~~	U	P	MBL
7439-96-5	Manganese	33.7		~~E~~ J	P	SD
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	1.2	~~B~~	J	P	
7440-09-7	Potassium	552	~~B~~	J	P	
7782-49-2	Selenium	5.0	U		P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	13400			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	20 ~~6.3~~	~~B~~	U	P	MBL

JAC 7/23/10

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments: DISSOLVED

SW846 - METALS
-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
IR69-GW11-10A JBC 7/9/10

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003032

Matrix (soil/water): WATER Lab Sample ID: 1003032-04

Level (low/med): LOW Date Received: 3/5/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	773			P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	33.5	~~B~~	J	P	
7440-41-7	Beryllium	5.0 ~~0.46~~	~~B~~	U	P	MBL
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	5000 ~~865~~	~~B~~	U	P	EBL
7440-47-3	Chromium	1.2	~~B~~	J	P	
7440-48-4	Cobalt	5.0 ~~0.91~~	~~B~~	U	P	MBL
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	128			P	
7439-92-1	Lead	3.1			P	
7439-95-4	Magnesium	5000 ~~1340~~	~~B~~	U	P	MBL
7439-96-5	Manganese	4.9	~~B~~	~~E~~ J	P	SD
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	259	~~B~~	J	P	
7782-49-2	Selenium	5.0	U		P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	9780			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	20 ~~5.5~~	~~B~~	U	P	MBL

JBC 7/9/10

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments: DISSOLVED

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW12-10A

JAC 72310

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003032

Matrix (soil/water): WATER Lab Sample ID: 1003032-01

Level (low/med): LOW Date Received: 3/4/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	296			P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	22.5	~~B~~	J	P	
7440-41-7	Beryllium	5.0 ~~0.36~~	~~B~~	U	P	MBL
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	1660	~~B~~	J	P	
7440-47-3	Chromium	10 ~~1.1~~	~~B~~	U	P	EBL
7440-48-4	Cobalt	5.0 ~~0.82~~	~~B~~	U	P	~~EBL~~ MBL
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	4850			P	
7439-92-1	Lead	3.0 ~~2.3~~	~~B~~	U	P	EBL
7439-95-4	Magnesium	5000 ~~1160~~	~~B~~	U	P	MBL
7439-96-5	Manganese	19.2	E	J	P	50
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	312	~~B~~	J	P	
7782-49-2	Selenium	5.0	U		P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	8800			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20 ~~1.2~~	~~B~~	U	P	MBL
7440-66-6	Zinc	80.0			P	

Xlcorr JAC 72310

JAC 72310

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Comments: DISSOLVED

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW13-10A JAC 7/19/10

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003032

Matrix (soil/water): WATER Lab Sample ID: 1003032-05

Level (low/med): LOW Date Received: 3/5/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	413			P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	6.8	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	5000 ~~837~~	~~B~~	U	P	FBL
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	1150			P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~544~~	~~B~~	U	P	MBL
7439-96-5	Manganese	9.5	~~B~~	~~E~~ J	P	SD
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	37.5	~~B~~	J	P	
7782-49-2	Selenium	5.0	U		P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	6780			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20 ~~1.9~~	~~B~~	U	P	MBL
7440-66-6	Zinc	20 ~~2.3~~	~~B~~	U	P	MBL

JAC 7/23/10

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Comments: DISSOLVED

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1859- EB01-022710-GW

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003032

Matrix (soil/water): WATER Lab Sample ID: 1003032-02

Level (low/med): LOW Date Received: 3/4/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	1.1	B	J	P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	41.6	B	J	P
7439-92-1	Lead	2.0	B	J	P
7439-95-4	Magnesium	20.9	B	J	P
7439-96-5	Manganese	0.43	B	E J	P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	4.0	B	J	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	761	B	J	P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	0.74	B	J	P
7440-66-6	Zinc	2.2	B	J	P

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SW846 - METALS
-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1869- EB01-030110-GW

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003032

Matrix (soil/water): WATER Lab Sample ID: 1003032-06

Level (low/med): LOW Date Received: 3/5/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	158	B	J	P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	28.7	B	J	P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	14.9	B	J	P
7439-96-5	Manganese	10.0	U	B	P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	5.0	U		P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	959	B	J	P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	10.2	B	J	P

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Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments: DISSOLVED

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Page 1 of 1

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Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

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Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd. Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Jessica High

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune, Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?
Are aqueous samples field filtered for metals? Y or N: Yes
Are high concentrations expected? Y or N? If yes, which ID(s)?: No

Requested Analysis (include method and bottle type)

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	8260B: VOCs GW: 3-40mL HCl VOAs Soil: 2-4oz Hat/MeOH Vial, 1 2oz jar	RSK 175: MSE 2-40mL HCl VOAs	TOC: 2-40mL H2SO4 VOAs	6010B: TAL METALS GW: 500mL HNO3 poly Soil: 8oz jar	8270C/8270C-SIM: SVOCs/PAHs GW: 2-1L Ambers Soil (8oz jar)	3550B/8081A: OC Pesticides GW: 2-1L Ambers Soil (8oz jar)	8082: PCBs GW: 2-1L Ambers Soil (8oz jar)	CN/NS & AIK: 1-250mL poly, unpres.	Sulfide: 1-500mL ZnAc GW NaOH poly	6010B: DISSOLVED METALS FIELD FILTERED 1-500mL HNO3 poly	pH / Sample Info (Lab Use) TOC	TAL MTL	sulfide	D. MTL
1003024-01 1003082-01	IR69-GW12-10A	2/27/10	1425	GW	1/4/15	2	1	1/1	2	1	6		x	x	x	x	x	x	x	x	x	<2	<2	>9	<2	

2-250mL HNO3
JD 3/4/10

Lab Use Only

Sample Unpacked By: Jennifer Dell
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:
Cyanide samples checked for sulfide & chlorine? Y or N/A
625 & Phenol samples checked for chlorine? Y or N/A
608 samples checked for pH between 5.0-9.0? Y or N/A

Comments

~~Residual Chlorine Present?~~
Yes ___ No ✓

Sample Custody

Relinquished by:	Date/Time: 3/3/10 1400	Received by:	Date/Time: 3/3/10 1400
Relinquished by:	Date/Time: 3/4/10 1020	Received by: Jennifer Dell	Date/Time: 3/4/10 1020
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 1.2 °C

Samples stored 60 days after date report mailed at no extra charge.

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SN0010

21867-A9

Page 1 of 1

CHAIN OF CUSTODY

CompuChem
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501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd. Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Jessica High

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune, Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?
Are aqueous samples field filtered for metals? Y or N: Yes
Are high concentrations expected? Y or N? If yes, which ID(s)? No

Requested Analysis (include method and bottle type)

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MeOH	Other	8260B: VOCs GW: 3-40mL HCl VOAs Soil: 2 NaHSO4, 1 Meat Vial, 1 2oz jar	RSK 175: MSE 2-40mL HCl VOAs	TOC: 2-40mL H2SO4 VOAs	6010B: TAL METALS GW: 500mL HNO3 poly Soil: Soil jar	8270C/8270C-SIM: SVOCs/PAHs GW: 1L Ambers Soil (8oz jar)	3550B/8081A: OC Pesticides GW: 2-1L Ambers Soil (8oz jar)	8082: PCBs GW: 2 1L Ambers Soil (8oz jar)	CNNS & AK: 1-250mL poly, unpres.	Sulfide: 1-500mL ZnAcGW NaOH poly	6010B: DISSOLVED METALS FIELD FILTERED 1-500mL HNO3 poly	pH / Sample Info (Lab Use): TOC	TAL MTL	Sulfide	O. MTL
1003029-01 1003032-02	IR69-EB(022710)-GW	2/27/10	1400	GW	~~14~~ 13	2	1	~~2~~ 3	2	1	6		x	x	x	x	x	x	x	x	x	<2	<2	>9	<2

2-250mL HNO3 JD 3/4/10

Lab Use Only

Sample Unpacked By: Jennifer Dover
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Residual Chlorine Present?
Yes ____ No ✓

Sample Custody

Relinquished by: [illegible]	Date/Time: 3/3/10 1400	Received by: Vera [illegible]	Date/Time: 3/3/10 1400
Relinquished by: Vera [illegible]	Date/Time: 3/4/10 1020	Received by: Jennifer Dover	Date/Time: 3/4/10 1020
Subcontract? Y or N If yes, where?		Custody Seal(s) intact? Y or N	On Ice? Y or N — Cooler Temp: 1.9 °C

Samples stored 60 days after date report mailed at no extra charge.

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Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Nikki Monroe

Project Information

Project Name: CTO-81
Sampling Location: MCB Camlej Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N: "-FF" on ID → for dissolved metals
Are high concentrations expected? Y or N? If yes, which ID(s)?

Residual Chlorine Present? Yes ____ No ✓

Requested Analysis (include method and bottle type)

CompuChem No (Lab Use)	Field ID	Date	Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other none	8270c/8270c-SIM / 2-1L ambers	3550B/8081A / 2-1L ambers	8082 / 2-1L ambers	RSK175 MEE / 2-40ml VOAs HCl	TOC / 2-40ml VOAs H2SO4	CN/S8 AHL / 1-250mL poly none	Sulfide / 1-500mL poly Zn acetate 6N NaOH	6010B/TAL Metals / 1-500mL poly HNO3	DISSOLVED METALS "-FF" / 1-500mL poly HNO3		TOC	Sulfide	Tal Metals	Diss. Metals
1003029-14	IP109-GW09-10A	3/1/10	1035	GW	14	2	1	2	2	0	7	X	X	X	X	X	X	X	X	X		<2	>9	<2	<2
DISS. →	1003032-03																								

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

pH / Sample Info (Lab Use)

Lab Use Only

Sample Unpacked By: K. Manning
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Sample Custody

Relinquished by: [illegible] 3/4/10	Date/Time: 3-4-10 1235	Received by: [illegible]	Date/Time: 3/4/10 1235
Relinquished by: [illegible]	Date/Time: 3/5/10 1400	Received by: K. Manning	Date/Time: 3/5/10 1235
Subcontact? Y or N If yes, where?		Custody Seal(s) intact? Y or N	On Ice? Y or N / Cooler Temp: 01 °C

Samples stored 30 days after date report mailed at no extra charge.

KM 03-[illegible]-10 Client Delivery

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Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: OHEM HILL
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gulen Buckley
Phone #: 757-671-6292
Sampler's Name: Ronny Fields

Project Information

Project Name: CTO-81
Sampling Location: MCB Camp Lej Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N: DISSOLVED METALS FIELD FILTERED: "LFF" on ID
Are high concentrations expected? Y or N? If yes, which ID(s)?

(Residual Chlorine Present?) Yes ____ No ✓

Requested Analysis (include method and bottle type)

CompuChem No (Lab Use)	Field ID	Date	Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MeOH	Other	8270C/8270C-SIM (2-1Lambrs)	3510B/8081A (2-1Lambrs)	8082 (2-1Lambrs)	RSKSOP/MEE (2-40mL VOAs HCl)	TOC (2-40mL VOAs H2SO4)	CN/S & AHL (1-250mL poly none)	Sulfide (1-500mL poly Zn acetate + NaOH)	6010B TAL Metals (1-500mL poly HNO3)	6010B DISSOLVED METALS "LFF" on ID (1-500mL poly field filtered HNO3)		pH / Sample Info (Lab Use): Sulfide	TOC	Diss. Metals	Tal. Metals
1003029-15	IR69-GW11-10A	3/1/10	1035	GW	14	2	1	2	2	0	7	X	X	X	X	X	X	X	X	X		>9	<2	<2	<2
	DISS. → 1003029-04 (3/18/10)																								

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

Lab Use Only

Sample Unpacked By: [signature]
Sample Order Entry By: [signature]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Sample Custody

Relinquished by: [signature]	Date/Time: 3/4/10 1230	Received by: [signature]	Date/Time: 3/4/10 1230
Relinquished by: [signature]	Date/Time: 3/5/10 1400	Received by: [signature]	Date/Time: 3/5/10 1235

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 0.3 °C

Samples stored 60 days after date report mailed at no extra charge.

KM 0510 Client Delivery

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2010

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CompuChem
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Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Courier:
Airbill No.:
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd #304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Nikki Monroe

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N — In field filtered
Dissolved metals ID labeled "-FF"
Are high concentrations expected? Y or N If yes, which ID(s)?

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

Residual Chlorine Present? Yes ____ No ✓

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other None	8260B/8270C-SIM 2-1Lambers	3550B/8081A 2-1Lambers	8082 2-1Lambers	RSK175 MEE 2-40mL VOAs HCl	TOC 2-40mL VOAs H2SO4	CN/SFAIL 1-250mL poly none	Sulfide 1-500mL poly 2mL 6N NaOH	6010B TAL Metals 1-500mL poly HNO3	6010B Dissolved Metals "-FF" on ID-filtered 1-500mL poly HNO3	pH / Sample Info (Lab Use) TOC	Sulfide	Tal Metals	Diss. Metals
1003029-16	JT69-GW13-10A	3/11/10	1445	GW	14	2	1	2	2	0	7										<2	A	<2	<2
	DISS → 1003032-05																							

Lab Use Only

Sample Unpacked By: KL Lanning
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Sample Custody

Relinquished by: [signature] 3/3/10	Date/Time: 3-4-10 1235	Received by: [signature]	Date/Time: 3/4/10 1235
Relinquished by: [signature]	Date/Time: 3/5/10 1400	Received by: KL Lanning	Date/Time: 3/5/10 1235
Subcontract? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 0.2 °C

Samples stored 30 days after date report mailed at no extra charge.

KL 3-5-10 Client Delivery

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CHAIN OF CUSTODY

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Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information	Project Information
Company Name: CH2M HILL	Project Name: CTO-081
Address: 11301 Carmel Commons Blvd Ste 304	Sampling Location: MCB Camlej Site 69
City: Charlotte State: NC Zip: 28226	Turnaround time: Standard
Project Contact: Gwen Buckley	Batch QC or Project Specific? If Specific, which Sample ID? Batch
Phone #: 757-671-6292	Are aqueous samples field filtered for metals? (Y) or N "-FF" for field filtered on dissolved metals
Sampler's Name: Jessica High	Are high concentrations expected? Y or (N) If yes, which ID(s)?

Residual Chlorine Present? Yes ____ No ✓

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	Number of Preserved Bottles: HCl	NaOH	HNO3	H2SO4	MEOH	Other none	8270C/8270C-SIM / 2-1L amber	8330B/8081 / 2-1L amber	8082 / 2-1L amber	PCB/TPH MEE / 2-40mL vials HCl	TOC / 2-40mL vials H2SO4	CNMS BATH / 1-250mL poly none	Sulfide / 1-500mL poly Zn Ac & NaOH	6010B TAL metals / 1-500mL poly HNO3	6010B DISSOLVED METALS "-FF" on ID / 1-500mL poly HNO3	pH / Sample Info (Lab Use): TOC	Sulfide	Diss. Metals	Tot. Metals
1003029-18	IR69-EB(030110)-GW	3/1/10	1400	GW	14	2	1	2	2	0	7	X	X	X	X	X	X	X	X	X	2	2	2	2
	DISS → 1003032-06																							

Lab Use Only

Sample Unpacked By: Jennifer Dove
Sample Order Entry By: [illegible]
Samples Received in Good Condition? (Y) or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or (NA)
625 & Phenol samples checked for chlorine? Y or (NA)
608 samples checked for pH between 5.0-9.0? Y or (NA)

Comments

Sample Custody

Relinquished by: [signature]	Date/Time: 3/5/10 1400	Received by: [signature]	Date/Time: 3/5/10 0930
Relinquished by: [signature]	Date/Time: 3/5/10 1230	Received by: Jennifer Dove	Date/Time: 3/5/10 1235

Subcontact? Y or (N) If yes, where?
Custody Seal(s) intact? (Y) or N
On Ice? (Y) or N
Cooler Temp: 0.3 °C

Samples stored 60 days after date report mailed at no extra charge.

KM 03-05-1 Client Delivery

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Sample ID Cross Reference

LAB WO	Project	Sample #	Field ID	Sample Date	Receive Date	DueDate	Chain of Custody ID
1003032	CTO-081 SITE 69/289017.SA.DM/N624	1003032-01	IR69-GW12	02/27/2010	03/04/2010	03/30/2010	IR69-GW12-10A
1003032	CTO-081 SITE 69/289017.SA.DM/N624	1003032-02	EB01-022710-GW	02/27/2010	03/04/2010	03/30/2010	IR69-EB01-022710-GW
1003032	CTO-081 SITE 69/289017.SA.DM/N624	1003032-03	IR69-GW09	03/01/2010	03/05/2010	03/30/2010	IR69-GW09-10A
1003032	CTO-081 SITE 69/289017.SA.DM/N624	1003032-04	IR69-GW11	03/01/2010	03/05/2010	03/30/2010	IR69-GW11-10A
1003032	CTO-081 SITE 69/289017.SA.DM/N624	1003032-05	IR69-GW13	03/01/2010	03/05/2010	03/30/2010	IR69-GW13-10A
1003032	CTO-081 SITE 69/289017.SA.DM/N624	1003032-06	EB01-030110-GW	03/01/2010	03/05/2010	03/30/2010	IR69-EB01-030110-GW

This SDG contains select metals analysis using SW-846 6010B/7470A/7471A.

HOLDING TIMES

Sampling Date: 2/27, 3/1
Received Date: 3/4, 3/5 Cooler temps: OK
Prep. Dates: 3/9 ICP, 3/26 Hg
Analysis Dates: 3/24 ICP, 3/26 Hg
All holding time requirements were met.

CALIBRATIONS

All initial calibration criteria were met. Single point calibration was analyzed for ICP. Calibration verification criteria were met for all ICV and CCV standards. The RL standards were analyzed and met method criteria for all analytes with the exception of Se which was high- no qualifications were required. Interference check standards were analyzed and met criteria in all standards. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if an analyte is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying the criteria.
- Apply the same data validation guidelines to any associated calibration, preparation, and field QC blanks and all associated samples.
- Qualification/Action codes:
  - No Action - The sample result is greater than the CRDL and greater than ten times (10X) the blank value.
  - U - The sample result is greater than or equal to the MDL but less than or equal to the RL, result is reported as non-detect at the RL.
  - R or J+ The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator.

Blank Contamination and Qualification Summaries

Blank ID	Analyte	Concentration	Action Level	Q Flag	Q Code
PBW	beryllium	0.255B ug/L	RL	U	MBL
	iron	30.6B ug/L	RL	U	MBL
	zinc	0.555B ug/L	RL	U	MBL
ICB	vanadium	0.9B ug/L	RL	U	MBL
	magnesium	10.3B ug/L	RL	U	MBL
CCB	cobalt	0.9B ug/L	RL	U	MBL
IR69-EB01-022710-GW	chromium	1.1B ug/L	RL	U	EBL
	lead	2.0B ug/L	RL	U	EBL
IR69-EB01-030110-GW	calcium	158B ug/L	RL	U	EBL

The concentration noted for the CCBs is the highest concentration in all the CCBs. However, when qualifying samples for CCB contamination, associated samples are those just prior to or just following a CCB. Therefore, not all analytes in all samples are flagged for noted CCB contamination. See worksheets for associations. Samples are qualified for field QC blank contamination based on QC tracking provided by CH2M HILL. Negative contamination in a prep blank or CCB, if less than the analyte CRDL, is qualified based on professional judgment.

Please note that based on the National Functional Guidelines, for contamination above the CRDL, results in the field samples that are greater than the RL up to 10X the blank contamination level should be qualified as estimated and considered biased high or they should be rejected. Associated samples and required qualifications are noted in the following table.

Sample ID	Analyte	Q Flag	Q Code
IR69-GW11-10A, IR69-GW12-10A	beryllium	U at RL	MBL
IR69-GW09-10A	iron	U at RL	MBL
IR69-GW09-10A, IR69-GW11-10A, IR69-GW13-10A	zinc	U at RL	MBL
IR69-GW12-10A, IR69-GW13-10A	vanadium	U at RL	MBL
all field samples	magnesium	U at RL	MBL
IR69-GW09-10A, IR69-GW11-10A, IR69-GW12-10A	cobalt	U at RL	MBL
IR69-GW12-10A	chromium	U at RL	EBL
IR69-GW12-10A	lead	U at RL	EBL
IR69-GW09-10A, IR69-GW11-10A, IR69-GW13-10A	calcium	U at RL	EBL

MATRIX SPIKE/DUPLICATE SUMMARY

There was no MS/MSD sample in this SDG. All LCS recoveries and RPDs were acceptable.

SERIAL DILUTIONS

The serial dilution results were OK with the exception of manganese (37.1%). Positive and non-detect results for Mn in the field samples are qualified as estimated J/UJ.

SAMPLE CALCULATION

EPA SAMPLE ID: IR69-GW09-10A
ANALYTE: SODIUM
CONCENTRATION: 13400 ug/L
%Solids – NA
Raw Data result: 13414.39 ug/L Water results are direct read from the instrument.

FIELD DUPLICATE SAMPLE SUMMARY

Note: Field duplicate results are assessed only if both results are above the CRDL.
Sample ID: None **Duplicate Sample ID:** None

Analyte	Sample Conc.	Duplicate Conc.	RPD
aluminum			#DIV/0!
barium			#DIV/0!
calcium			#DIV/0!
chromium			#DIV/0!
iorn			#DIV/0!
lead			#DIV/0!
magnesium			#DIV/0!
manganese			#DIV/0!
nickel			#DIV/0!
zinc			#DIV/0!

Comments:

SAMPLE RESULT VERIFICATION

Specific Comments:

All sample results were reported within the calibration/linear range of the instruments. Detection limits were acceptable. Raw data was verified. All positive results reported at concentrations between the IDL and the RL were qualified as estimated J by the laboratory. All field sample and QC blank IDs were missing either the first 4 or the last four characters. The characters (-10A) were added for the field samples and the characters IR69 were added for the field QC blanks to the Form 1s in the DV reports by the data validator.

Reviewer ACleveland **Date:** 72310

CompuChem
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501 Madison Avenue
Cary, NC 27513

SDG NARRATIVE
SDG # 1003032

The indicated Sample Delivery Group (SDG) consisting of six (6) liquid dissolved samples was received into the laboratory information management system (LIMS) on March 4 and 5, 2010 intact and in good condition with Chain of Custody (COC) Records in order, unless otherwise noted in any attachments or Quality Assurance Notices. The temperature of the samples upon receipt was 0.1 to 1.9°C. Sample ID's reported in this data package are noted by the receiving department on the COC if they differ from those listed by the samplers on the COC.

The samples were digested and analyzed in accordance with SW846 methodology for the requested dissolved TAL metals and mercury.

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (ICV & CCV) and blanks (ICB & CCB) associated with this data were confirmed to be within allowable limits.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verification (PBW, LCSW, & LCSWD) was found to be within acceptable ranges and the field samples were analyzed within the specified holding times. The mercury samples were re-digested. The original analysis for mercury had suspected contamination in the prep blank and the equipment blank so the whole batch was redone.

MATRIX RELATED QUALITY CONTROL:

No matrix spikes were requested for this SDG.

A five-fold serial dilution of sample, CCN = 1003032-01 ID IR69-GW12L was performed in accordance with requirements for ICP and mercury analysis.

The adjusted sample concentration was inside control limits for the requested analytes except manganese.

The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice.

Susan Bass

Susan W. Bass
Senior Chemist
March 30, 2010

AMENDED DATA

Jacqueline Cleveland

From: Cathy Dover [cdover@compuchemlabs.com]
Sent: Wednesday, July 28, 2010 11:43 AM
To: Jacqueline Cleveland
Cc: DataQual; Gwen.Buckley@CH2M.com
Subject: RE: CTO-81 Lejeune Resubmission Status
Attachments: CTO-081 site 69 revised metals narratives.pdf

Hi Jackie,

Sorry for the delay! I have attached the three revised metals case narratives (WO#1003029, 1003032 & 1003089).

Ken, who was helping with the xylene issue, is on vacation. I have been trying to reach him so he can verify the list you sent in the e-mail this week. I wanted him to answer the data inquiry since the xylene reporting has changed recently.

I will call and see if I can reach him so that I can respond back to you today.

Cathy

Cathy Dover
Supervisor of Project Management
Compuchem
501 Madison Ave.
Cary, N.C. 27513
(919)379-4089 office
(919)379-4050 fax

From: Jacqueline Cleveland [mailto:cleve137@charter.net]
Sent: Wednesday, July 28, 2010 11:28 AM
To: Cathy Dover
Cc: 'DataQual'; Gwen.Buckley@CH2M.com
Subject: CTO-81 Lejeune Resubmission Status
Importance: High

Cathy,

Good Morning! Laura and I have two outstanding issues for the CTO-81 data packages that we are checking up on. I am waiting for metals case narratives for three SDGs (to explain REs) and Laura has a question regarding xylene results. Do you have an idea when we might see these items? Thanks for the info!

Jackie

Jacqueline Cleveland
Vice-President
DataQual, ES, LLC
636-352-9391
cleve137@charter.net

Jacqueline Cleveland

From: Jacqueline Cleveland [cleve137@charter.net]
Sent: Thursday, July 22, 2010 8:46 AM
To: 'Cathy Dover'
Cc: 'DataQual'; 'Anita.Dodson@CH2M.com'; 'Rebekha.Shaw@CH2M.com'; 'Gwen.Buckley@CH2M.com'
Subject: FW: CTO-81 Lejeune

Importance: High

Cathy,

I am just checking on the status of the request below – I sent it over Monday and don't believe that I have heard back on it. Please let me know!

Thanks, Jackie

From: Jacqueline Cleveland [mailto:cleve137@charter.net]
Sent: Monday, July 19, 2010 12:00 PM
To: 'Cathy Dover'
Cc: 'DataQual'; 'Rebekha.Shaw@CH2M.com'; 'Gwen.Buckley@CH2M.com'
Subject: CTO-81 Lejeune

Dear Cathy,

I have a request regarding the metals data packages for SDGs 1003029, 1003032 and 1003089. Based on the sample summary in the front of the data packages, it looks like most of the samples were re-digested and/or reanalyzed for some reason. There is no mention of this in the case narratives. Please provide revised narratives that addresses these RE samples and explains the reason for the RE suffix. Thanks so much!

Jackie

Jacqueline Cleveland
Vice-President
DataQual, ES, LLC
636-352-9391
cleve137@charter.net

Jacqueline Cleveland

From: Cathy Dover [cdover@compuchemlabs.com]
Sent: Thursday, July 22, 2010 9:02 AM
To: Jacqueline Cleveland
Cc: DataQual; Anita.Dodson@CH2M.com; Gwen.Buckley@CH2M.com
Subject: FW: New CH2M HILL, INC. Inquiry: 1593, Due Date: 7/20/2010

Hi Jackie,

I have been waiting to speak with both the Inorganic supervisor and lab director since he e-mailed me the response below. I have already asked him to please ask the reviewer to mention instances like this even though holding times were meet. I will update you as soon as we meet to discuss.

Cathy

Cathy Dover
Supervisor of Project Management
Compuchem
501 Madison Ave.
Cary, N.C. 27513
(919)379-4089 office
(919)379-4050 fax

From: James Feldhaus
Sent: Monday, July 19, 2010 2:10 PM
To: Cathy Dover; Rebecca K. Mead
Cc: Bob Meierer
Subject: RE: New CH2M HILL, INC. Inquiry: 1593, Due Date: 7/20/2010

Cathy

It is not policy to state in the narrative why batch QC or instrument QC required either a re-digestion or reanalysis if samples met required holding times.

Jim Feldhaus
Inorganic Manager
Compuchem Laboratories
Cary, NC 27513
(919)-379-4039

From: cdover@compuchemlabs.com [mailto:cdover@compuchemlabs.com]
Sent: Monday, July 19, 2010 1:59 PM
To: James Feldhaus
Cc: Cathy Dover; William Waring; Mark Ross; Rebecca K. Mead; Jennifer Rebman; Bob Meierer; Cathy Dover
Subject: New CH2M HILL, INC. Inquiry: 1593, Due Date: 7/20/2010

You have a new Client Inquiry **(1593)** waiting for review.
View

Contract Required TAT: 1 day

Penalty Assessment:

Originator:	Catherine Dover
Inquiry Date:	7/19/2010
Client:	CH2M HILL, INC.
Project Name:	CTO-081 SITE 69/289017.SA.DM/N62470-08-D-1000
Client Contact:	GWEN BUCKLEY
Work Order(s):	
1003029	
1003032	
1003089	
Required Response Date:	7/20/2010
Department(s):	
Inorganics	
Categories(s):	
Other	
Questions/Issues:	Please see attached e-mail copy requesting a response for why the samples were re-prepped.
Resolution:	

SW846 - METALS

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: COMPUCHEM Contract: _____

Lab Code: LIBRTY Case No.: _____ SAS No.: _____ SDG No.: 1003032

AA CRDL Standard Source: HP0916320

ICP CRDL Standard Source: HP0916320

Concentration Units: ug/L

Analyte	True	Found	%R	CRDL Standard for ICP Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum				200.0	292.45	146.2		
Antimony				10.0	10.60	106.0		
Arsenic				10.0	10.22	102.2		
Barium				200.0	200.53	100.3		
Beryllium				5.0	5.50	110.0		
Cadmium				5.0	5.58	111.6		
Calcium				5.000.0	4945.77	98.9		
Chromium				10.0	10.63	106.3		
Cobalt				5.0	5.55	111.0		
Copper				5.0	4.55	91.0		
Iron				100.0	130.65	130.6	NQ	
Lead				3.0	2.16	72.0		
Magnesium				5000.0	4813.66	96.3		
Manganese				10.0	9.97	99.7		
Mercury	0.2	0.25	125.0					
Nickel				5.0	5.43	108.6		
Potassium				5000.0	4357.06	87.1		
Selenium				5.0	8.40	168.0	NQ -	one result was negated due to blk contamination
Silver				5.0	5.30	106.0		
Sodium				5000.0	4687.87	93.8		
Thallium				10.0	14.09	140.9		
Vanadium				20.0	20.64	103.2		
Zinc				20.0	17.83	89.2		

Control Limits: no limits have been established by EPA at this time

SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003032

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M	
Aluminum	200.0	U	99.5	B	76.7	B	57.7	B	39.252	B	P	NQ
Antimony	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P	
Arsenic	10.0	U	10.0	U	3.1	B	10.0	U	10.000	U	P	
Barium	-0.3	B	-0.3	B	-0.4	B	200.0	U	-0.359	B	P	NQ
Beryllium	0.2	B	0.7	B	0.5	B	0.5	B	0.255	B	P	
Cadmium	0.4	B	0.8	B	0.5	B	0.7	B	5.000	U	P	
Calcium	5000.0	U	5000.0	U	5000.0	U	122.1	B	5000.000	U	P	
Chromium	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P	
Cobalt	5.0	U	5.0	U	5.0	U	1.2	B	5.000	U	P	
Copper	5.0	U	-1.5	B	5.0	U	5.0	U	5.000	U	P	
Iron	21.1	B	100.0	U	20.2	B	23.5	B	22.952	B	P	
Lead	3.0	U	3.0	U	3.0	U	3.0	U	3.000	U	P	
Magnesium	10.3	B	38.2	B	27.9	B	45.8	B	5000.000	U	P	
Manganese	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P	
Mercury	0.200	U	0.200	U	0.200	U			0.200	U	CV	
Nickel	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P	
Potassium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	5000.000	U	P	
Selenium	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P	
Silver	5.0	U	-1.0	B	5.0	U	5.0	U	5.000	U	P	
Sodium	5000.0	U	-323.2	B	5000.0	U	5000.0	U	649.213	B	P	NQ
Thallium	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P	
Vanadium	0.9	B	20.0	U	20.0	U	0.9	B	20.000	U	P	
Zinc	20.0	U	20.0	U	20.0	U	20.0	U	0.555	B	P	

none assoc.

SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003032

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum			47.3	B	51.3	B	200.0	U			P
Antimony			10.0	U	10.0	U	10.0	U			P
Arsenic			3.1	B	10.0	U	10.0	U			P
Barium			-0.4	B	200.0	U	-0.3	B			P
Beryllium			0.5	B	0.4	B	5.0	U			P
Cadmium			0.5	B	0.4	B	5.0	U			P
Calcium			5000.0	U	5000.0	U	-119.7	B			P
Chromium			10.0	U	10.0	U	10.0	U			P
Cobalt			5.0	U	0.9	B	5.0	U			P
Copper			5.0	U	5.0	U	5.0	U			P
Iron			100.0	U	100.0	U	100.0	U			P
Lead			3.0	U	3.0	U	3.0	U			P
Magnesium			10.2	B	23.1	B	5000.0	U			P
Manganese			10.0	U	10.0	U	10.0	U			P
Nickel			5.0	U	5.0	U	5.0	U			P
Potassium			5000.0	U	5000.0	U	5000.0	U			P
Selenium			5.0	U	5.0	U	5.0	U			P
Silver			5.0	U	5.0	U	5.0	U			P
Sodium			5000.0	U	5000.0	U	5000.0	U			P
Thallium			10.0	U	10.0	U	10.0	U			P
Vanadium			20.0	U	0.8	B	20.0	U			P
Zinc			20.0	U	20.0	U	20.0	U			P

NONE
ADDC

1R69GW12

1R69-GW09
GW11
GW13

✓ flag as noted in report

SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003032

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum			200.0	U							P
Antimony			10.0	U							P
Arsenic			3.8	B	RQ						P
Barium			200.0	U							P
Beryllium			5.0	U							P
Cadmium			0.5	B	See peak						P
Calcium			5000.0	U							P
Chromium			10.0	U							P
Cobalt			0.9	B	✓						P
Copper			5.0	U							P
Iron			18.9	B	See peak						P
Lead			3.0	U							P
Magnesium			12.5	B	See ICB						P
Manganese			10.0	U							P
Nickel			5.0	U							P
Potassium			5000.0	U							P
Selenium			5.0	U							P
Silver			5.0	U							P
Sodium			5000.0	U							P
Thallium			10.0	U							P
Vanadium			0.8	B	See ICB						P
Zinc			20.0	U							P

GW09
11
13

✓ flag as noted in report

SW846 - METALS

9

ICP SERIAL DILUTIONS

SAMPLE NO.

IR69-GW12L

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003032

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	295.71		361.27	B	22.2		P
Antimony	10.00	U	50.00	U			P
Arsenic	10.00	U	50.00	U			P
Barium	22.54	B	22.23	B	1.4		P
Beryllium	0.36	B	25.00	U	100.0		P
Cadmium	5.00	U	2.21	B	100.0		P
Calcium	1663.69	B	1532.64	B	7.9		P
Chromium	1.15	B	50.00	U	100.0		P
Cobalt	0.82	B	5.13	B	525.6		P
Copper	5.00	U	25.00	U			P
Iron	4849.07		4929.31		1.7		P
Lead	2.29	B	15.00	U	100.0		P
Magnesium	1164.14	B	1214.40	B	4.3		P
Manganese	19.23		26.37	B	37.1	E	P
Nickel	5.00	U	25.00	U			P
Potassium	311.60	B	286.69	B	8.0		P
Selenium	5.00	U	25.00	U			P
Silver	5.00	U	25.00	U			P
Sodium	8801.31		8627.60	B	2.0		P
Thallium	10.00	U	50.00	U			P
Vanadium	1.23	B	4.55	B	269.9		P
Zinc	79.97		79.43	B	0.7		P

JWS

DataQual

Environmental Services, LLC

CH2M HILL
5700 Cleveland Street
Suite 101
Virginia Beach, VA 23462

July 30, 2010
CompuChem, SDG= 1003089
MCB Camp Lejeune, CTO-81

Dear Ms. Buckley,

The following Data Validation report is provided as requested for the parameters noted in the table below for SDG = 1003089. The data validation was performed in accordance with the SW846 Method 8260B for volatiles, 8270C and 8270C-SIM for semivolatiles and PAH, 8081A for pesticides, 8082 for PCBs and 6010B/7470A/7471A for metals and mercury and good professional judgment. Also used in the validation of these samples were The National Functional Guidelines for Organic Data Review (June, 2008) and the National Functional Guidelines for Inorganic Data Review (October, 2004), as applicable. All areas of concern are discussed in the body of the report and a summary of data qualifications is provided.

Sample ID	Lab ID	Matrix	VOA	SVOA	LL PAH	Pest	PCBs	Metals
IR69-EB01-030410-SS	1003089-01	water	X	X	X	X	X	
IR69-EB01-030610-GW	1003089-08	water	X	X	X	X	X	X
IR69-EB01-030710-GW	1003089-09	water	X	X	X	X	X	X
IR69-EB01-030710-SS	1003089-15	water	X	X	X			X
IR69-EB01-030810-GW	1003089-21	water	X	X	X	X	X	X
IR69-EB01-030710-SB	1003089-17	water				X	X	
IR69-EB01-031010	1003089-14	water	X	X	X			
IR69-GW02DD-10A	1003089-06	water	X	X	X	X	X	X
IR69-GW03-10A	1003089-11	water	X	X	X	X	X	X
IR69-GW03D-10A	1003089-10	water	X	X	X	X	X	X
IR69-GW03DW-10A	1003089-12	water	X	X	X	X	X	X
IR69-GW06-10A	1003089-18	water	X	X	X	X	X	X
IR69-GW08-10A	1003089-19	water	X	X	X	X	X	X
IR69-GW08D-10A	1003089-20	water	X	X	X	X	X	X
IR69-GW09DW-10A	1003089-05	water	X	X	X	X	X	X
IR69-GW09IW-10A	1003089-04	water	X	X	X	X	X	X
IR69-GW15-10A	1003089-13	water	X	X	X	X	X	X
IR69-GW15IW-10A	1003089-07	water	X	X	X	X	X	X
IR69-GW27DW-10A	1003089-03	water	X	X	X	X	X	X
IR69-GW27IW-10A	1003089-02	water	X	X	X	X	X	X
IR69-EB01-030810	1003089-16	water	X					
IR69-GW06-10A MS	1003089-18MS	water	X	X	X	X	X	X
IR69-GW06-10A MSD	1003089-18MSD	water	X	X	X	X	X	X

The following quality control samples were provided with this SDG: sample IR69-GW03D-10A-field duplicate of sample IR69-GW03-10A; sample IR69-GW08D-10A-field duplicate of sample IR69-GW08-10A; samples IR69-EB01-030410-SS, IR69-EB01-030610-GW, IR69-EB01-030710-GW, IR69-EB01-030710-SS, IR69-EB01-

030710SB, IR69-EB01-030810-GW- equipment blanks; sample IR69-FB01-031010- field blank; and sample IR69-TB01-030810- trip blank.

The samples were evaluated based on the following criteria:

• Data Completeness	*
• Technical Holding Times	*
• GC/MS Tunes	*
• GC Performance	*
• Initial Continuing Calibrations	
• CRI Standards	*
• Interference Check Sample	*
• Blanks	
• Internal Standards	
• Surrogates	*
• Laboratory Control Samples	
• Matrix Spike Recoveries	*
• Matrix Duplicate RPDs	*
• Post Digestion Spike Recoveries	*
• Serial Dilutions	*
• Field Duplicates	
• Identification/Quantitation	
• Reporting Limits	*
• Tentatively Identified Compounds	NA

* - indicates that no qualifications were required based on this criteria

Overall Evaluation of Data/Potential Usability Issues

A summary of qualifications applied to the sample results are noted below for the fractions validated. Specific details regarding qualification of the data are addressed in the Specific Evaluation section of this narrative. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte the validator has chosen the qualifier that best indicates possible bias in the results and flagged the data accordingly. However, information regarding all quality control issues is provided in the body of the report and on the qualification summary page. Please note that when a compound or analyte is flagged due to blank contamination the BL qualifier code takes precedence over all other qualifier codes except a code that explains rejected data.

VOA

Several sample compounds were qualified as estimated based on high %RSD and %Ds and low RRF values which were exhibited in the initial and continuing calibrations.

Blank contamination was exhibited in the method and/or QC blanks that resulted in qualifications to the data.

Dilutions were required to obtain results within the calibration range.

SVOA

Several sample compounds were qualified as estimated based on high %Ds which were exhibited in the continuing calibrations.

Blank contamination was exhibited in the method and or QC blanks that resulted in qualifications to the data.

Due to non-compliant internal standards exhibited in one sample, qualifications were add to the associated compound results.

Pesticides/PCBs

The laboratory control samples associated with a group of the water samples exhibited high recoveries for some compounds that resulted in the qualification of results in one rinse blank.

Reported positive results exhibited column quantitation %Ds greater than 40%. These P flagged results were qualified as estimated J.

Two samples required dilution to accurately quantitate target compounds.

Metals

Qualifications were required in the samples due to laboratory and field QC blank contamination.

Qualifications were required due to field duplicate issues.

All results reported between the MDL and the RL (B flagged by the laboratory) were qualified as estimated J.

Specific Evaluation of Data

Data Completeness

The metals fraction required resubmission due to unexplained RE samples. Please note: All field sample and QC blank IDs were missing the first four (IR69) and/or the last four (-10A) characters. The characters were added to the Form 1s in the DV reports by the data validator.

Technical Holding Times

According to chain of custody records, sampling was performed on 3/04-10/10 and samples were received at the laboratory 3/11-12/10. All sample preparation and analysis was performed within method holding time requirements.

Initial/Continuing Calibration

VOA

Calibration standards exhibited %RSD, %D and RRFs that were non-compliant. A summary of these non-compliances and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	RRF, %RSD, %D	Samples	Q Flag	Q Code
IC 3/16/10	acetone 2-butanone	0.0337 0.0419	IR69-EB01-030410-SS IR69-GW27IW-10A,	J/R	ICL
	1,3-dichlorobenzene	25.242	IR69-GW27DW-10A, IR69-GW09IW-10A, IR69-GW09DW-10A, IR69-GW02DD-10A, IR69-GW15IW-10A, IR69-GW03-10A	J/UJ	ICH
CC 3/17/10	trichlorofluoromethane 2-hexanone	31.80 31.92	IR69-EB01-030610-GW, IR69-EB01-030710-GW,	J/UJ	CCH
	tetrachloroethene	-27.36	IR69-GW03D-10A, IR69-GW03DW-10A, IR69-GW15-10A, IR69-FB01-031010-10, IR69-EB01-030710-SB, IR69-TB01-030810, IR69-GW06-10A, IR69-GW08-10A, IR69-GW08D-10A, IR69-EB01-030810-GW	J/UJ	CCL

SVOA

Calibration standards exhibited %Ds that were non-compliant. A summary of these non-compliances and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	RRF, %RSD, %D	Samples	Q Flag	Q Code
CC 3/25/10	indeno(1,2,3-cd)pyrene benzo(g,h,i)perylene	-24.08 -22.61	IR69-GW27DW-10A, IR69-GW09IW-10A, IR69-GW02DD-10A, IR69-GW15IW-10A, IR69-EB01-030610-GW, IR69-GW03-10A	J/UJ	CCL
CC 3/26/10	caprolactam	24.35	IR69-EB01-030710-SB	J/UJ	CCH

Standard ID	Compound(s)	RRF, %RSD, %D	Samples	Q Flag	Q Code
CC 3/26/10	dibenzo(a,h)anthracene	-21.13	PAH SIM: IR69-GW03DW-10A, IR69-GW15-10A, IR69-EB-030710-SB	J UJ	CCL

Blanks

VOA

The associated method and or QC blanks exhibited contamination as noted in the following table. Compounds for which there was no action required, are not included in the following table.

Blank ID	Compound	Concentration	Reporting Limit
VBLKHK	acetone	0.73J ug/L	2.5 ug/L
	methylene chloride	0.038	0.5
	cis-1,2-dichloroethene	0.091	0.5
VBLKHJ	acetone	0.52J	2.5
	methylene chloride	0.026J	0.5
IR69-EB01-030810-GW	carbon disulfide	0.13J	0.5
	acetone	11	2.5
	methylene chloride	8.4	0.5
	2-butanone	1.9J	2.5
	chloroform	0.17J	0.5
	benzene	0.13J	0.5
	toluene	2.4	0.5
	chlorobenzene	0.22J	0.5
	o-xylene	0.065J	0.5
IR69-EB01-030610-GW	acetone	4.7	2.5
	methylene chloride	8.2	0.5
	cis-1,2-dichloroethene	0.057J	0.5
	2-butanone	1.3J	2.5
	chloroform	0.16J	0.5
	toluene	2.8	0.5
	chlorobenzene	0.33J	0.5
	o-xylene	0.038J	0.5
IR69-EB01-030710-GW	acetone	6.5	2.5
	methylene chloride	5.3	0.5
	cis-1,2-dichloroethene	0.048J	0.5
	2-butanone	1.2J	2.5
	chloroform	0.11J	0.5
	benzene	0.15J	0.5
	toluene	1.7	0.5
	chlorobenzene	0.19J	0.5
	ethylbenzene	0.051J	0.5
	o-xylene	0.067J	0.5

Blank ID	Compound	Concentration	Reporting Limit
IR69-FB01-031010	acetone	5.5	2.5
	methylene chloride	10	0.5
	cis-1,2-dichloroethene	0.035	0.5
	2-butanone	1.8J	0.5
	chloroform	0.19J	0.5
	benzene	0.12J	0.5
	toluene	2.6	0.5
	chlorobenzene	0.23J	0.5
	ethylbenzene	0.064J	0.5
	o-xylene	0.062J	0.5

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Q Code
IR69-GW02DD-10A, IR69-GW03-10A, IR69-GW03D-10A, IR69-GW03DW-10A, IR69-GW06-10A, IR69-GW08-10A, IR69-GW08D-10A, IR69-GW15-10A, IR69-GW27DW-10A, IR69-GW27IW-10A	acetone	U at RL	MBL
IR69-GW03DW-10A, IR69-GW09IW-10A, IR69-GW27DW-10A, IR69-GW27IW-10A	methylene chloride	U at RL	MBL
IR69-GW03DW-10A	cis-1,2-dichloroethene	U at RL	MBL
IR69-GW02DD-10A, IR69-GW03D-10A, IR69-GW06-10A, IR69-GW08-10A, IR69-GW08D-10A, IR69-GW09DW-10A, IR69-GW09IW-10A, IR69-GW15-10A, IR69-GW15IW-10A, IR69-GW27DW-10A, IR69-GW27IW-10A	toluene	U at RL	EBL
IR69-GW03-10A, IR69-GW09DW-10A	ethylbenzene	U at RL	EBL
IR69-GW03D-10A	benzene	U at RL	EBL
IR69-GW09DW-10A	methylene chloride	U	EBL
IR69-GW09DW-10A	cis-1,2-dichloroethene	U at RL	EBL
IR69-GW09DW-10A	chloroform	U at RL	EBL
IR69-GW09DW-10A, IR69-GW15-10A, IR69-GW15IW-10A	benzene	U at RL	EBL
IR69-GW15IW-10A	acetone	U	EBL

SVOA

The associated method and/or QC blanks exhibited contamination as noted in the following table. Compounds for which there was no action required, are not included in the following table.

Blank ID	Compound	Concentration	Reporting Limit	Action Level	Qualifer
IR69-FB01-031010-SIM	naphthalene	0.063J	0.20	RL	U at RL

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Q Code
PAH SIM: IR69-GW03-10A, IR69-GW03D-10A	naphthalene	U at RL	EBL

Metals

Contamination was noted in associated blanks and qualification was required in the associated samples. Required action is noted in the following tables.

Blank ID	Analyte	Concentration	Action Level	Q Flag	Q Code
PBW	calcium	192.547B ug/L	RL	U	MBL
	magnesium	47.368B ug/L	RL	U	MBL
	potassium	36.310B ug/L	RL	U	MBL
CCB	iron	19.9B ug/L	RL	U	MBL
	nickel	1.1B ug/L	RL	U	MBL
IR69-FB01-030310	copper	2.3B ug/L	RL	U	FBL
IR69-EB01-030610-GW	zinc	1.0B ug/L	RL	U	EBL
IR69-EB01-030710-GW	zinc	0.73B ug/L	RL	U	EBL

Associated samples and required qualifications are noted in the following table.

Sample ID	Analyte	Q Flag	Q Code
IR69-GW06-10A, IR69-GW08-10A	calcium	U at RL	MBL
all field samples >MDL < RL	magnesium	U at RL	MBL
all field samples >MDL < RL	potassium	U at RL	MBL
IR69-GW06-10A	iron	U at RL	MBL
IR69-GW03-10A, IR69-GW03D-10A, IR69-GW15-10A, IR69-GW27IW-10A	nickel	U at RL	MBL
all field samples >MDL < RL	copper	U at RL	FBL
IR69-GW02DD-10A, IR69-GW09DW-10A, IR69-GW09IW-10A, IR69-GW15-10A, IR69-GW15IW-10A, IR69-GW27DW-10A, IR69-GW27IW-10A, IR69-GW03DW-10A	zinc	U at RL	EBL

Internal Standards

SVOA

The sample IR69-GW08D-10A exhibited low recovery for perylene-d12; therefore all result associated with this standard were qualified as estimated (J/UJ), qualifier code: ISL. The sample was re-analyzed with non-compliant results exhibited; therefore this analysis was excluded in favor of the initial analysis.

Laboratory Control Samples

Pesticides/PCBs

The LCS pair associated with one group of water samples exhibited high recoveries for several compounds. Most of the associated samples did not exhibit positive results. Qualifications were required in one rinse blank sample, IR69-EB01-030810-GW, for the compounds δ-BHC (153/147) and dieldrin (145/132) with a qualifier code of BSL.

Field Duplicates

Metals

The field duplicate pair of samples IR69-GW03-10A and IR69-GW03D-10A exhibited one analyte with an RPD >20% (29%). The reported positive results for aluminum were qualified as estimated J/UJ in the field duplicate pair with a qualifier code of FD.

Please note that the reported results for the field sample IR69-GW08-10A exhibited positive results above the RL for several analytes and the field duplicate IR69-GW08D-10A exhibited only non-detect results. The results suggest that the identity of the duplicate may be suspect.

Identification/Quantitation

VOA

Samples IR69-GW03-10A, IR69-GW09IW-10A and IR69-GW15IW-10A required a dilution to obtain results within the calibration range. All E-flagged results are excluded in favor of the corresponding D-flagged results from the dilution analysis. All results except corresponding D-flagged results in the dilution analysis are excluded in favor of the results reported from the undiluted analysis.

Sample IR69-GW15IW-10A exhibited above calibration range results for several compounds and therefore the laboratory ran a dilution. The dilution submitted did not have recovery for trichloroethene; therefore the result from the initial analysis was used and qualified as estimated (J), qualifier code: LR.

Pesticides/PCBs

All positive results reported with a P flag to indicate column quantitation %Ds greater than 40% are qualified as estimated J with a qualifier code of 2C.

Samples IR69-GW03-10A and IR69-GW03D-10A required dilution to accurately quantitate one target compound. All E flagged results are excluded in favor of the corresponding D flagged results from the dilution analyses. All results except corresponding D flagged results in the dilution analyses are excluded in favor of the results reported from the undiluted analysis. Qualifier code is DL.

Metals

All results reported between the IDL and the RL (B flagged by laboratory) were qualified as estimated J. No qualification code was required.

A summary of qualifications required is provided on the following page. Please do not hesitate to contact DataQual ES with any questions regarding this validation report.

Sincerely,

Laura Maschhoff
President

Jacqueline Cleveland
Vice-President

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Summary of Data Qualifications

VOA

Sample ID	Compound	Results	Q-Flag	Q Code
IR69-EB01-030410-SS, IR69-GW27IW-10A, IR69-GW27DW-10A, IR69-GW09IW-10A, IR69-GW09DW-10A, IR69-GW02DD-10A, IR69-GW15IW-10A, IR69-GW03-10A	acetone 2-butanone	- -	J R	ICL
IR69-EB01-030410-SS, IR69-GW27IW-10A, IR69-GW27DW-10A, IR69-GW09IW-10A, IR69-GW09DW-10A, IR69-GW02DD-10A, IR69-GW15IW-10A, IR69-GW03-10A	1,3-dichlorobenzene	- -	J UJ	ICH
IR69-EB01-030610-GW, IR69-EB01-030710-GW, IR69-GW03D-10A, IR69-GW03DW-10A, IR69-GW15-10A, IR69-FB01-031010-10, IR69-EB01-030710-SB, IR69-TB01-030810, IR69-GW06-10A, IR69-GW08-10A, IR69-GW08D-10A, IR69-FB01-030810-GW	trichlorofluoromethane 2-hexanone	- -	J UJ	CCH
IR69-EB01-030610-GW, IR69-EB01-030710-GW, IR69-GW03D-10A, IR69-GW03DW-10A, IR69-GW15-10A, IR69-FB01-031010-10, IR69-EB01-030710-SB, IR69-TB01-030810, IR69-GW06-10A, IR69-GW08-10A, IR69-GW08D-10A, IR69-EB01-030810-GW	tetrachloroethene	- -	J UJ	CCL
IR69-GW02DD-10A, IR69-GW03-10A, IR69-GW03D-10A, IR69-GW03DW-10A, IR69-GW06-10A, IR69-GW08-10A, IR69-GW08D-10A, IR69-GW15-10A, IR69-GW27DW-10A,IR69-GW27IW-10A	acetone	-	U at RL	MBL
IR69-GW03DW-10A, IR69-GW09IW-10A, IR69-GW27DW-10A, IR69-GW27IW-10A	methylene chloride	-	U at RL	MBL
IR69-GW03DW-10A	cis-1,2-dichloroethene	-	U at RL	MBL
IR69-GW02DD-10A, IR69-GW03D-10A, IR69-GW06-10A, IR69-GW08-10A, IR69-GW08D-10A, IR69-GW09DW-10A, IR69-GW09IW-10A, IR69-GW15-10A, IR69-GW15IW-10A, IR69-GW27DW-10A, IR69-GW27IW-10A	toluene	-	U at RL	EBL
IR69-GW03-10A, IR69-GW09DW-10A	ethylbenzene	-	U at RL	FBL
IR69-GW03D-10A	benzene	-	U at RL	FBL
IR69-GW09DW-10A	methylene chloride	-	U	EBL
IR69-GW09DW-10A	cis-1,2-dichloroethene	-	U at RL	FBL
IR69-GW09DW-10A	chloroform	-	U at RL	EBL
IR69-GW09DW-10A, IR69-GW15-10A, IR69-GW15IW-10A	benzene	-	U at RL	FBL
IR69-GW15IW-10A	acetone	-	U	EBL
IR69-GW03-10A, IR69-GW09IW-10A, IR69-GW15IW-10A	all F-flagged compounds	- -	exclude	DL
IR69-GW03-10ADL, IR69-GW09IW-10ADL, IR69-GW15IW-10ADL	all except corresponding D-flagged compounds	- -	exclude	DL
IR69-GW15IW-10A	trichloroethene	- F	J	LR

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Summary of Data Qualifications

SVOA

Sample ID	Compound	Results	Q-Flag	Q Code
IR69-GW27DW-10A, IR69-GW09IW-10A, IR69-GW02DD-10A, IR69-GW15IW-10A, IR69-EB01-030610-GW, IR69-GW03-10A	indeno(1,2,3-cd)pyrene benzo(g,h,i)perylene	- -	J UJ	CCL
IR69-EB01-030710-SB	caprolactam	- -	J UJ	CCH
PAH SIM: IR69-GW03DW-10A, IR69-GW15-10A, IR69-EB-030710-SB	dibenzo(a,h)anthracene	- -	J UJ	CCL
PAH SIM: IR69-GW03-10A, IR69-GW03D-10A	naphthalene	-	U at RL	FBL
IR69-GW08D-10A	all compounds associated with: perylene-d12	- -	J UJ	ISL
IR69-GW08D-10ARE	all results	- -	exclude	RE

Pesticides/PCBs

Sample ID	Compound	Results	Q-Flag	Q Code
IR69-EB01-030810-GW	δ-BHC dieldrin	-	J	BSH
IR69-GW03-10A, IR69-GW03D-10A	all E flagged compounds	-E	exclude	DI
IR69-GW03-10A RE, IR69-GW03D-10A RE	all except corresponding D flagged compounds	- -	exclude	DI
all samples	all compounds	-P	J	2C

Metals

Sample ID	Analyte	Results	Q-Flag	Q Code
IR69-GW06-10A, IR69-GW08-10A	calcium	-B	U at RL	MBL
all field samples >MDL ≤RL	magnesium	-B	U at RL	MBL
all field samples >MDL ≤RL	potassium	-B	U at RL	MBL
IR69-GW06-10A	iron	-B	U at RL	MBL
IR69-GW03-10A, IR69-GW03D-10A, IR69-GW15-10A, IR69-GW27IW-10A	nickel	-B	U at RL	MBL
all field samples >MDL ≤RL	copper	-B	U at RL	FBL
IR69-GW02DD-10A, IR69-GW09DW-10A, IR69-GW09IW-10A, IR69-GW15-10A, IR69-GW15IW-10A, IR69-GW27DW-10A, IR69-GW27IW-10A, IR69-GW03DW-10A	zinc	-B	U at RL	EBL
IR69-GW03-10A, IR69-GW03D-10A	aluminum	-	J	FD
all samples	all analytes	-B	J	

Glossary of Qualification Flags and Abbreviations

Qualification Flags (Q-Flags)

U	not detected above the reported sample quantitation limit
J	estimated value
UJ	reported quantitation limit is qualified as estimated
R	result is rejected; the presence or absence of the analyte cannot be verified
D	result value is based on dilution analysis result
NJ	analyte has been tentatively identified, estimated value
L	analyte present, biased low
UL	not detected, quantitation limit is probably higher
K	analyte present, biased high

Inorganic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 10X the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL and the result is raised to the RL and flagged U.
R or J+	The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator. (see NFG, Rev. date 10/04, p. 17 for extracted blanks (PB))

Organic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 5X (10X for common laboratory contaminants) the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is raised to the RL and flagged U.
U	The sample result for the blank contaminant is greater than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is flagged U at the reported value.

General Abbreviations

RL / MDL	reporting limit method detection limit
CRQL	contract required quantitation limit
Q Code	qualifier code
+	positive result
-	non-detect result

QUALIFIER CODE REFERENCE

Qualifier	Description
TN	Tune
BSL	Blank Spike LCS - High Recovery
BSH	Blank Spike LCS - Low Recovery
BD	Blank Spike Blank Spike Duplicate (LCS LCSD) Precision
BRL	Below Reporting Limit
ISL	Internal Standard - Low Recovery
ISH	Internal Standard - High Recovery
MSL	Matrix Spike and or Matrix Spike Duplicate - Low Recovery
MSH	Matrix Spike and or Matrix Spike Duplicate - High Recovery
ML	Matrix interference obscuring the raw data
MDP	Matrix Spike Matrix Spike Duplicate Precision
2S	Second Source - Bad reproducibility between tandem detectors
SSL	Spiked Surrogate - Low Recovery
SSH	Spiked Surrogate - High Recovery
SD	Serial Dilution Reproducibility
ICL	Initial Calibration - Low Relative Response Factors (RRF)
ICH	Initial Calibration - High Relative Response Factors (RRF)
ICB	Initial Calibration - Bad Linearity or Curve Function
CCL	Continuing Calibration - Low Recovery or %Difference
CCH	Continuing Calibration - High Recovery or %Difference
LD	Lab Duplicate Reproducibility
HT	Holding Time
PD	Pesticide Degradation
2C	Second Column - Poor Dual Column Reproducibility
LR	Concentration Exceeds Linear Range
BL	Blank Contamination (MBL, FBL, EBL, TBL)
RE	Redundant Result - due to Re-analysis or Re-extraction
DI	Redundant Result - due to Dilution
FD	Field Duplicate
OT	Other - explained in data validation report
%SOL	High moisture content

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

JHM- EB01-030410-SS

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 JM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-01

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-0171

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/16/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.022	J
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	6.2	~~B~~ J ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	11	~~B~~
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	1.8	~~J~~ J ICL
67-66-3	Chloroform	0.95	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.20	J
107-06-2	1,2-Dichloroethane	0.32	J
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.080	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.93	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

JM 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRM- EB01-030410-SS

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-01

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-0171

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. Date Analyzed: 03/16/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.023	J
100-41-4	Ethylbenzene	0.16	J
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.31	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	~~U~~ UJ ICH
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.31	J
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

LM 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR-04- EB01-030610-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072204

Matrix: (soil/water) WATER Lab Sample ID: 1003089-08

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-08R71

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	~~U~~ UJ CCH
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	4.7	~~B~~
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	8.2	~~B~~
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.057	J~~B~~
78-93-3	2-butanone	1.3	J
67-66-3	Chloroform	0.16	J
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	2.8	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	~~U~~ UJ CCL
591-78-6	2-hexanone	2.5	~~U~~ UJ CCH
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

LM 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69 EB01-030610-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-08

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-08R71

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.33	J
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.038	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.038 ~~0.50~~	~~U~~ J
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

LM 072910

FORM I VOA

LM 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030710-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-09

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-09R71

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	~~U~~ UJ CH
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	6.5	~~B~~
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	5.3	~~B~~
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.048	~~JB~~
78-93-3	2-butanone	1.2	J
67-66-3	Chloroform	0.11	J
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.15	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	1.7	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	~~U~~ UJ CL
591-78-6	2-hexanone	2.5	~~U~~ UJ CH
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030710-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-09

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-09R71

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.19	J
100-41-4	Ethylbenzene	0.051	J
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.067	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.067 ~~0.50~~	~~U~~ J
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69 EB01-030710-SB

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LW 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-15

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-1571

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	~~U~~ UJ CCH
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	5.2	~~B~~
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	8.3	~~B~~
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	U
67-66-3	Chloroform	0.16	J
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	2.6	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	~~U~~ UJ CCL
591-78-6	2-hexanone	2.5	~~U~~ UJ CCH
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

LW 072210

020

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR01 EB01-030710-SB

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 0722.10

Matrix: (soil/water) WATER Lab Sample ID: 1003089-15

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-1571

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.29	J
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

LM 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IHA EB01-030810-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDC No.: 1003089 VM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-21

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-2171

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	~~U~~ UJ CCH
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.13	J
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	11	~~B~~
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	8.4	~~B~~
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	1.9	J
67-66-3	Chloroform	0.17	J
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.13	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	2.4	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	~~U~~ UJ CCL
591-78-6	2-hexanone	2.5	~~U~~ UJ CCH
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

VM 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030810-GW

Lab Name: COMPUCHEM Method: 8260B IR69

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-21

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-2171

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.22	J
100-41-4	Ethylbenzene	0.050	J
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.065	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.065 ~~0.50~~	~~U~~ J
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

LM 072810

FORM I VOA

LM 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR04 FB01-031010-10

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LCM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-14

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-1471

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	~~U~~ UJ CLH
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	5.5	~~B~~
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	10	~~B~~
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.035	J~~B~~
78-93-3	2-butanone	1.8	J
67-66-3	Chloroform	0.19	J
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.12	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	2.6	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	~~U~~ UJ CLL
591-78-6	2-hexanone	2.5	~~U~~ UJ CLH
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

LCM 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR09 FB01-031010-10

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-14

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-1471

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.23	J
100-41-4	Ethylbenzene	0.064	J
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.062	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.062 ~~0.50~~	~~U~~ J
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

LM 072910

FORM I VOA

LM 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02DD-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LMC 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-06

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-0671

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/16/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.023	J
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	~~1.0~~	~~JB~~ R,ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ R ICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	~~0.30~~	~~J~~ U EAL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

1 correction LMC 072210

LMC 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02DD-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LMM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-06

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-0671

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/16/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	~~U~~ UJ ICH
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

LMM 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-11

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-1171

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/16/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	5.2	
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.42	J
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5 ~~1.6~~	~~JB~~ ~~UMPA~~ R, ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	3.2	
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.043	J
156-59-2	cis-1,2-Dichloroethene	160	~~E~~ exclude, DL
78-93-3	2-butanone	2.5	~~U~~ R ICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.58	
107-06-2	1,2-Dichloroethane	0.76	
79-01-6	Trichloroethene	3.2	
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.73	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.39	J
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

1 correction
LM 072210

LM 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-11

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-1171

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/16/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	7.1	
100-41-4	Ethylbenzene	~~0.11~~ 0.50	~~J~~ U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.18	J
541-73-1	1,3-Dichlorobenzene	0.50	~~U~~ U5 ICH
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03DL-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-11RE1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-11D71

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 6.3

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	3.1	U exclude, DL
74-87-3	Chloromethane	3.1	U
75-01-4	Vinyl Chloride	4.9	D
74-83-9	Bromomethane	3.1	U
75-00-3	Chloroethane	3.1	U
75-69-4	Trichlorofluoromethane	3.1	U
75-35-4	1,1-Dichloroethene	0.52	DJ
75-15-0	Carbon disulfide	3.1	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	3.1	U
67-64-1	Acetone	4.8	DJB
79-20-9	Methyl acetate	3.1	U
75-09-2	Methylene Chloride	3.1	U
156-60-5	trans-1,2-Dichloroethene	4.1	D
1634-04-4	Methyl-tert-butyl ether	3.1	U
75-34-3	1,1-Dichloroethane	3.1	U
156-59-2	cis-1,2-Dichloroethene	180	~~DB~~
78-93-3	2-butanone	16	U exclude, DL
67-66-3	Chloroform	3.1	U
71-55-6	1,1,1-Trichloroethane	3.1	U
56-23-5	Carbon Tetrachloride	3.1	U
71-43-2	Benzene	0.70	DJ
107-06-2	1,2-Dichloroethane	0.70	DJ
79-01-6	Trichloroethene	3.4	D
78-87-5	1,2-Dichloropropane	3.1	U
75-27-4	Bromodichloromethane	3.1	U
10061-01-5	cis-1,3-Dichloropropene	3.1	U
108-10-1	4-Methyl-2-pentanone	16	U
108-88-3	Toluene	0.80	DJ
10061-02-6	trans-1,3-Dichloropropene	3.1	U
79-00-5	1,1,2-Trichloroethane	3.1	U
127-18-4	Tetrachloroethene	3.1	U
591-78-6	2-hexanone	16	U
124-48-1	Dibromochloromethane	3.1	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03DL-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-11RE1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-11D71

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 6.3

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	3.1	U
108-90-7	Chlorobenzene	7.7	D
100-41-4	Ethylbenzene	3.1	U
108-38-3	m,p-Xylene	6.3	U
95-47-6	o-Xylene	3.1	U
100-42-5	Styrene	3.1	U
75-25-2	Bromoform	3.1	U
98-82-8	Isopropyl Benzene	3.1	U
79-34-5	1,1,2,2-Tetrachloroethane	3.1	U
541-73-1	1,3-Dichlorobenzene	3.1	U
106-46-7	1,4-Dichlorobenzene	3.1	U
95-50-1	1,2-Dichlorobenzene	3.1	U
96-12-8	1,2-Dibromo-3-Chloropropane	3.1	U
120-82-1	1,2,4-Trichlorobenzene	3.1	U
1330-20-7	Xylene (total)	3.1	U
110-82-7	Cyclohexane	3.1	U
108-87-2	Methylcyclohexane	3.1	U

exclude, DL

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03D-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-10

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-10D71

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 6.3

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	3.1	U
74-87-3	Chloromethane	3.1	U
75-01-4	Vinyl Chloride	4.8	
74-83-9	Bromomethane	3.1	U
75-00-3	Chloroethane	3.1	U
75-69-4	Trichlorofluoromethane	3.1	~~U~~ UJ CCH
75-35-4	1,1-Dichloroethene	0.53	J
75-15-0	Carbon disulfide	3.1	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	3.1	U
67-64-1	Acetone	16 ~~4.5~~	~~JB~~ U MBL
79-20-9	Methyl acetate	3.1	U
75-09-2	Methylene Chloride	3.1	U
156-60-5	trans-1,2-Dichloroethene	3.9	
1634-04-4	Methyl-tert-butyl ether	3.1	U
75-34-3	1,1-Dichloroethane	3.1	U
156-59-2	cis-1,2-Dichloroethene	170	~~B~~
78-93-3	2-butanone	16	U
67-66-3	Chloroform	3.1	U
71-55-6	1,1,1-Trichloroethane	3.1	U
56-23-5	Carbon Tetrachloride	3.1	U
71-43-2	Benzene	3.1 ~~0.66~~	~~J~~ U MBL
107-06-2	1,2-Dichloroethane	0.72	J
79-01-6	Trichloroethene	3.5	
78-87-5	1,2-Dichloropropane	3.1	U
75-27-4	Bromodichloromethane	3.1	U
10061-01-5	cis-1,3-Dichloropropene	3.1	U
108-10-1	4-Methyl-2-pentanone	16	U
108-88-3	Toluene	3.1 ~~0.74~~	~~J~~ U EPL
10061-02-6	trans-1,3-Dichloropropene	3.1	U
79-00-5	1,1,2-Trichloroethane	0.50	J
127-18-4	Tetrachloroethene	3.1	~~U~~ UJ CCL
591-78-6	2-hexanone	16	~~U~~ UJ CCH
124-48-1	Dibromochloromethane	3.1	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03D-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-10

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-10D71

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 6.3

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	3.1	U
108-90-7	Chlorobenzene	7.5	
100-41-4	Ethylbenzene	3.1	U
108-38-3	m,p-Xylene	6.3	U
95-47-6	o-Xylene	3.1	U
100-42-5	Styrene	3.1	U
75-25-2	Bromoform	3.1	U
98-82-8	Isopropyl Benzene	3.1	U
79-34-5	1,1,2,2-Tetrachloroethane	3.1	U
541-73-1	1,3-Dichlorobenzene	3.1	U
106-46-7	1,4-Dichlorobenzene	3.1	U
95-50-1	1,2-Dichlorobenzene	3.1	U
96-12-8	1,2-Dibromo-3-Chloropropane	3.1	U
120-82-1	1,2,4-Trichlorobenzene	3.1	U
1330-20-7	Xylene (total)	3.1	U
110-82-7	Cyclohexane	3.1	U
108-87-2	Methylcyclohexane	3.1	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03DW-1 0A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-12

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-1271

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	~~U~~ U5 CCH
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5 ~~1.1 JB~~	U MBL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50 ~~0.026 JB~~	U MBL
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50 ~~0.091 JB~~	U MBL
78-93-3	2-butanone	2.5	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	~~U~~ U5 CCL
591-78-6	2-hexanone	2.5	~~U~~ U5 CCH
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03DW-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-12

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-1271

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW06-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 WW 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-18

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-1871

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	~~U~~ UJ CCH
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5 ~~1.4~~ ~~JB~~	U MBL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	U
67-66-3	Chloroform	1.5	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50 ~~0.096~~ ~~J~~	U EBL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	~~U~~ UJ CCL
591-78-6	2-hexanone	2.5	~~U~~ UJ CCH
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

WW 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW06-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 VM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-18

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-1871

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

VM 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW08-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LMM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-19

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-1971

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	~~U~~ UJ CCH
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5 ~~1.2~~	~~JB~~ U MBL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	U
67-66-3	Chloroform	0.64	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50 ~~0.088~~	~~J~~ U EBL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	~~U~~ UJ CCL
591-78-6	2-hexanone	2.5	~~U~~ UJ CCH
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

LMM 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW08-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-19

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-1971

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

LM 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW08D-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-20

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-2071

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	~~U~~ UJ CCH
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5 ~~0.71~~ ~~JB~~	UMBL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1 Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	U
67-66-3	Chloroform	0.66	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50 ~~0.061~~ ~~J~~	U EBL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	~~U~~ UJ CCL
591-78-6	2-hexanone	2.5	~~U~~ UJ CCH
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW08D-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-20

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-2071

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

LM 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09DW-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-05

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-0571

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/16/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.035	J
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5	~~U~~ R ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.66	~~B~~ U EBL
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50 ~~0.12~~	~~J~~ U EBL
78-93-3	2-butanone	2.5	~~U~~ R ICL
67-66-3	Chloroform	0.50 ~~0.43~~	~~J~~ U EBL
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50 ~~0.034~~	~~J~~ U ~~EBL~~ EBL
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.055	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50 ~~0.076~~	~~J~~ U EBL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

Correction 11/16/2010

LM 072210

LM 072210

642

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09DW-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-05

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-0571

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/16/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50 ~~0.070~~	~~J~~ U FBL
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	~~U~~ UJ ICH
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09IW-1 CA

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LMM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-04

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-0471

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/16/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.38	J
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.035	J
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5	~~U~~ RICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50 ~~0.20~~ ~~JB~~	U MBL
156-60-5	trans-1,2-Dichloroethene	0.089	J
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	68	~~E~~ exclude, DL
78-93-3	2-butanone	2.5	~~U~~ RICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50 ~~0.035~~ ~~J~~	U EBL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2 hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

LMM 072210

044

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09IW-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-04

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-0471

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/16/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	~~U~~ UJ ICH
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

LM 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09IWDL 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LWM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-04RE1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-04D71

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 2.8

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	1.4	U Exclude, DL
74-87-3	Chloromethane	1.4	U
75-01-4	Vinyl Chloride	0.34	DJ
74-83-9	Bromomethane	1.4	U
75-00-3	Chloroethane	1.4	U
75-69-4	Trichlorofluoromethane	1.4	U
75-35-4	1,1-Dichloroethene	1.4	U
75-15-0	Carbon disulfide	1.4	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	1.4	U
67-64-1	Acetone	2.8	DJB
79-20-9	Methyl acetate	1.4	U
75-09-2	Methylene Chloride	0.27	DJB
156-60-5	trans-1,2-Dichloroethene	1.4	U
1634-04-4	Methyl-tert-butyl ether	1.4	U
75-34-3	1,1-Dichloroethane	1.4	U
156-59-2	cis-1,2-Dichloroethene	67	~~DB~~
78-93-3	2-butanone	7.0	U exclude, DL
67-66-3	Chloroform	1.4	U
71-55-6	1,1,1-Trichloroethane	1.4	U
56-23-5	Carbon Tetrachloride	1.4	U
71-43-2	Benzene	1.4	U
107-06-2	1,2-Dichloroethane	1.4	U
79-01-6	Trichloroethene	1.4	U
78-87-5	1,2-Dichloropropane	1.4	U
75-27-4	Bromodichloromethane	1.4	U
10061-01-5	cis-1,3-Dichloropropene	1.4	U
108-10-1	4-Methyl-2-pentanone	7.0	U
108-88-3	Toluene	1.4	U
10061-02-6	trans-1,3-Dichloropropene	1.4	U
79-00-5	1,1,2-Trichloroethane	1.4	U
127-18-4	Tetrachloroethene	1.4	U
591-78-6	2-hexanone	7.0	U
124-48-1	Dibromochloromethane	1.4	U

FORM I VOA

LWM 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09IWDL 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 MM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-04RE1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-04D71

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 2.8

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	1.4	U
108-90-7	Chlorobenzene	1.4	U
100-41-4	Ethylbenzene	1.4	U
108-38-3	m,p-Xylene	2.8	U
95-47-6	o-Xylene	1.4	U
100-42-5	Styrene	1.4	U
75-25-2	Bromoform	1.4	U
98-82-8	Isopropyl Benzene	1.4	U
79-34-5	1,1,2,2-Tetrachloroethane	1.4	U
541-73-1	1,3-Dichlorobenzene	1.4	U
106-46-7	1,4-Dichlorobenzene	1.4	U
95-50-1	1,2-Dichlorobenzene	1.4	U
96-12-8	1,2-Dibromo-3-Chloropropane	1.4	U
120-82-1	1,2,4-Trichlorobenzene	1.4	U
1330-20-7	Xylene (total)	1.4	U
110-82-7	Cyclohexane	1.4	U
108-87-2	Methylcyclohexane	1.4	U

exclude DL

FORM I VOA

MM 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-13

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-1371

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	12	
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	~~U~~ UJ CCIH
75-35-4	1,1 Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.14	J
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5 ~~2.0~~ ~~JB~~ U FBL	
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.78	
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	2.1	~~B~~
78-93-3	2-butanone	2.5	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50 ~~0.037~~ J U FBL	
107-06-2	1,2-Dichloroethane	13	
79-01-6	Trichloroethene	0.38	J
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50 ~~0.049~~ J U FBL	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	1.3	
127-18-4	Tetrachloroethene	0.50	~~U~~ UJ CCL
591-78-6	2-hexanone	2.5	~~U~~ UJ CCIH
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

LM 072210

048

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-13

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-1371

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	1.3	
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	2.9	
541-73-1	1,3-Dichlorobenzene	0.55	
106-46-7	1,4-Dichlorobenzene	3.3	
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.13	J
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15IW-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LMM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-07

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-0771

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. Date Analyzed: 03/16/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	1600	~~E~~ exclude, DL
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	11	
75-15-0	Carbon disulfide	0.030	J
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	3.3	~~B~~ ~~U EPA~~ R, ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	600	~~E~~ exclude, DL
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	2100	~~E~~ exclude, DL
78-93-3	2-butanone	2.5	~~U~~ R ICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50 ~~0.27~~	~~J~~ U EPA
107-06-2	1,2-Dichloroethane	19	
79-01-6	Trichloroethene	J, LR 100	~~E~~ ~~exclude, DL~~
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50 ~~0.11~~	~~J~~ U EPA
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

Corrections LMM 072210

LMM 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15IW-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-07

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-0771

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/16/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	1.0	J ICH
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	8.5	
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

LM 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15IWDL 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-07RE1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-07D271

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1666.7

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	830	~~U~~ exclude DL
74-87-3	Chloromethane	830	~~U~~ exclude DL
75-01-4	Vinyl Chloride	5500	~~U~~
74-83-9	Bromomethane	830	~~U~~ exclude DL
75-00-3	Chloroethane	830	~~U~~
75-69-4	Trichlorofluoromethane	830	~~U~~
75-35-4	1,1-Dichloroethene	830	~~U~~
75-15-0	Carbon disulfide	830	~~U~~
76-13-1	1,1,2-trichloro-1,2,2-triflu	830	~~U~~
67-64-1	Acetone	4200	~~U~~
79-20-9	Methyl acetate	830	~~U~~
75-09-2	Methylene Chloride	830	~~U~~
156-60-5	trans-1,2-Dichloroethene	750	~~DJ~~
1634-04-4	Methyl-tert-butyl ether	830	U exclude DL
75-34-3	1,1-Dichloroethane	830	U exclude DL
156-59-2	cis-1,2-Dichloroethene	51000	~~DB~~
78-93-3	2-butanone	4200	U exclude DL
67-66-3	Chloroform	830	~~U~~
71-55-6	1,1,1-Trichloroethane	830	~~U~~
56-23-5	Carbon Tetrachloride	830	~~U~~
71-43-2	Benzene	830	~~U~~
107-06-2	1,2-Dichloroethane	830	~~U~~
79-01-6	Trichloroethene	830	~~U~~
78-87-5	1,2-Dichloropropane	830	~~U~~
75-27-4	Bromodichloromethane	830	~~U~~
10061-01-5	cis-1,3-Dichloropropene	830	~~U~~
108-10-1	4-Methyl-2-pentanone	4200	~~U~~
108-88-3	Toluene	830	~~U~~
10061-02-6	trans-1,3-Dichloropropene	830	~~U~~
79-00-5	1,1,2-Trichloroethane	830	~~U~~
127-18-4	Tetrachloroethene	830	~~U~~
591-78-6	2-hexanone	4200	~~U~~
124-48-1	Dibromochloromethane	830	~~U~~

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW151WDL-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-07RE1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-07D271

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1666.7

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	830	U
108-90-7	Chlorobenzene	830	U
100-41-4	Ethylbenzene	830	U
108-38-3	m,p-Xylene	1700	U
95-47-6	o-Xylene	830	U
100-42-5	Styrene	830	U
75-25-2	Bromoform	830	U
98-82-8	Isopropyl Benzene	830	U
79-34-5	1,1,2,2-Tetrachloroethane	830	U
541-73-1	1,3-Dichlorobenzene	830	U
106-46-7	1,4-Dichlorobenzene	830	U
95-50-1	1,2-Dichlorobenzene	830	U
96-12-8	1,2-Dibromo-3-Chloropropane	830	U
120-82-1	1,2,4-Trichlorobenzene	830	U
1330-20-7	Xylene (total)	830	U
110-82-7	Cyclohexane	830	U
108-87-2	Methylcyclohexane	830	U

Exclude, DL

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW27DW - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LLL 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-03

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-0371

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/16/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1 Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.021	J
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5 ~~2.0~~ ~~JB~~ ~~U MBL~~	RICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50 ~~0.19~~ ~~JB~~ U MBL	
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5 ~~U~~	RICL
67-66-3	Chloroform	2.9	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50 ~~0.20~~ ~~J~~ U	EBL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

1 correction LLL 072210

LLL 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW27DW - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LMM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-03

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-0371

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/16/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U UJICH
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

LMM 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW27IW — 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LLL 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-02

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-0271

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/16/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.20	J
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5 ~~1.8~~	~~JB~~ U ~~MBL~~ R ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.5 ~~0.25~~	~~JB~~ U MBL
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ R ICL
67-66-3	Chloroform	2.9	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50 ~~0.10~~	~~J~~ U EBL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

1 correction LLL 072210

072210

005

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW27IW - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 MM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-02

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-0271

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/16/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	~~U~~ UJ ICH
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

MM 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-TB0
1-030810

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-16

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-1671

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	~~U~~ UJCCH
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	1.8	~~JB~~
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.032	~~JB~~
78-93-3	2-butanone	2.5	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	~~U~~ UJCCL
591-78-6	2-hexanone	2.5	~~U~~ UJCCH
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

MM 072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-TB0
1-030810

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-16

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003089-1671

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

072210

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW06MS 10/7

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 0031702-MS1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 0031702-MS171

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.6	
74-87-3	Chloromethane	5.2	
75-01-4	Vinyl Chloride	5.3	
74-83-9	Bromomethane	4.5	
75-00-3	Chloroethane	5.5	
75-69-4	Trichlorofluoromethane	8.2	
75-35-4	1,1-Dichloroethene	5.3	
75-15-0	Carbon disulfide	5.5	
76-13-1	1,1,2-trichloro-1,2,2-triflu	5.0	
67-64-1	Acetone	27	B
79-20-9	Methyl acetate	5.1	
75-09-2	Methylene Chloride	5.4	B
156-60-5	trans-1,2-Dichloroethene	5.6	
1634-04-4	Methyl-tert-butyl ether	4.7	
75-34-3	1,1-Dichloroethane	5.7	
156-59-2	cis-1,2-Dichloroethene	5.5	B
78-93-3	2-butanone	23	
67-66-3	Chloroform	7.6	
71-55-6	1,1,1-Trichloroethane	6.0	
56-23-5	Carbon Tetrachloride	5.6	
71-43-2	Benzene	5.3	
107-06-2	1,2-Dichloroethane	6.0	
79-01-6	Trichloroethene	5.1	
78-87-5	1,2-Dichloropropane	5.6	
75-27-4	Bromodichloromethane	5.9	
10061-01-5	cis-1,3-Dichloropropene	5.1	
108-10-1	4-Methyl-2-pentanone	23	
108-88-3	Toluene	4.5	
10061-02-6	trans-1,3-Dichloropropene	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	
127-18-4	Tetrachloroethene	4.6	
591-78-6	2-hexanone	23	
124-48-1	Dibromochloromethane	5.0	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW06MS 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 0031702-MS1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 0031702-MS171

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	4.8	
108-90-7	Chlorobenzene	4.6	
100-41-4	Ethylbenzene	4.1	
108-38-3	m,p-Xylene	8.7	
95-47-6	o-Xylene	4.4	
100-42-5	Styrene	4.5	
75-25-2	Bromoform	5.0	
98-82-8	Isopropyl Benzene	4.1	
79-34-5	1,1,2,2-Tetrachloroethane	4.4	
541-73-1	1,3-Dichlorobenzene	3.7	
106-46-7	1,4-Dichlorobenzene	4.0	
95-50-1	1,2-Dichlorobenzene	4.2	
96-12-8	1,2-Dibromo-3-Chloropropane	3.9	
120-82-1	1,2,4-Trichlorobenzene	3.5	
1330-20-7	Xylene (total)	14	
110-82-7	Cyclohexane	4.0	
108-87-2	Methylcyclohexane	3.4	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW06MSD

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 0031702-MSD1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 0031702-MSD171

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.6	
74-87-3	Chloromethane	5.6	
75-01-4	Vinyl Chloride	5.9	
74-83-9	Bromomethane	4.9	
75-00-3	Chloroethane	5.6	
75-69-4	Trichlorofluoromethane	8.3	
75-35-4	1,1-Dichloroethene	5.7	
75-15-0	Carbon disulfide	5.5	
76-13-1	1,1,2-trichloro-1,2,2-triflu	5.3	
67-64-1	Acetone	26	B
79-20-9	Methyl acetate	4.9	
75-09-2	Methylene Chloride	5.4	B
156-60-5	trans-1,2-Dichloroethene	5.6	
1634-04-4	Methyl-tert-butyl ether	4.7	
75-34-3	1,1-Dichloroethane	5.7	
156-59-2	cis-1,2-Dichloroethene	5.5	B
78-93-3	2-butanone	23	
67-66-3	Chloroform	7.5	
71-55-6	1,1,1-Trichloroethane	6.1	
56-23-5	Carbon Tetrachloride	5.8	
71-43-2	Benzene	5.4	
107-06-2	1,2-Dichloroethane	5.8	
79-01-6	Trichloroethene	5.2	
78-87-5	1,2-Dichloropropane	5.5	
75-27-4	Bromodichloromethane	5.8	
10061-01-5	cis-1,3-Dichloropropene	5.0	
108-10-1	4-Methyl-2-pentanone	22	
108-88-3	Toluene	4.7	
10061-02-6	trans-1,3-Dichloropropene	5.0	
79-00-5	1,1,2-Trichloroethane	4.9	
127-18-4	Tetrachloroethene	4.9	
591-78-6	2-hexanone	23	
124-48-1	Dibromochloromethane	5.0	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW06MSD

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 0031702-MSD1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 0031702-MSD171

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/17/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	4.8	
108-90-7	Chlorobenzene	4.7	
100-41-4	Ethylbenzene	4.4	
108-38-3	m,p-Xylene	9.3	
95-47-6	o-Xylene	4.5	
100-42-5	Styrene	4.7	
75-25-2	Bromoform	5.0	
98-82-8	Isopropyl Benzene	4.5	
79-34-5	1,1,2,2-Tetrachloroethane	4.3	
541-73-1	1,3-Dichlorobenzene	4.0	
106-46-7	1,4-Dichlorobenzene	4.3	
95-50-1	1,2-Dichlorobenzene	4.4	
96-12-8	1,2-Dibromo-3-Chloropropane	3.9	
120-82-1	1,2,4-Trichlorobenzene	3.8	
1330-20-7	Xylene (total)	14	
110-82-7	Cyclohexane	4.3	
108-87-2	Methylcyclohexane	3.8	

FORM I VOA

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69 EB01-030410-SS

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 MM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-01A70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/11/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

MM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030410-SS

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-01A70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/11/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030410-SS

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-01A60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/11/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IEW EB01-030610-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LMM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-08C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2 Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

LMM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IF04 EB01-030610-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-08C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	~~U~~ UJ CCL
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	~~U~~ UJ CCL

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

LM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030610-GW

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-08C60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRL61 EB01-030710-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-09

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1003089-09JA70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.3	U
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.3	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.3	U
98-86-2	Acetophenone	5.3	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.3	U
67-72-1	Hexachloroethane	5.3	U
98-95-3	Nitrobenzene	5.3	U
78-59-1	Isophorone	5.3	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.3	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.3	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.3	U
105-60-2	Caprolactam	5.3	~~U~~ ~~UJ~~ ~~CCH~~ U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.3	U
77-47-4	Hexachlorocyclopentadiene	5.3	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.3	U
91-58-7	2-Chloronaphthalene	5.3	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.3	U
606-20-2	2,6-Dinitrotoluene	5.3	U
208-96-8	Acenaphthylene	5.3	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.3	U

FORM I SV 8270C

Correction LM 072310

LM 072210

U70

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR64 EB01-030710-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-09

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1003089-09JA70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.3	U
132-64-9	Dibenzofuran	5.3	U
84-66-2	Diethylphthalate	5.3	U
7005-72-3	4-Chlorophenyl-phenylether	5.3	U
86-73-7	Fluorene	5.3	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.3	U
101-55-3	4-Bromophenyl-phenylether	5.3	U
118-74-1	Hexachlorobenzene	5.3	U
1912-24-9	Atrazine	5.3	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.3	U
120-12-7	Anthracene	5.3	U
86-74-8	Carbazole	5.3	U
84-74-2	Di-n-butylphthalate	5.3	U
206-44-0	Fluoranthene	5.3	U
129-00-0	Pyrene	5.3	U
85-68-7	Butylbenzylphthalate	5.3	U
91-94-1	3,3'-Dichlorobenzidine	5.3	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.3	U
56-55-3	Benzo(a)anthracene	5.3	U
218-01-9	Chrysene	5.3	U
117-84-0	Di-n-octylphthalate	5.3	U
205-99-2	Benzo(b)fluoranthene	5.3	U
207-08-9	Benzo(k)fluoranthene	5.3	U
50-32-8	Benzo(a)pyrene	5.3	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.3	U
53-70-3	Dibenzo(a,h)anthracene	5.3	U
191-24-2	Benzo(g,h,i)perylene	5.3	U

(1) - Cannot be separated from Diphenylamine

LM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030710-GW

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-09

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1003089-09C60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.21	U
91-57-6	2-Methylnaphthalene	0.21	U
208-96-8	Acenaphthylene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	U
206-44-0	Fluoranthene	0.21	U
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U
53-70-3	Dibenzo(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030710-SB

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-17

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-17JC70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.1	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.1	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.1	U
98-86-2	Acetophenone	5.1	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.1	U
67-72-1	Hexachloroethane	5.1	U
98-95-3	Nitrobenzene	5.1	U
78-59-1	Isophorone	5.1	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.1	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.1	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.1	U
105-60-2	Caprolactam	5.1	~~U~~ UJ CCH
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.1	U
77-47-4	Hexachlorocyclopentadiene	5.1	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.1	U
91-58-7	2-Chloronaphthalene	5.1	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.1	U
606-20-2	2,6-Dinitrotoluene	5.1	U
208-96-8	Acenaphthylene	5.1	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.1	U

UJ 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IC69 | EB01-030710-SB

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LMM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-17

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-17JC70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.1	U
132-64-9	Dibenzofuran	5.1	U
84-66-2	Diethylphthalate	5.1	U
7005-72-3	4-Chlorophenyl-phenylether	5.1	U
86-73-7	Fluorene	5.1	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.1	U
101-55-3	4-Bromophenyl-phenylether	5.1	U
118-74-1	Hexachlorobenzene	5.1	U
1912-24-9	Atrazine	5.1	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.1	U
120-12-7	Anthracene	5.1	U
86-74-8	Carbazole	5.1	U
84-74-2	Di-n-butylphthalate	5.1	U
206-44-0	Fluoranthene	5.1	U
129-00-0	Pyrene	5.1	U
85-68-7	Butylbenzylphthalate	5.1	U
91-94-1	3,3'-Dichlorobenzidine	5.1	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.1	U
56-55-3	Benzo(a)anthracene	5.1	U
218-01-9	Chrysene	5.1	U
117-84-0	Di-n-octylphthalate	5.1	U
205-99-2	Benzo(b)fluoranthene	5.1	U
207-08-9	Benzo(k)fluoranthene	5.1	U
50-32-8	Benzo(a)pyrene	5.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.1	U
53-70-3	Dibenzo(a,h)anthracene	5.1	U
191-24-2	Benzo(g,h,i)perylene	5.1	U

(1) - Cannot be separated from Diphenylamine

LMM 072210

074

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030710-SB

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-17

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-17A60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.21	U
91-57-6	2-Methylnaphthalene	0.21	U
208-96-8	Acenaphthylene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	U
206-44-0	Fluoranthene	0.21	U
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U
53-70-3	Dibenzo(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IFW EB01-030810-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 MM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-21

Sample wt/vol: 900 (g/mL) ML Lab File ID: 1003089-21A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.6	U
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.6	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.6	U
98-86-2	Acetophenone	5.6	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.6	U
67-72-1	Hexachloroethane	5.6	U
98-95-3	Nitrobenzene	5.6	U
78-59-1	Isophorone	5.6	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.6	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.6	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.6	U
105-60-2	Caprolactam	5.6	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.6	U
77-47-4	Hexachlorocyclopentadiene	5.6	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.6	U
91-58-7	2-Chloronaphthalene	5.6	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.6	U
606-20-2	2,6-Dinitrotoluene	5.6	U
208-96-8	Acenaphthylene	5.6	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.6	U

MM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IEA EB01-030810-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 UA 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-21

Sample wt/vol: 900 (g/mL) ML Lab File ID: 1003089-21A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.6	U
132-64-9	Dibenzofuran	5.6	U
84-66-2	Diethylphthalate	5.6	U
7005-72-3	4-Chlorophenyl-phenylether	5.6	U
86-73-7	Fluorene	5.6	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.6	U
101-55-3	4-Bromophenyl-phenylether	5.6	U
118-74-1	Hexachlorobenzene	5.6	U
1912-24-9	Atrazine	5.6	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.6	U
120-12-7	Anthracene	5.6	U
86-74-8	Carbazole	5.6	U
84-74-2	Di-n-butylphthalate	5.6	U
206-44-0	Fluoranthene	5.6	U
129-00-0	Pyrene	5.6	U
85-68-7	Butylbenzylphthalate	5.6	U
91-94-1	3,3'-Dichlorobenzidine	5.6	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.6	U
56-55-3	Benzo(a)anthracene	5.6	U
218-01-9	Chrysene	5.6	U
117-84-0	Di-n-octylphthalate	5.6	U
205-99-2	Benzo(b)fluoranthene	5.6	U
207-08-9	Benzo(k)fluoranthene	5.6	U
50-32-8	Benzo(a)pyrene	5.6	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.6	U
53-70-3	Dibenzo(a,h)anthracene	5.6	U
191-24-2	Benzo(g,h,i)perylene	5.6	U

(1) - Cannot be separated from Diphenylamine

UA 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030810-GW

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-21

Sample wt/vol: 900 (g/mL) ML Lab File ID: 1003089-21C60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.22	U
91-57-6	2-Methylnaphthalene	0.22	U
208-96-8	Acenaphthylene	0.22	U
83-32-9	Acenaphthene	0.22	U
86-73-7	Fluorene	0.22	U
85-01-8	Phenanthrene	0.22	U
120-12-7	Anthracene	0.22	U
206-44-0	Fluoranthene	0.22	U
129-00-0	Pyrene	0.22	U
56-55-3	Benzo(a)anthracene	0.22	U
218-01-9	Chrysene	0.22	U
205-99-2	Benzo(b)fluoranthene	0.22	U
207-08-9	Benzo(k)fluoranthene	0.22	U
50-32-8	Benzo(a)pyrene	0.22	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.22	U
53-70-3	Dibenzo(a,h)anthracene	0.22	U
191-24-2	Benzo(g,h,i)perylene	0.22	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02DD -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-06

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-06C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.1	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.1	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.1	U
98-86-2	Acetophenone	5.1	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.1	U
67-72-1	Hexachloroethane	5.1	U
98-95-3	Nitrobenzene	5.1	U
78-59-1	Isophorone	5.1	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.1	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.1	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.1	U
105-60-2	Caprolactam	5.1	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.1	U
77-47-4	Hexachlorocyclopentadiene	5.1	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.1	U
91-58-7	2-Chloronaphthalene	5.1	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.1	U
606-20-2	2,6-Dinitrotoluene	5.1	U
208-96-8	Acenaphthylene	5.1	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.1	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02DD-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-06

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-06C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.1	U
132-64-9	Dibenzofuran	5.1	U
84-66-2	Diethylphthalate	5.1	U
7005-72-3	4-Chlorophenyl-phenylether	5.1	U
86-73-7	Fluorene	5.1	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.1	U
101-55-3	4-Bromophenyl-phenylether	5.1	U
118-74-1	Hexachlorobenzene	5.1	U
1912-24-9	Atrazine	5.1	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.1	U
120-12-7	Anthracene	5.1	U
86-74-8	Carbazole	5.1	U
84-74-2	Di-n-butylphthalate	5.1	U
206-44-0	Fluoranthene	5.1	U
129-00-0	Pyrene	5.1	U
85-68-7	Butylbenzylphthalate	5.1	U
91-94-1	3,3'-Dichlorobenzidine	5.1	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.1	U
56-55-3	Benzo(a)anthracene	5.1	U
218-01-9	Chrysene	5.1	U
117-84-0	Di-n-octylphthalate	5.1	U
205-99-2	Benzo(b)fluoranthene	5.1	U
207-08-9	Benzo(k)fluoranthene	5.1	U
50-32-8	Benzo(a)pyrene	5.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.1	~~U~~ UJ CCL
53-70-3	Dibenzo(a,h)anthracene	5.1	U
191-24-2	Benzo(g,h,i)perylene	5.1	~~U~~ UJ CCL

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02DD-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDC No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-06

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-06C60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.21	U
91-57-6	2-Methylnaphthalene	0.21	U
208-96-8	Acenaphthylene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	U
206-44-0	Fluoranthene	0.21	U
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U
53-70-3	Dibenzo(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-11

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-11C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)____ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-11

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-11C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	~~U~~ UJ CCL
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	~~U~~ UJ CCL

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

LM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03 ~10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LMT 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-11

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-11C60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.2~~0.051~~	~~J~~ U PBL
91-57-6	2-Methylnaphthalene	0.13	J
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

LMT 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03D-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-10

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-10JA70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03D-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-10

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-10JA70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03D-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-10

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-10C60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20 ~~0.068~~	~~J~~ U PBL
91-57-6	2-Methylnaphthalene	0.12	J
208-96-8	Acenaphthylene	0.010	J
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03DW-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-12

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-12A70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

072210

068

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03DW-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-12

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-12A70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03DW -10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LLM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-12

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-12A60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	~~U~~ UJ CCL
191-24-2	Benzo(g,h,i)perylene	0.20	U

LLM 072210

030

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW06 -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-18

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1003089-18JC70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.3	U
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.3	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.3	U
98-86-2	Acetophenone	5.3	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.3	U
67-72-1	Hexachloroethane	5.3	U
98-95-3	Nitrobenzene	5.3	U
78-59-1	Isophorone	5.3	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.3	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.3	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.3	U
105-60-2	Caprolactam	5.3	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.3	U
77-47-4	Hexachlorocyclopentadiene	5.3	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.3	U
91-58-7	2-Chloronaphthalene	5.3	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.3	U
606-20-2	2,6-Dinitrotoluene	5.3	U
208-96-8	Acenaphthylene	5.3	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.3	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW06 -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-18

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1003089-18JC70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.3	U
132-64-9	Dibenzofuran	5.3	U
84-66-2	Diethylphthalate	5.3	U
7005-72-3	4-Chlorophenyl-phenylether	5.3	U
86-73-7	Fluorene	5.3	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.3	U
101-55-3	4-Bromophenyl-phenylether	5.3	U
118-74-1	Hexachlorobenzene	5.3	U
1912-24-9	Atrazine	5.3	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.3	U
120-12-7	Anthracene	5.3	U
86-74-8	Carbazole	5.3	U
84-74-2	Di-n-butylphthalate	5.3	U
206-44-0	Fluoranthene	5.3	U
129-00-0	Pyrene	5.3	U
85-68-7	Butylbenzylphthalate	5.3	U
91-94-1	3,3'-Dichlorobenzidine	5.3	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.3	U
56-55-3	Benzo(a)anthracene	5.3	U
218-01-9	Chrysene	5.3	U
117-84-0	Di-n-octylphthalate	5.3	U
205-99-2	Benzo(b)fluoranthene	5.3	U
207-08-9	Benzo(k)fluoranthene	5.3	U
50-32-8	Benzo(a)pyrene	5.3	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.3	U
53-70-3	Dibenzo(a,h)anthracene	5.3	U
191-24-2	Benzo(g,h,i)perylene	5.3	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW06 -10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-18

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1003089-18A60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/13/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.21	U
91-57-6	2-Methylnaphthalene	0.21	U
208-96-8	Acenaphthylene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	U
206-44-0	Fluoranthene	0.21	U
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U
53-70-3	Dibenzo(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW08 - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 VM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-19

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-19J2C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.1	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.1	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.1	U
98-86-2	Acetophenone	5.1	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.1	U
67-72-1	Hexachloroethane	5.1	U
98-95-3	Nitrobenzene	5.1	U
78-59-1	Isophorone	5.1	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.1	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.1	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.1	U
105-60-2	Caprolactam	5.1	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.1	U
77-47-4	Hexachlorocyclopentadiene	5.1	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.1	U
91-58-7	2-Chloronaphthalene	5.1	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.1	U
606-20-2	2,6-Dinitrotoluene	5.1	U
208-96-8	Acenaphthylene	5.1	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.1	U

VM 072210

U54

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW08 - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LMM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-19

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-19J2C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.1	U
132-64-9	Dibenzofuran	5.1	U
84-66-2	Diethylphthalate	5.1	U
7005-72-3	4-Chlorophenyl-phenylether	5.1	U
86-73-7	Fluorene	5.1	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.1	U
101-55-3	4-Bromophenyl-phenylether	5.1	U
118-74-1	Hexachlorobenzene	5.1	U
1912-24-9	Atrazine	5.1	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.1	U
120-12-7	Anthracene	5.1	U
86-74-8	Carbazole	5.1	U
84-74-2	Di-n-butylphthalate	5.1	U
206-44-0	Fluoranthene	5.1	U
129-00-0	Pyrene	5.1	U
85-68-7	Butylbenzylphthalate	5.1	U
91-94-1	3,3'-Dichlorobenzidine	5.1	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.1	U
56-55-3	Benzo(a)anthracene	5.1	U
218-01-9	Chrysene	5.1	U
117-84-0	Di-n-octylphthalate	5.1	U
205-99-2	Benzo(b)fluoranthene	5.1	U
207-08-9	Benzo(k)fluoranthene	5.1	U
50-32-8	Benzo(a)pyrene	5.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.1	U
53-70-3	Dibenzo(a,h)anthracene	5.1	U
191-24-2	Benzo(g,h,i)perylene	5.1	U

(1) - Cannot be separated from Diphenylamine

LMM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW08 - 10 A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-19

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-19A60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)__ Date Extracted: 03/13/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.21	U
91-57-6	2-Methylnaphthalene	0.21	U
208-96-8	Acenaphthylene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	U
206-44-0	Fluoranthene	0.21	U
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U
53-70-3	Dibenzo(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U

LM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW08D-1DA

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-20

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003089-20A70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.4	U
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.4	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.4	U
98-86-2	Acetophenone	5.4	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.4	U
67-72-1	Hexachloroethane	5.4	U
98-95-3	Nitrobenzene	5.4	U
78-59-1	Isophorone	5.4	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.4	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.4	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.4	U
105-60-2	Caprolactam	5.4	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.4	U
77-47-4	Hexachlorocyclopentadiene	5.4	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.4	U
91-58-7	2-Chloronaphthalene	5.4	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.4	U
606-20-2	2,6-Dinitrotoluene	5.4	U
208-96-8	Acenaphthylene	5.4	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.4	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW08D -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-20

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003089-20A70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.4	U
132-64-9	Dibenzofuran	5.4	U
84-66-2	Diethylphthalate	5.4	U
7005-72-3	4-Chlorophenyl-phenylether	5.4	U
86-73-7	Fluorene	5.4	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.4	U
101-55-3	4-Bromophenyl-phenylether	5.4	U
118-74-1	Hexachlorobenzene	5.4	U
1912-24-9	Atrazine	5.4	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.4	U
120-12-7	Anthracene	5.4	U
86-74-8	Carbazole	5.4	U
84-74-2	Di-n-butylphthalate	5.4	U
206-44-0	Fluoranthene	5.4	U
129-00-0	Pyrene	5.4	U
85-68-7	Butylbenzylphthalate	5.4	U
91-94-1	3,3'-Dichlorobenzidine	5.4	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.4	U
56-55-3	Benzo(a)anthracene	5.4	U
218-01-9	Chrysene	5.4	U
117-84-0	Di-n-octylphthalate	5.4	~~U~~ UJ ISL
205-99-2	Benzo(b)fluoranthene	5.4	~~U~~
207-08-9	Benzo(k)fluoranthene	5.4	~~U~~
50-32-8	Benzo(a)pyrene	5.4	~~U~~
193-39-5	Indeno(1,2,3-cd)pyrene	5.4	~~U~~
53-70-3	Dibenzo(a,h)anthracene	5.4	~~U~~
191-24-2	Benzo(g,h,i)perylene	5.4	~~U~~

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

UM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW08D -10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-20

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003089-20A60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/13/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.22	U
91-57-6	2-Methylnaphthalene	0.22	U
208-96-8	Acenaphthylene	0.22	U
83-32-9	Acenaphthene	0.22	U
86-73-7	Fluorene	0.22	U
85-01-8	Phenanthrene	0.22	U
120-12-7	Anthracene	0.22	U
206-44-0	Fluoranthene	0.22	U
129-00-0	Pyrene	0.22	U
56-55-3	Benzo(a)anthracene	0.22	U
218-01-9	Chrysene	0.22	U
205-99-2	Benzo(b)fluoranthene	0.22	U
207-08-9	Benzo(k)fluoranthene	0.22	U
50-32-8	Benzo(a)pyrene	0.22	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.22	U
53-70-3	Dibenzo(a,h)anthracene	0.22	U
191-24-2	Benzo(g,h,i)perylene	0.22	U

LM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW08DRE-1DA

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 WM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-20

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003089-20J2C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.4	U exclude RE
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.4	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.4	U
98-86-2	Acetophenone	5.4	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.4	U
67-72-1	Hexachloroethane	5.4	U
98-95-3	Nitrobenzene	5.4	U
78-59-1	Isophorone	5.4	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.4	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.4	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.4	U
105-60-2	Caprolactam	5.4	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.4	U
77-47-4	Hexachlorocyclopentadiene	5.4	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.4	U
91-58-7	2-Chloronaphthalene	5.4	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.4	U
606-20-2	2,6-Dinitrotoluene	5.4	U
208-96-8	Acenaphthylene	5.4	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.4	U

WM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW08DRE-1DA

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-20

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003089-20J2C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.4	U
132-64-9	Dibenzofuran	5.4	U
84-66-2	Diethylphthalate	5.4	U
7005-72-3	4-Chlorophenyl-phenylether	5.4	U
86-73-7	Fluorene	5.4	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.4	U
101-55-3	4-Bromophenyl-phenylether	5.4	U
118-74-1	Hexachlorobenzene	5.4	U
1912-24-9	Atrazine	5.4	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.4	U
120-12-7	Anthracene	5.4	U
86-74-8	Carbazole	5.4	U
84-74-2	Di-n-butylphthalate	5.4	U
206-44-0	Fluoranthene	5.4	U
129-00-0	Pyrene	5.4	U
85-68-7	Butylbenzylphthalate	5.4	U
91-94-1	3,3'-Dichlorobenzidine	5.4	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.4	U
56-55-3	Benzo(a)anthracene	5.4	U
218-01-9	Chrysene	5.4	U
117-84-0	Di-n-octylphthalate	5.4	U
205-99-2	Benzo(b)fluoranthene	5.4	U
207-08-9	Benzo(k)fluoranthene	5.4	U
50-32-8	Benzo(a)pyrene	5.4	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.4	U
53-70-3	Dibenzo(a,h)anthracene	5.4	U
191-24-2	Benzo(g,h,i)perylene	5.4	U

Exclude RE

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09DW-1DA

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-05JA70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09DW-1DA

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-05JA70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

LM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09DW-1DA

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-05C60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

LM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09IW ~ 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LMM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-04C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

LMM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09IW-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-04C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	~~U~~ UJ CCL
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	~~U~~ UJ CCL

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

LM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09IW-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 MM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-04C60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

MM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LMM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-13

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-13JC70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

LMM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-13

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-13JC70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

LM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-13

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-13A60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.013	J
129-00-0	Pyrene	0.018	J
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	~~U~~ UJ CCL
191-24-2	Benzo(g,h,i)perylene	0.20	U

LM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15IW-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-07

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-07C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.1	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.1	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.1	U
98-86-2	Acetophenone	5.1	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.1	U
67-72-1	Hexachloroethane	5.1	U
98-95-3	Nitrobenzene	5.1	U
78-59-1	Isophorone	5.1	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.1	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.1	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.1	U
105-60-2	Caprolactam	5.1	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.1	U
77-47-4	Hexachlorocyclopentadiene	5.1	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.1	U
91-58-7	2-Chloronaphthalene	5.1	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.1	U
606-20-2	2,6-Dinitrotoluene	5.1	U
208-96-8	Acenaphthylene	5.1	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.1	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15IW - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-07

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-07C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.1	U
132-64-9	Dibenzofuran	5.1	U
84-66-2	Diethylphthalate	5.1	U
7005-72-3	4-Chlorophenyl-phenylether	5.1	U
86-73-7	Fluorene	5.1	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.1	U
101-55-3	4-Bromophenyl-phenylether	5.1	U
118-74-1	Hexachlorobenzene	5.1	U
1912-24-9	Atrazine	5.1	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.1	U
120-12-7	Anthracene	5.1	U
86-74-8	Carbazole	5.1	U
84-74-2	Di-n-butylphthalate	5.1	U
206-44-0	Fluoranthene	5.1	U
129-00-0	Pyrene	5.1	U
85-68-7	Butylbenzylphthalate	5.1	U
91-94-1	3,3'-Dichlorobenzidine	5.1	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.1	U
56-55-3	Benzo(a)anthracene	5.1	U
218-01-9	Chrysene	5.1	U
117-84-0	Di-n-octylphthalate	5.1	U
205-99-2	Benzo(b)fluoranthene	5.1	U
207-08-9	Benzo(k)fluoranthene	5.1	U
50-32-8	Benzo(a)pyrene	5.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.1	~~U~~ UJ LLL
53-70-3	Dibenzo(a,h)anthracene	5.1	U
191-24-2	Benzo(g,h,i)perylene	5.1	~~U~~ UJ LLL

(1) - Cannot be separated from Diphenylamine

LLL 072210

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15IW- 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-07

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-07C60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.21	U
91-57-6	2-Methylnaphthalene	0.21	U
208-96-8	Acenaphthylene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	U
206-44-0	Fluoranthene	0.21	U
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U
53-70-3	Dibenzo(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW27DW 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-03C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW27DW 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-03C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	~~U~~ UJ CCL
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	~~U~~ UJ CCL

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

VM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW27DW— 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-03 MM 072210

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-03C60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

MM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW27IW — 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-02

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003089-02JA70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.4	U
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.4	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.4	U
98-86-2	Acetophenone	5.4	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.4	U
67-72-1	Hexachloroethane	5.4	U
98-95-3	Nitrobenzene	5.4	U
78-59-1	Isophorone	5.4	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.4	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.4	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.4	U
105-60-2	Caprolactam	5.4	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.4	U
77-47-4	Hexachlorocyclopentadiene	5.4	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.4	U
91-58-7	2-Chloronaphthalene	5.4	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.4	U
606-20-2	2,6-Dinitrotoluene	5.4	U
208-96-8	Acenaphthylene	5.4	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.4	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW27IW - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-02

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003089-02JA70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.4	U
132-64-9	Dibenzofuran	5.4	U
84-66-2	Diethylphthalate	5.4	U
7005-72-3	4-Chlorophenyl-phenylether	5.4	U
86-73-7	Fluorene	5.4	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.4	U
101-55-3	4-Bromophenyl-phenylether	5.4	U
118-74-1	Hexachlorobenzene	5.4	U
1912-24-9	Atrazine	5.4	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.4	U
120-12-7	Anthracene	5.4	U
86-74-8	Carbazole	5.4	U
84-74-2	Di-n-butylphthalate	5.4	U
206-44-0	Fluoranthene	5.4	U
129-00-0	Pyrene	5.4	U
85-68-7	Butylbenzylphthalate	5.4	U
91-94-1	3,3'-Dichlorobenzidine	5.4	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.4	U
56-55-3	Benzo(a)anthracene	5.4	U
218-01-9	Chrysene	5.4	U
117-84-0	Di-n-octylphthalate	5.4	U
205-99-2	Benzo(b)fluoranthene	5.4	U
207-08-9	Benzo(k)fluoranthene	5.4	U
50-32-8	Benzo(a)pyrene	5.4	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.4	U
53-70-3	Dibenzo(a,h)anthracene	5.4	U
191-24-2	Benzo(g,h,i)perylene	5.4	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW27IW-0A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-02

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003089-02C60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.22	U
91-57-6	2-Methylnaphthalene	0.22	U
208-96-8	Acenaphthylene	0.22	U
83-32-9	Acenaphthene	0.22	U
86-73-7	Fluorene	0.22	U
85-01-8	Phenanthrene	0.22	U
120-12-7	Anthracene	0.22	U
206-44-0	Fluoranthene	0.012	J
129-00-0	Pyrene	0.011	J
56-55-3	Benzo(a)anthracene	0.22	U
218-01-9	Chrysene	0.22	U
205-99-2	Benzo(b)fluoranthene	0.22	U
207-08-9	Benzo(k)fluoranthene	0.22	U
50-32-8	Benzo(a)pyrene	0.22	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.22	U
53-70-3	Dibenzo(a,h)anthracene	0.22	U
191-24-2	Benzo(g,h,i)perylene	0.22	U

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

JRG9- EB01-030410-SS

JAC 72910

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/11/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/11/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/19/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.041	~~JP~~ J 2C
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

JAC 72910

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1R59- EB01-030610-GW JC 72910

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-08

Sample wt/vol: 975.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/11/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/12/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.051	U
319-85-7	beta-BHC	0.051	U
319-84-6	alpha-BHC	0.051	U
319-86-8	delta-BHC	0.051	U
58-89-9	gamma-BHC (Lindane)	0.051	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.051	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.051	U
1024-57-3	Heptachlor Epoxide	0.051	U
72-43-5	Methoxychlor	0.51	U
8001-35-2	Toxaphene	2.6	U
12674-11-2	Aroclor-1016	0.95	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.95	U
53469-21-9	Aroclor-1242	0.64	U
12672-29-6	Aroclor-1248	0.64	U
11097-69-1	Aroclor-1254	0.64	U
11096-82-5	Aroclor-1260	0.95	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.051	U
5103-71-9	alpha-Chlordane	0.051	U

JC 72910

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1R69- EB01-030710-GW

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-09

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/11/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/12/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.034	~~JP~~ J 2C
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1R69- EB01-030710-SB JAC 12910

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-17

Sample wt/vol: 900.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/12/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.056	U
319-85-7	beta-BHC	0.056	U
319-84-6	alpha-BHC	0.056	U
319-86-8	delta-BHC	0.046	~~JP~~ J 2C
58-89-9	gamma-BHC (Lindane)	0.056	U
72-54-8	4,4'-DDD	0.11	U
72-55-9	4,4'-DDE	0.11	U
50-29-3	4,4'-DDT	0.11	U
60-57-1	Dieldrin	0.027	~~JP~~ J 2C
959-98-8	Endosulfan I	0.056	U
33213-65-9	Endosulfan II	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
72-20-8	Endrin	0.11	U
7421-93-4	Endrin Aldehyde	0.11	U
76-44-8	Heptachlor	0.056	U
1024-57-3	Heptachlor Epoxide	0.056	U
72-43-5	Methoxychlor	0.56	U
8001-35-2	Toxaphene	2.8	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.4	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	0.69	U
12672-29-6	Aroclor-1248	0.69	U
11097-69-1	Aroclor-1254	0.69	U
11096-82-5	Aroclor-1260	1.0	U
53494-70-5	Endrin Ketone	0.11	U
5103-74-2	gamma-Chlordane	0.056	U
5103-71-9	alpha-Chlordane	0.056	U

JAC 12910

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69- EB01-030810-GW JAC 12910

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-21

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: ___ decanted: (Y/N) __ Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/15/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/24/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
309-00-2	Aldrin	0.050	U	
319-85-7	beta-BHC	0.050	U	
319-84-6	alpha-BHC	0.050	U	
319-86-8	delta-BHC	0.053	~~P~~ J	BSH
58-89-9	gamma-BHC (Lindane)	0.050	U	
72-54-8	4,4'-DDD	0.10	U	
72-55-9	4,4'-DDE	0.10	U	
50-29-3	4,4'-DDT	0.10	U	
60-57-1	Dieldrin	0.044	~~JP~~ J	BSH
959-98-8	Endosulfan I	0.050	U	
33213-65-9	Endosulfan II	0.10	U	
1031-07-8	Endosulfan sulfate	0.10	U	
72-20-8	Endrin	0.10	U	
7421-93-4	Endrin Aldehyde	0.10	U	
76-44-8	Heptachlor	0.050	U	
1024-57-3	Heptachlor Epoxide	0.050	U	
72-43-5	Methoxychlor	0.50	U	
8001-35-2	Toxaphene	2.5	U	
12674-11-2	Aroclor-1016	0.93	U	
11104-28-2	Aroclor-1221	1.3	U	
11141-16-5	Aroclor-1232	0.93	U	
53469-21-9	Aroclor-1242	0.63	U	
12672-29-6	Aroclor-1248	0.63	U	
11097-69-1	Aroclor-1254	0.63	U	
11096-82-5	Aroclor-1260	0.93	U	
53494-70-5	Endrin Ketone	0.10	U	
5103-74-2	gamma-Chlordane	0.050	U	
5103-71-9	alpha-Chlordane	0.050	U	

FORM I PEST

JAC 12910

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. JAC 72910

IR69-GW02DD-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-06

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/11/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/12/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

JAC 72910

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW03-10A JAC 72910

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-11

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/11/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/12/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.19	~~P~~ J 2C
319-84-6	alpha-BHC	0.077	
319-86-8	delta-BHC	~~1.5~~ ~~E~~ Exclude DL	
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4' DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.0052	J
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

JAC 72910

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW03DL-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

JAC 72910

Matrix: (soil/water) WATER Lab Sample ID: 1003089-11RE1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/11/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/12/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/29/10

Injection Volume: 1.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	~~0.25~~	~~U~~ Exclude DL
319-85-7	beta-BHC	0.25	U
319-84-6	alpha-BHC	~~0.069~~	~~DJ~~
319-86-8	delta-BHC	1.5	~~D~~
58-89-9	gamma-BHC (Lindane)	~~0.25~~	~~U~~ Exclude DL
72-54-8	4,4'-DDD	0.50	U
72-55-9	4,4'-DDE	0.50	U
50-29-3	4,4'-DDT	0.50	U
60-57-1	Dieldrin	0.50	U
959-98-8	Endosulfan I	0.25	U
33213-65-9	Endosulfan II	0.50	U
1031-07-8	Endosulfan sulfate	0.50	U
72-20-8	Endrin	0.50	U
7421-93-4	Endrin Aldehyde	0.50	U
76-44-8	Heptachlor	0.25	U
1024-57-3	Heptachlor Epoxide	0.25	U
72-43-5	Methoxychlor	2.5	U
8001-35-2	Toxaphene	13	U
12674-11-2	Aroclor-1016	4.7	U
11104-28-2	Aroclor-1221	6.3	U
11141-16-5	Aroclor-1232	4.7	U
53469-21-9	Aroclor-1242	3.1	U
12672-29-6	Aroclor-1248	3.1	U
11097-69-1	Aroclor-1254	3.1	U
11096-82-5	Aroclor-1260	4.7	U
53494-70-5	Endrin Ketone	0.50	U
5103-74-2	gamma-Chlordane	0.25	U
5103-71-9	alpha-Chlordane	~~0.25~~	~~U~~

JAC 72910

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW03D-10A JAC 72910

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-10

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: ___ decanted: (Y/N) ___ Date Received: 03/11/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/12/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.14	~~P~~ J 2C
319-84-6	alpha-BHC	0.075	
319-86-8	delta-BHC	~~1.5~~	~~E~~ exclude DL
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4' DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

JAC 72910

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW03DDL-10A

JAC 12910

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-10RE1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/11/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/12/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/29/10

Injection Volume: 1.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	~~0.25~~	~~U~~
319-85-7	beta-BHC	0.25	U
319-84-6	alpha-BHC	~~0.071~~	~~DJ~~
319-86-8	delta-BHC	1.4	D
58-89-9	gamma-BHC (Lindane)	~~0.25~~	~~U~~
72-54-8	4,4'-DDD	0.50	U
72-55-9	4,4'-DDE	0.50	U
50-29-3	4,4'-DDT	0.50	U
60-57-1	Dieldrin	0.50	U
959-98-8	Endosulfan I	0.25	U
33213-65-9	Endosulfan II	0.50	U
1031-07-8	Endosulfan sulfate	0.50	U
72-20-8	Endrin	0.50	U
7421-93-4	Endrin Aldehyde	0.50	U
76-44-8	Heptachlor	0.25	U
1024-57-3	Heptachlor Epoxide	0.25	U
72-43-5	Methoxychlor	2.5	U
8001-35-2	Toxaphene	13	U
12674-11-2	Aroclor-1016	4.7	U
11104-28-2	Aroclor 1221	6.3	U
11141-16-5	Aroclor-1232	4.7	U
53469-21-9	Aroclor-1242	3.1	U
12672-29-6	Aroclor-1248	3.1	U
11097-69-1	Aroclor-1254	3.1	U
11096-82-5	Aroclor-1260	4.7	U
53494-70-5	Endrin Ketone	0.50	U
5103-74-2	gamma-Chlordane	0.25	U
5103-71-9	alpha-Chlordane	~~0.25~~	~~U~~

exclude DL

exclude DL

JAC 12910

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW03DW -10A

JAC 72910

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-12

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/11/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/12/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor 1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

JAC 72910

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW06-10A

JPC 72910

Lab Name: COMPUCHEM Contract: 8081A 8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-18

Sample wt/vol: 900.0 (g/mL) ML Lab File ID: _____

% Moisture: ___ decanted: (Y/N)___ Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/15/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/24/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.056	U
319-85-7	beta-BHC	0.056	U
319-84-6	alpha-BHC	0.056	U
319-86-8	delta BHC	0.056	U
58-89-9	gamma-BHC (Lindane)	0.056	U
72-54-8	4,4'-DDD	0.11	U
72-55-9	4,4'-DDE	0.11	U
50-29-3	4,4'-DDT	0.11	U
60-57-1	Dieldrin	0.11	U
959-98-8	Endosulfan I	0.056	U
33213-65-9	Endosulfan II	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
72-20-8	Endrin	0.11	U
7421-93-4	Endrin Aldehyde	0.11	U
76-44-8	Heptachlor	0.056	U
1024-57-3	Heptachlor Epoxide	0.056	U
72-43-5	Methoxychlor	0.56	U
8001-35-2	Toxaphene	2.8	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor 1221	1.4	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	0.69	U
12672-29-6	Aroclor-1248	0.69	U
11097-69-1	Aroclor-1254	0.69	U
11096-82-5	Aroclor-1260	1.0	U
53494-70-5	Endrin Ketone	0.11	U
5103-74-2	gamma-Chlordane	0.056	U
5103-71-9	alpha-Chlordane	0.056	U

JPC 72910

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW08-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-19

Sample wt/vol: 950.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/11/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/15/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/24/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.053	U
319-85-7	beta-BHC	0.053	U
319-84-6	alpha-BHC	0.053	U
319-86-8	delta-BHC	0.053	U
58-89-9	gamma-BHC (Lindane)	0.053	U
72-54-8	4,4'-DDD	0.11	U
72-55-9	4,4'-DDE	0.11	U
50-29-3	4,4'-DDT	0.11	U
60-57-1	Dieldrin	0.11	U
959-98-8	Endosulfan I	0.053	U
33213-65-9	Endosulfan II	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
72-20-8	Endrin	0.11	U
7421-93-4	Endrin Aldehyde	0.11	U
76-44-8	Heptachlor	0.053	U
1024-57-3	Heptachlor Epoxide	0.053	U
72-43-5	Methoxychlor	0.53	U
8001-35-2	Toxaphene	2.6	U
12674-11-2	Aroclor-1016	0.98	U
11104-28-2	Aroclor 1221	1.3	U
11141-16-5	Aroclor-1232	0.98	U
53469-21-9	Aroclor-1242	0.66	U
12672-29-6	Aroclor-1248	0.66	U
11097-69-1	Aroclor-1254	0.66	U
11096-82-5	Aroclor-1260	0.98	U
53494-70-5	Endrin Ketone	0.11	U
5103-74-2	gamma-Chlordane	0.053	U
5103-71-9	alpha-Chlordane	0.053	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW08D -10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-20

Sample wt/vol: 900.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/11/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/15/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/24/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.056	U
319-85-7	beta-BHC	0.056	U
319-84-6	alpha-BHC	0.056	U
319-86-8	delta-BHC	0.056	U
58-89-9	gamma-BHC (Lindane)	0.056	U
72-54-8	4,4'-DDD	0.11	U
72-55-9	4,4'-DDE	0.11	U
50-29-3	4,4'-DDT	0.11	U
60-57-1	Dieldrin	0.11	U
959-98-8	Endosulfan I	0.056	U
33213-65-9	Endosulfan II	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
72-20-8	Endrin	0.11	U
7421-93-4	Endrin Aldehyde	0.11	U
76-44-8	Heptachlor	0.056	U
1024-57-3	Heptachlor Epoxide	0.056	U
72-43-5	Methoxychlor	0.56	U
8001-35-2	Toxaphene	2.8	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.4	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	0.69	U
12672-29-6	Aroclor-1248	0.69	U
11097-69-1	Aroclor-1254	0.69	U
11096-82-5	Aroclor-1260	1.0	U
53494-70-5	Endrin Ketone	0.11	U
5103-74-2	gamma-Chlordane	0.056	U
5103-71-9	alpha-Chlordane	0.056	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW09DW-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) __ Date Received: 03/11/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/12/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4' DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4' DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW09IW-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/11/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/12/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104 28 2	Aroclor 1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor 1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW15-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-13

Sample wt/vol: 925.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/11/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/12/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.054	U
319-85-7	beta-BHC	0.054	U
319-84-6	alpha-BHC	0.054	U
319-86-8	delta-BHC	0.054	U
58-89-9	gamma-BHC (Lindane)	0.054	U
72-54-8	4,4'-DDD	0.11	U
72-55-9	4,4'-DDE	0.11	U
50-29-3	4,4'-DDT	0.11	U
60-57-1	Dieldrin	0.11	U
959-98-8	Endosulfan I	0.054	U
33213-65-9	Endosulfan II	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
72-20-8	Endrin	0.029	~~JP~~ J 2C
7421-93-4	Endrin Aldehyde	0.11	U
76-44-8	Heptachlor	0.054	U
1024-57-3	Heptachlor Epoxide	0.079	P
72-43-5	Methoxychlor	0.54	U
8001-35-2	Toxaphene	2.7	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.4	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	0.68	U
12672-29-6	Aroclor-1248	0.68	U
11097-69-1	Aroclor-1254	0.68	U
11096-82-5	Aroclor-1260	1.2	
53494-70-5	Endrin Ketone	0.11	U
5103-74-2	gamma-Chlordane	0.060	~~P~~ J 2C
5103-71-9	alpha-Chlordane	0.054	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW15IW-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-07

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/11/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/12/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.036	~~JP~~ J 2C
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.16	
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.12	~~P~~ J 2C
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469 21 9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.34	J
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.18	
5103-71-9	alpha-Chlordane	0.038	~~JP~~ J 2C

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW27DW-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/11/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/12/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW27IW-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-02

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) _____ Date Received: 03/11/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/12/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW06MS-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 0031304-MS1

Sample wt/vol: 900.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/15/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/24/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.17	
319-85-7	beta-BHC	0.22	
319-84-6	alpha-BHC	0.22	
319-86-8	delta-BHC	0.25	
58-89-9	gamma-BHC (Lindane)	0.21	
72-54-8	4,4'-DDD	0.57	
72-55-9	4,4'-DDE	0.54	
50-29-3	4,4'-DDT	0.52	
60-57-1	Dieldrin	0.57	
959-98-8	Endosulfan I	0.20	
33213-65-9	Endosulfan II	0.45	
1031-07-8	Endosulfan sulfate	0.46	
72-20-8	Endrin	0.37	
7421-93-4	Endrin Aldehyde	0.33	
76-44-8	Heptachlor	0.22	
1024-57-3	Heptachlor Epoxide	0.23	
72-43-5	Methoxychlor	0.57	
8001-35-2	Toxaphene	2.8	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.4	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	0.69	U
12672-29-6	Aroclor-1248	0.69	U
11097-69-1	Aroclor-1254	0.69	U
11096-82-5	Aroclor-1260	1.0	U
53494-70-5	Endrin Ketone	0.54	
5103-74-2	gamma-Chlordane	0.21	
5103-71-9	alpha-Chlordane	0.23	

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW06MSD-10A

gc 72910

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 0031304-MSD1

Sample wt/vol: 900.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/15/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/24/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.18	
319-85-7	beta-BHC	0.20	
319-84-6	alpha-BHC	0.22	
319-86-8	delta-BHC	0.24	
58-89-9	gamma-BHC (Lindane)	0.20	
72-54-8	4,4'-DDD	0.56	
72-55-9	4,4'-DDE	0.53	
50-29-3	4,4'-DDT	0.52	
60-57-1	Dieldrin	0.57	
959-98-8	Endosulfan I	0.19	
33213-65-9	Endosulfan II	0.51	
1031-07-8	Endosulfan sulfate	0.52	
72-20-8	Endrin	0.52	
7421-93-4	Endrin Aldehyde	0.34	
76-44-8	Heptachlor	0.22	
1024-57-3	Heptachlor Epoxide	0.24	
72-43-5	Methoxychlor	0.57	
8001-35-2	Toxaphene	2.8	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.4	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	0.69	U
12672-29-6	Aroclor-1248	0.69	U
11097-69-1	Aroclor-1254	0.69	U
11096-82-5	Aroclor-1260	1.0	U
53494-70-5	Endrin Ketone	0.55	
5103-74-2	gamma-Chlordane	0.21	
5103-71-9	alpha-Chlordane	0.23	

gc 72910

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW06PCBMS-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 0031304-MS2

Sample wt/vol: 900.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/15/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/24/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.056	U
319-85-7	beta-BHC	0.056	U
319-84-6	alpha-BHC	0.056	U
319-86-8	delta-BHC	0.056	U
58-89-9	gamma-BHC (Lindane)	0.056	U
72-54-8	4,4'-DDD	0.11	U
72-55-9	4,4'-DDE	0.11	U
50-29-3	4,4'-DDT	0.11	U
60-57-1	Dieldrin	0.11	U
959-98-8	Endosulfan I	0.056	U
33213-65-9	Endosulfan II	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
72-20-8	Endrin	0.11	U
7421-93-4	Endrin Aldehyde	0.11	U
76-44-8	Heptachlor	0.056	U
1024-57-3	Heptachlor Epoxide	0.056	U
72-43-5	Methoxychlor	0.56	U
8001-35-2	Toxaphene	2.8	U
12674-11-2	Aroclor-1016	6.6	
11104-28-2	Aroclor-1221	1.4	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	0.69	U
12672-29-6	Aroclor-1248	0.69	U
11097-69-1	Aroclor-1254	0.69	U
11096-82-5	Aroclor-1260	6.5	
53494-70-5	Endrin Ketone	0.11	U
5103-74-2	gamma-Chlordane	0.056	U
5103-71-9	alpha-Chlordane	0.056	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW06PCBMSD 10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

gac 72910

Matrix: (soil/water) WATER Lab Sample ID: 0031304-MSD2

Sample wt/vol: 900.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/15/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/24/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.056	U
319-85-7	beta-BHC	0.056	U
319-84-6	alpha-BHC	0.056	U
319-86-8	delta-BHC	0.056	U
58-89-9	gamma-BHC (Lindane)	0.056	U
72-54-8	4,4'-DDD	0.11	U
72-55-9	4,4'-DDE	0.11	U
50-29-3	4,4'-DDT	0.11	U
60-57-1	Dieldrin	0.11	U
959-98-8	Endosulfan I	0.056	U
33213-65-9	Endosulfan II	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
72-20-8	Endrin	0.11	U
7421-93-4	Endrin Aldehyde	0.11	U
76-44-8	Heptachlor	0.056	U
1024-57-3	Heptachlor Epoxide	0.056	U
72-43-5	Methoxychlor	0.56	U
8001-35-2	Toxaphene	2.8	U
12674-11-2	Aroclor-1016	6.4	
11104-28-2	Aroclor-1221	1.4	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	0.69	U
12672-29-6	Aroclor-1248	0.69	U
11097-69-1	Aroclor-1254	0.69	U
11096-82-5	Aroclor-1260	6.2	
53494-70-5	Endrin Ketone	0.11	U
5103-74-2	gamma-Chlordane	0.056	U
5103-71-9	alpha-Chlordane	0.056	U

gac 72910

FORM I PEST

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW02DD - 10A JAC 7/9/10

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix (soil/water): WATER Lab Sample ID: 1003089-06RE1

Level (low/med): LOW Date Received: 3/11/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200	U		P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	18.7	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	88500			P	
7440-47-3	Chromium	1.4	~~B~~	J	P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	1970			P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5130			P	
7439-96-5	Manganese	151			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	5000 ~~1350~~	~~B~~	U	P	MBL
7782-49-2	Selenium	5.0	U	~~B~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	27000			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	0.74	~~B~~	J	P	
7440-66-6	Zinc	20 ~~3.0~~	~~B~~	U	P	EBL

JAC 7/29/10

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW03-10A

JAC 72910

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix (soil/water): WATER Lab Sample ID: 1003089-11RE1

Level (low/med): LOW Date Received: 3/11/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	942		J	P	FD
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	46.3	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	7390			P	
7440-47-3	Chromium	1.9	~~B~~	J	P	
7440-48-4	Cobalt	1.7	~~B~~	J	P	
7440-50-8	Copper	5.0 ~~2.6~~	~~B~~	U	P	FBL
7439-89-6	Iron	13600			P	
7439-92-1	Lead	1.8	~~B~~	J	P	
7439-95-4	Magnesium	5000 ~~579~~	~~B~~	U	P	MBL
7439-96-5	Manganese	130			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0 ~~1.9~~	~~B~~	U	P	MBL
7440-09-7	Potassium	5000 ~~413~~	~~B~~	U	P	MBL
7782-49-2	Selenium	5.0	U	~~N~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	12500			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	4.8	~~B~~	J	P	
7440-66-6	Zinc	4760			P	

JAC 72910

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW03D-10A JAC 72910

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix (soil/water): WATER Lab Sample ID: 1003089-10RE1

Level (low/med): LOW Date Received: 3/11/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	704		J	P	FD
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	45.9	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	7360			P	
7440-47-3	Chromium	1.5	~~B~~	J	P	
7440-48-4	Cobalt	1.5	~~B~~	J	P	
7440-50-8	Copper	5.0 ~~2.0~~	~~B~~	U	P	FBL
7439-89-6	Iron	12300			P	
7439-92-1	Lead	1.8	~~B~~	J	P	
7439-95-4	Magnesium	5000 ~~564~~	~~B~~	U	P	MBL
7439-96-5	Manganese	129			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0 ~~1.7~~	~~B~~	U	P	MBL
7440-09-7	Potassium	5000 ~~384~~	~~B~~	U	P	MBL
7782-49-2	Selenium	5.0	U	~~N~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	12200			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	3.3	~~B~~	J	P	
7440-66-6	Zinc	4660			P	

JAC 72910

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW03DW-10A JAC 72910

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix (soil/water): WATER Lab Sample ID: 1003089-12RE1

Level (low/med): LOW Date Received: 3/11/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200	U		P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	24.7	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	46000			P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	628			P	
7439-92-1	Lead	1.8	~~B~~	J	P	
7439-95-4	Magnesium	5000 ~~2220~~	~~B~~	U	P	MBL
7439-96-5	Manganese	96.8			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	5000 ~~1110~~	~~B~~	U	P	MBL
7782-49-2	Selenium	5.0	U	~~N~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	14800			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	20 ~~8.3~~	~~B~~	U	P	EBL

JAC 72910

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW06-10A JAC 72910

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix (soil/water): WATER Lab Sample ID: 1003089-18RE1

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200	U		P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	20.7	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	5000 ~~1080~~	~~B~~	U	P	MBL
7440-47-3	Chromium	1.8	~~B~~	J	P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	100 ~~31.5~~	~~B~~	U	P	MBL
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~933~~	~~B~~	U	P	MBL
7439-96-5	Manganese	2.5	~~B~~	J	P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	5000 ~~254~~	~~B~~	U	P	MBL
7782-49-2	Selenium	5.0	U	N	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	8590			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	2.7	~~B~~	J	P	

JAC 72910

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW08-10A JAC 7/9/10

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix (soil/water): WATER Lab Sample ID: 1003089-19RE1

Level (low/med): LOW Date Received: 3/11/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	499			P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	12.6	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	5000 ~~1900~~	~~B~~	U	P	MBL
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	254			P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~713~~	~~B~~	U	P	MBL
7439-96-5	Manganese	4.3	~~B~~	J	P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	5000 ~~139~~	~~B~~	U	P	MBL
7782-49-2	Selenium	5.0	U	~~N~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	6150			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	72.7			P	

JAC 7/29/10

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW08D-10A JAC 72910

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix (soil/water): WATER Lab Sample ID: 1003089-20RE1

Level (low/med): LOW Date Received: 3/11/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	5.0	U	N	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	5000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	20.0	U		P

JAC 72910

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW09DW-10A JAC 11910

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix (soil/water): WATER Lab Sample ID: 1003089-05RE1

Level (low/med): LOW Date Received: 3/11/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	39.8	~~B~~	J	P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	10.0	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	75300			P	
7440-47-3	Chromium	2.4	~~B~~	J	P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0 ~~1.9~~	~~B~~	U	P	FBL
7439-89-6	Iron	2740			P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~2840~~	~~B~~	U	P	MBL
7439-96-5	Manganese	90.0			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	5000 ~~1050~~	~~B~~	U	P	MBL
7782-49-2	Selenium	5.0	U	~~N~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	14300			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	20 ~~9.5~~	~~B~~	U	P	FBL

JAC 72910

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW09IW-10A JAC 7910

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix (soil/water): WATER Lab Sample ID: 1003089-04RE1

Level (low/med): LOW Date Received: 3/11/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	171	~~B~~	J	P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	23.7	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	57400			P	
7440-47-3	Chromium	2.4	~~B~~	J	P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	1370			P	
7439-92-1	Lead	2.1	~~B~~	J	P	
7439-95-4	Magnesium	5000 ~~2550~~	~~B~~	U	P	MBL
7439-96-5	Manganese	61.7			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	5000 ~~964~~	~~B~~	U	P	MBL
7782-49-2	Selenium	5.2		~~U~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	33100			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	0.85	~~B~~	J	P	
7440-66-6	Zinc	20 ~~3.7~~	~~B~~	U	P	EBL

JAC 72910

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW15-10A JAC 71910

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix (soil/water): WATER Lab Sample ID: 1003089-13RE1

Level (low/med): LOW Date Received: 3/11/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	790			P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	2.9	~~B~~	J	P	
7440-39-3	Barium	97.2	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	65200			P	
7440-47-3	Chromium	2.4	~~B~~	J	P	
7440-48-4	Cobalt	0.78	~~B~~	J	P	
7440-50-8	Copper	5.0 ~~2.2~~	~~B~~	U	P	FBL
7439-89-6	Iron	29100			P	
7439-92-1	Lead	2.5	~~B~~	J	P	
7439-95-4	Magnesium	5000 ~~3070~~	~~B~~	U	P	MBL
7439-96-5	Manganese	800			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0 ~~1.8~~	~~B~~	U	P	MBL
7440-09-7	Potassium	5000 ~~446~~	~~B~~	U	P	MBL
7782-49-2	Selenium	5.0	U	~~N~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	24300			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	2.5	~~B~~	J	P	
7440-66-6	Zinc	20 ~~11.3~~	~~B~~	U	P	EBL

JAC 72910

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW15IW-10A JAC 72910

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix (soil/water): WATER Lab Sample ID: 1003089-07RE1

Level (low/med): LOW Date Received: 3/11/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200	U		P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	55.7	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	121000			P	
7440-47-3	Chromium	1.0	~~B~~	J	P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0 ~~1.5~~	~~B~~	U	P	FBL
7439-89-6	Iron	10500			P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~4270~~	~~B~~	U	P	MBL
7439-96-5	Manganese	208			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	5000 ~~1540~~	~~B~~	U	P	MBL
7782-49-2	Selenium	5.0	U	~~N~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	23100			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	20 ~~2.9~~	~~B~~	U	P	EBL

JAC 72910

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW27DW-10A JAC 7/29/10

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix (soil/water): WATER Lab Sample ID: 1003089-03RE1

Level (low/med): LOW Date Received: 3/11/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200	U		P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	5.7	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	63900			P	
7440-47-3	Chromium	1.1	~~B~~	J	P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0 ~~1.7~~	~~B~~	U	P	FBL
7439-89-6	Iron	1460			P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~2410~~	~~B~~	U	P	MBL
7439-96-5	Manganese	65.2			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	5000 ~~1330~~	~~B~~	U	P	MBL
7782-49-2	Selenium	3.7	~~B~~	~~U~~ J	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	20000			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	0.89	~~B~~	J	P	
7440-66-6	Zinc	20 ~~12.1~~	~~B~~	U	P	FBL

JAC 7/29/10

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW27IW-10A JAC 72910

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix (soil/water): WATER Lab Sample ID: 1003089-02RE1

Level (low/med): LOW Date Received: 3/11/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200	U		P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	31.3	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	77300			P	
7440-47-3	Chromium	1.7	~~B~~	J	P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	326			P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~2800~~	~~B~~	U	P	MBL
7439-96-5	Manganese	188			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0 ~~0.90~~	~~B~~	U	P	MBL
7440-09-7	Potassium	5000 ~~1260~~	~~B~~	U	P	MBL
7782-49-2	Selenium	5.0	U	~~N~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	23700			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	20 ~~5.2~~	~~B~~	U	P	EBL

JAC 72910

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-EB01-030610-GW

JAC 7/19/10

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix (soil/water): WATER Lab Sample ID: 1003089-08RE1

Level (low/med): LOW Date Received: 3/11/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	1.6	~~B~~	J	P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	5.0	U	~~N~~	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	311	~~B~~	J	P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	1.0	~~B~~	J	P

JAC 7/29/10

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1RS9-EB01-030710-GW

JAC 72910

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix (soil/water): WATER Lab Sample ID: 1003089-09RE1

Level (low/med): LOW Date Received: 3/11/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	5.0	U	~~B~~	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	5000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	0.73	~~B~~	J	P

JAC 72910

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1R69-EB01-030710-SB

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix (soil/water): WATER Lab Sample ID: 1003089-17RE1

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	10.7	~~B~~	J	P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	5.0	U	~~N~~	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	5000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	20.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IRG- EB01-030810-GW

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix (soil/water): WATER Lab Sample ID: 1003089-21RE1

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	5.0	U	N	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	5000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	20.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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Page 1 of 2 21766

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information	Project Information
Company Name: CH2MHILL	Project Name: CTO-081
Address: 11301 Carmel Commons Blvd-Ste 3[illegible]	Sampling Location: MCB Camlej - Site 69
City: Charlotte State: NC Zip: 28226	Turnaround time: Standard
Project Contact: Gwen Buckley	Batch QC or Project Specific? If Specific, which Sample ID? Batch
Phone #: 757-671-6292	Are aqueous samples field filtered for metals? Y or N
Sampler's Name	Are high concentrations expected? Y or N? If yes, which ID(s)? IR69-GW15IW-10A, possibly (GW15)

Matrix: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

Lab Sample ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	8260B VOCs / 40 mL VOAs; HCl														
1003089-02	IR69-GW27IW-10A	3/6/10	1415	GW	3	X						X														
-03	IR69-GW27DW-10A	3/6/10	1650	GW	3	X						X														
-04	IR69-GW09IW-10A	3/6/10	1740	GW	3	X						X														
-05	IR69-GW09DW-10A	3/6/10	1800	GW	3	X						X														
-06	IR69-GW02DD-10A	3/6/10	1230	GW	3	X						X														
-07	IR69-GW15IW-10A	3/6/10	1145	GW	3	X						X														
-08	IR69-~~GW~~-030610-~~10A~~ GW	3/6/10	1100	RI	3	X						X														
-09	IR69-EB-030710-GW	3/7/10	1200	RI	3	X						X														
-10	IR69-TB-030810	3/8/10	0900	TB	3	X						X														
~~—~~	~~IR69-EB-030710-GW~~	~~3-7-10~~	~~1200~~	~~RI~~	~~3~~	~~X~~						~~X~~														

Sample Unpacked By: Jennifer Doles
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Relinquished by: Jeffrey Mitchell	Date/Time: 3/10/10 1700	Received by: Jennifer Doles	Date/Time: 3/11/10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 1.3 °C

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Courier
Airbill No.
Sampling Complete? Y or N

Client Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camlej - Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID? Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Laboratory ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	VOCs/8260B/ 40 ml VOA vials; HCl
1003089-10:	IR69GW03D-10A	3-7-10	~~1130~~ 1205	GW	3	3						3
—	~~IR69-GW10-10A~~	~~3-8-10~~	~~1625~~	~~GW~~	~~3~~	~~3~~						~~3~~
1003089-14:	IR69-FB-030910-10	3-10-10	1100	RI	3	3						3
—	~~IR69-EB-0304-10~~	~~3-9-10~~	~~1600~~	~~RI~~	~~3~~	~~3~~						~~3~~
1003089-11:	IR69-GW09-10A	3-7-10	1200	GW	3	3						3
-12:	IR69-GW03DW-10A	3/7/10	1650	GW	3	3						3
1003089-01:	IR69-EB-030410-SS	3/4/10	1700	RI	3	3						3
1003089-13:	IR69-GW15-10A	3/7/10	1140	GW	3	3						3
-15:	IR69-EB030710-SB	3/7/10	1700	RI	3	3						3

XM

two vials list MEE for parameter 3/11/10

Laboratory Information

Sample Unpacked By: Jennifer Doles
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Relinquished by:	Date/Time: 3/10/10 1700	Received by: Jennifer Doles	Date/Time: 3/11/10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 1.3 °C

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Courier
Airbill No.
Sampling Complete? Y or N

Client Reporting Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Bucklaff
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lej Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Analysis Requested/Preservation

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Sample Number (Lab Use Only)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other None	8260B	8270C/8270C-SIM (2-L Amber)	RSK 175 ME (VOAs-HCl)	8350B/8081A/8082 (2-L Amber)	TOC (2-40ml VOAs H2SO4)	CNWS-Alk (1-250ml poly, none)	Sulfide (1-500ml poly, 2 drops 6N NaOH)	6010B/TAL METALS (1-500ml poly, HNO3)	6010B/DISSOLVED METALS (1-500ml poly, HNO3 Field Filtered)							
1003089-01	DRC9-EB-030410-SS	3-4-10	1700	RI	4						4		2		2												

Sample Receipt Information

Sample Unpacked By: Jennifer Dove
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Residual Chlorine Present?
Yes ____ No ✓

Relinquished/Received

Relinquished by:	Date/Time: 3/10/10 1700	Received by: Jennifer Dove	Date/Time: 3/11/10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 4.4 °C

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SAMPLES

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Courier
Airbill No.
Sampling Complete? Y or N

Company Name: CH2MHILL	Project Name: CTO-081
Address: 11301 Carmel Commons Blvd - Ste 304	Sampling Location: MCB Camlej Site 69
City: Charlotte State: NC Zip: 28226	Turnaround time: Standard
Project Contact: Gwen Buckley	Batch QC or Project Specific? If Specific, which Sample ID? Batch
Phone #: 757-671-6292	Are aqueous samples field filtered for metals? Y or N
Sampler's Name	Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other none	8260B	8270C/8270C-SIM	RPK 175 MEE	3550B/8081A/8082	TOC	CNWS-AIK	Sulfide	6010B/TAL METALS/Dissolved	6010B/METALS							
													2-1L Amber	2-40ml VOAs, HCl	2-1L	2-40ml VOAs H2SO4	1-250ml	1-500ml poly	1-500ml poly HNO3	1-500 ml poly HNO3							
1003089-02	IR69-GW2TIW-10A	3/10/10	1415	GW	11	2	1	1	2		5		X	X	X	X	X	X	X				<2	>9	<2		

Sample Unpacked By: Jennifer Does	Cyanide samples checked for sulfide & chlorine? Y or NA	Residual Chlorine Present?
Sample Order Entry By:	625 & Phenol samples checked for chlorine? Y or NA	Yes ____ No ✓
Samples Received in Good Condition? Y or N	608 samples checked for pH between 5.0-9.0? Y or NA	
If no, explain:		

Relinquished by: [signature]	Date/Time: 3/10/10 1400	Received by: Jennifer Does	Date/Time: 3/11/10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 2.3 °C

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2MHILL
Address: 11301 Carmel Commons Blvd Ste. 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camlej Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Requested Analysis (include method and bottle type)

Matrices: GW - Ground water; W/W - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No. (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	8260B	8270B/8270C-SIM	RSK 175 MEE	8015B	TOC	CNWS-AIK	Sulfide	6010B	6010B	Matrix				
													2-1L Ambers	2-40ml VOAs, HCl	2-1L	2-40ml VOAs H2SO4	1-250ml poly, none	1-500ml poly Zn Ac, NaOH	1-500ml	TAL METALS poly bottles Acidified 1-500ml poly	6010B METALS Unfiltered-Filtered					
1003089-03	TRIA-GW27DW-10A	3/6/10	1650	GW	11	2	1	1	2		5		X	X	X	X	X	X	X			<2	>9	<2	

Lab Use Only

Sample Unpacked By: Jennifer Doer
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Residual Chlorine Present?
Yes ____ No ✓

Sample Custody

Relinquished by: [illegible]	Date/Time: 3/10/10 1400	Received by: Jennifer Doer	Date/Time: 3/11/10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 1.0 °C

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5-7-15

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camby Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Requested Analysis (include method and bottle type)

Matrix codes: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No. (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	8260B	8270C/8270C-SIM 2-1L Ambers	RSK 175 MEE 2-40ml VOAs, HCl	3550/8081A/8082 2-1L Ambers	TOC 2-40ml VOAs / H2SO4	CNWS-Alk 1-250ml poly, none	Sulfide 1-500ml poly, zinc acet, NaOH	6010B/7470 METALS 1-500ml poly HNO3 (Dissolved METALS)	6010B/7470 METALS 1-500ml poly HNO3, Field Filtered							
1003089-05 (09)	IR69-GW09IW-10A	3/6/10	1740	GW	11	2	1	1	2		5		X	X	X	X	X	X	X			<2	>9	<2			

Lab Use Only

Sample Unpacked By: Jennifer Doer
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Residual Chlorine Present?
Yes ____ No ✓

Sample Custody

Relinquished by:	Date/Time: 3/10/10 1600	Received by: Jennifer Doer	Date/Time: 3/11/10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 1.6 °C

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Courier
Airbill No.
Sampling Complete? Y or N

Company Name	CH2M HILL	Project Name	CTO-081
Address	11301 Carmel Commons Blvd Ste 304	Sampling Location	MCB Camlej Site 69
City / State / Zip	Charlotte NC 28226	Turnaround time	Standard
Project Contact	Gwen Buckley	Batch QC or Project Specific? If Specific, which Sample ID?	Batch
Phone #	757-671-6292	Are aqueous samples field filtered for metals? Y or N	
Sampler's Name		Are high concentrations expected? Y or N? If yes, which ID(s)?	

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab Sample ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	8260B	8270C/8270C-SIM	RSK 175 MEE	8081A/8082	350.B/8081B	TOC	CNWS-AIK	Sulfide	6010B/TAL METALS	1A SOLVED 6010B/METALS	1A SOLVED 6010B/METALS	pH			
1003089-05	DM69-GW09DW-104	3/6/10	1800	GW	11	2	1	1	2		5		X	X	X	X	X	X	X	X			<2	>9	<2	

Sample Unpacked By: Jennifer Doer	Cyanide samples checked for sulfide & chlorine? Y or NA	Residual Chlorine Present?	
Sample Order Entry By:	625 & Phenol samples checked for chlorine? Y or NA	Yes ____	No ✓
Samples Received in Good Condition? Y or N	608 samples checked for pH between 5.0-9.0? Y or NA		
If no, explain:			

Relinquished by:	Date/Time: 3/10/10 1400	Received by: Jennifer Doer	Date/Time: 3/11/10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 2.1 °C

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camley Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

CompuChem No. (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other None	8260B	8270c/8270cSim/2-1L Amber	RSK/175 MEE/2-40ml VOAs HCl	3550B/8081A/8082/2-1L Amber	TOC/2-40ml VOAs H2SO4	CNWS-AIK/1-250ml poly, none	Sulfide/1-500ml poly ZnAc, NaOH	6010B/TAL metals/poly HNO3 Dissolved/1-500ml poly	6010B/METALS/HNO3 unfiltered			Temp				
1003089-01	DR69-GW02DD-00A	3-10-10	1230	GW	11	2	1	1	2		5		2	2	2	2	1	1	1				<2	>9	<2		

Lab Use Only

Sample Unpacked By: Jennifer Davis
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Residual Chlorine Present?
Yes ____ No ✓

Sample Custody

Relinquished by: Jeff Smith	Date/Time: 3/10/10 1400	Received by: Jennifer Davis	Date/Time: 3/11/10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 1.8 °C

Samples stored 60 days after date report mailed at no extra charge.

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SW 15

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CHAIN OF CUSTODY

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 1130 Channel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camlex Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Preservatives/Analysis/Methods/Bottles

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

Lab ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	8260B	8270C/8270C-SIM/Aniline 2-1L	8081/175 MEE 2-40ml VOAs, HCl	8260B/8260B/8260B 2-1L Aniline	TOC 2-40ml VOA H2SO4	CNNS - Alk 1-250ml poly, none	Sulfide 1-500ml poly Zn Ac, 6M NaOH	6010B/TPH/DISSOLVED METALS 1-500ml poly HNO3	6010B METALS 1-500ml poly HNO3, Field Filtered		Matrices				
1003089-08 (08) 3/11/10	JR69-GW15IW-10A	3/6/10	1145	GW	11	2	1	1	2		5		X	X	X	X	X	X	X			<2	>9	>2	2	3/11/10

Lab Use Only

Sample Unpacked By: Jennifer Does
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Residual Chlorine Present? Yes ____ No ✓

Relinquished by: [signature]	Date/Time: 3/10/10 1600	Received by: Jennifer Does	Date/Time: 3/11/10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:
Subcontact? Y or N If yes, where?		Custody Seal(s) intact? Y or N	On Ice? Y or N

Cooler Temp: 0.3 °C

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Courier
Airbill No.
Sampling Complete? Y or N

Report Information

Company Name: CH2MHILL
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camlex, Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Requested Analyses (include method number)

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

Lab ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other None	8260B	8270C	8270C-SIM	RSK175 MEE	3550B/8081A/8082	TOC	CNWS-AIK	Sulfide	6010B TOTAL METALS	6010B DISSOLVED METALS							
													2-1L	2-1L	2-40ml VOAs, HCl	2-1L Ambers	2-40ml VOAs H2SO4	1-250ml poly	1-500ml poly	2-acc. bottles 1-500ml	1-500ml poly	1-500ml poly Filtered	1-500ml poly Filtered					
1003089-08	IR69-EB-030610-GW	3-6-10	1100		11	2	1	1	2		5		2	2	2	2	1	1	1			<2	>9	<2			

Notes

Sample Unpacked By: Jennifer Davis
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Residual Chlorine Present?
Yes ____ No ✓

Relinquished by:	Date/Time: 3/10/10 1400	Received by: Jennifer Davis	Date/Time: 3/11/10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 1.3 °C

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21869

CHAIN OF CUSTODY

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camlej. Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Matrix: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

Lab Sample No.	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MeOH	Other	8260B	8270C/8270C-SIM	RSK175 MEE	3550B/8081A/8082	TOC	CNWS - Alk	Sulfide	6010B	6010B							
													2-1L amber	2-40mL VOAs, HCl	2-1L amber	2-40mL VOAs H2SO4	1-250 mL poly, none	1-500mL poly Zn Ac, 6N NaOH	TAL METALS (Poly HNO3 & SOLVED) 1-500mL poly	METALS (HNO3, Total & Diss)							
1003089-10	TR69-EB-030310-GW	3-7-10	1200	W	11	2	1	1	2		5		2	2	2	2	1	1	1				<2	29	<2		

Sample Unpacked By: Jennifer Doner
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

~~Residual Chlorine Present?~~
Yes ____ No ✓

Relinquished by:	Date/Time: 3/10/10	Received by: Jennifer Doner	Date/Time: 3/11/10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 2-4 °C

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carroll Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lej Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

CompuChem No. (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other None	8260B	8270C/8270C-SIM (amber) 2-1L	RSK 175 MEE 2-40ml VOAs, HCl	3550B/8081A/8082 (amber) 2-1L	TOC 2-40ml VOAs H2SO4	CNWS-ALK 1-250 ml poly, none	Sulfide 1-500 ml poly NaOH	Zn Acetate 1-500 ml	6010B/TAL metals 1-500ml poly, HNO3 (Dissolved)	6010B metals 1-500ml poly (HNO3 filtered)										
1003089-10	DRLA-GW03D-10N	3-2-10	1705	GW	11	2	1	1	2		5		2	2	2	2	1	1	1					<2	>9	<2						

Lab Use Only

Sample Unpacked By: Jennifer Doles
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

~~Residual Chlorine Present?~~
Yes ____ No ✓

Sample Custody

Relinquished by: [signature]	Date/Time: 3/10/10 1400	Received by: Jennifer Doles	Date/Time: 3/11/10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 2.4 °C

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CHAIN OF CUSTODY

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2MHILL
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune, Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Requested Analysis (Including Method and Bottle Type)

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

CompuChem No. (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other None	8260B 2-1L	8270C/8270C-Sim 2-1L Ambers	RPK175 MEE 2-40ml VOAs, HCl	355.08/8081A/8082 2-1L ambers	TOC 2-40ml VOAs H2SO4	CN/NS: Alk 1-250ml poly, none	Sulfide 1-500ml poly Zn Ace. NaHydr	6010B/TAL METALS 1-500ml poly HNO3	6010B/METALS DISSOLVED 1-500ml poly HNO3 Field Filtered	6010B/MEOH METALS Field Filtered					
1003089-11	IR69-GW03-10A	3-7-10	1700	GW	11	2	2	1	2		5		2	2	2	2	1	1	1			<2	>9	<2		

Lab Use Only

Sample Unpacked By: Jennifer Davis
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Residual Chlorine Present?
Yes ____ No ✓

Sample Custody

Relinquished by:	Date/Time: 3/10/10 1600	Received by: Jennifer Davis	Date/Time: 3/11/10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 0.6 °C

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2MHill
Address: 11301 Carmel Commons Blvd - Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camlej - Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch.
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

CompuChem No. (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other none	8260B	8270C/8270C-SIM	RSK 175 MEE	3550B/8081A/8082	TOC	CNWS-AIK	Sulfide	6010B/TAL METALS	6010B/METALS								
													2-1L Ambers	2-40ml VOAs HCl	2-1L Ambers	2-40ml VOAs H2SO4	1-250ml poly, none	1-500 poly ZnAce 6N NaOH	1-500ml poly HNO3	1-500ml poly HNO3 field filtered								
1003089-13	IR69-GW03DW-10A	3/7/10	1650	GW	11	2	1	1	2		5		X	X	X	X	X	X	X				<2	>9	<2			

Lab Use Only

Sample Unpacked By: Jennifer Doles
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Residual Chlorine Present?
Yes ____ No ✓

Sample Custody

Relinquished by: [illegible]	Date/Time: 3/10/10 1400	Received by: Jennifer Doles	Date/Time: 3/11/10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 2.1 °C

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CHAIN OF CUSTODY

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Beckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch.
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Analysis Requested

CompuChem No. (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other Na2S	8260B	8270C/8270C-SIM (2-1L Ambers)	RSK-175 MEE (2-40ml VOAs HCl)	3550B/8081A/8082 (2-1L Ambers)	TOC (2-40ml VOAs H2SO4)	CN/S AIK (1-250ml poly, none)	Sulfide (1-500ml poly, NaOH)	6010B/TAL metals (1-500ml Zn Acetate 6N NaOH)	7470/7471 mercury (1-500ml poly HNO3)	6010B/metals (1-500ml poly HNO3)						
1003089-14	IR69-GW15-10A	3-7-10	1140	GW	11	2	1	1	2		5		2	2	2	2	1	1	1				<2	>9	<2		

Lab Use Only

Sample Unpacked By: Jennifer Doles
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Residual Chlorine Present?
Yes ____ No ✓

Sample Custody

Relinquished by: Jeffrey Mitchell	Date/Time: 3/10/10 1400	Received by: Jennifer Doles	Date/Time: 3/11/10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 2.3 °C

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N: N
Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	8260B: VOCs: 40mL vials, HCl													
1003102-12	IR69-TB-031110	3/11/10	1700	TB	3	3						3													
1003089-20	IR69-GW08D-10A	3/8/10	1135	GW	3	3						3													
1003089-19	IR69-GW08-10A	3/8/10	1130	GW	3	3						3													
1003102-01	IR69-GW01-10A	3/8/10	1115	GW	3	3						3													
-03	IR69-GW05-10A	3/8/10	1600	GW	3	3						3													
-05	IR69-GW03BCH-10A	3/9/10	1540	GW	3	3						3													
-04	IR69-GW05D-10A	3/8/10	1605	GW	3	3						3													
-06	IR69-GW02BCH-10A	3/8/10	1510	GW	3	3						3													
1003089-21	IR69-EB-030810-10A	3/8/10	0930	GW	3	3						3	Sample ID on container IR69-EB-030810-GW												
1003102-07	IR69-GW07D-10A	3/9/10	1605	GW	3	3						3													

Lab Use Only

Sample Unpacked By: Jennifer Doyle
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N: Y
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA: NA
625 & Phenol samples checked for chlorine? Y or NA: NA
608 samples checked for pH between 5.0-9.0? Y or NA: NA

Comments

Sample Custody

Relinquished by: [illegible]	Date/Time: 3/11/10 1800	Received by: Jennifer Doyle	Date/Time: 3/12/10 ~~1345~~ 1445
Relinquished by:	Date/Time:	Received by:	Date/Time: 3/12/10

Subcontract? Y or N: N If yes, where?
Custody Seal(s) intact? Y or N: Y
On Ice? Y or N: Y
Cooler Temp: 0.2 °C

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Courier
Airbill No.
Sampling Complete? Y or N

Section 1: Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd Ste 504
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Section 2: Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID? Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N If yes, which ID(s)?

Section 3: Sample Information

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab Use Only	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	8260B: VOCs: 40mL VOAs, HCl
1003102-08	IR69-EB-030910-GW	3/9/10	1600	GW	3	3						3
-09	IR69-GW07-10A	3/9/10	1600	GW	3	3						3
-10	IR69-GW10-10A	3/8/10	1625	GW	3	3						3
1003089-18	IR69-GW06-10A	3/9/10	1115	GW	3	3						3
	IR69-GW06-10A-MS	3/9/10	1115	GW	3	3						3
1003102-02	IR69-GW01D-10A	3/8/10	1120	GW	3	3						3
1003089-18	IR69-GW06-10A-SD	3/9/10	1115	GW	3	3						3

Section 4: Lab Use Only

Sample Unpacked By: Jennifer Doyle
Sample Order Entry By: Jennifer Doyle
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Section 5: Signature

Relinquished by: [signature]	Date/Time: 3/11/10 1800	Received by: Jennifer Doyle	Date/Time: 3/12/10 1345
Relinquished by:	Date/Time:	Received by:	Date/Time: JD 3/12/10

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 0.2 °C

Samples stored 60 days after date report mailed at no extra charge.

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Courier
Airbill No.
Sampling Complete? Y or N

Client Reporting Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Susan Buckley
Phone #: 757-671-6792
Sampler's Name:

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab Sample ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MeOH	Other	8260B (2-1L)	8270C/8270C-SIM (4 amber)	RSK 175 MEE (VOAs, HCl) (2-40ml)	3550B/8081A/8082 (Amber) (2-1L)	TOC (2-40 ml VOAs H2SO4)	CNWS-Alk (poly, nonp) (1-250ml)	Sulfide (1-500 ml poly, NaOH, Zn Ac)	TAL 6010B/METALS (poly, HNO3)	6010B/metals (HNO3 to pH<2) (1-500ml poly)		Lab Use Only			
10030089-18	IR69-GW06-10A-MS	3/9/10	1115	GW	7	2	1	1	2					2		2	1	1	1			<2	>9	<2	
	IR69-GW06-10A-SD	3/9/10	1115	GW	7	2	1	1	2					2		2	1	1	1			<2	>9	<2	
	IR69-GW06-10A	3/9/10	1115	GW	7	2	1	1	2					2		2	1	1	1			<2	>9	<2	

Laboratory Use Only

Sample Unpacked By: [signature]
Sample Order Entry By: [signature]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

~~Residual Chlorine Present?~~
Yes ____ No ✓

Sample Custody

Relinquished by: [signature] Date/Time: 3-11-10/1635 Received by: [signature] Date/Time: 3-12-10 01145
Relinquished by: Date/Time: Received by: Date/Time:
Subcontact? Y or N If yes, where? Custody Seal(s) intact? Y or N On Ice? Y or N Cooler Temp: 4.9 °C

Samples stored 60 days after date report mailed at no extra charge.

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00015

CHAIN OF CUSTODY

CompuChem
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501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

217,80

Courier:
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6792
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camlez Suite 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID? Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MeOH	Other NONE	8260B 2-1L	8270C/8270C-SIM/Anions 2-1L	RSK 175 MEE/VOAs HCl 2-40ml	3500B/8081A/8082/Anions 2-1L	5-40ml vials H2SO4	TOC 1-250ml	CN/N-AIK 1-500ml poly, none	Sulfide 1-500ml poly ZnAce 6N NaOH	TKL 1-500ml	6010B/MS/MS poly HNO3	1-500ml poly FIELD FILTERED	6010B/METALS/Hg FILTERED
1003089-18	IRIA-GW0610A-SD	3/9/10	1145	GW	4						4		2		2								
	~~IRIA-GW15DW 10A~~	~~3/7/10~~	~~1255~~	~~GW~~	~~11~~	~~2~~	~~1~~	~~1~~	~~2~~		~~5~~		~~2~~	~~2~~	~~2~~	~~2~~	~~1~~	~~1~~	~~1~~				

Lab Use Only

Sample Unpacked By: [illegible]
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or N
625 & Phenol samples checked for chlorine? Y or N
608 samples checked for pH between 5.0-9.0? Y or N

~~*No TOCs or 8260Bs in this cooler.~~ KM 03-12-10

Residual Chlorine Present?
Yes ____ No ✓

Relinquished/Received Information

Relinquished by:	Date/Time: 3-11-10 1950	Received by: A. Manning	Date/Time: 03-12-10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 09 °C

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Page ____ of ____

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2MHill
Address: 11301 Carmel Commons Blvd - Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camby Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Sample Clip or Seal	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other None	8260B	8270C/8270C-SIM	RSK 175 MEE	3550B/8081A/8082	TOC	CNHS-ALK	Sulfide	TPH 6010B/METALS	6010B/Metals	Other
													2-1L Ambers	2-40ml VOAs HCl	2-1L Ambers 2-40ml VOAs	1-250ml H2SO4	1-500ml poly, none	1-500ml poly ZnAc 6N NaOH	1-500ml poly, HNO3	1-500ml poly Nitric Acid	
1003089-18	IR69-GW06-10A	3/9/10	1115	GW									2		2						
✓	IR69-GW06-10A-MS	3/9/10	1115	GW									2		2						

Sample Unpacked By: [signature]
Sample Order Entry By: [signature]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Residual Chlorine Present?
Yes ____ No ✓

Relinquished by: [signature]	Date/Time: 3-11-10 1745	Received by: [signature]	Date/Time: 3-12-10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 0.1 °C

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2015

21792

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd - Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6792
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lej. Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

CompuChem Sample ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other None	8260B	8270C/8270C SIM	RSK 175 MEE	8081A/8082 Aroclors	TOC	CWNS-Alk	Sulfide	6010B Metals	6010B Metals	6010B Metals						
													2-1L Ambers	2-40mL	2-1L Ambers	2-40mL VOAS	1-250mL poly, none	1-500mL poly Zn Ac 6N NaOH	1-500mL FAL	1-500mL poly HNO3	1-500mL poly HNO3						
														HCl		H2SO4				Dissolved	Total						
1003089-20	IR69-GW08D-10A	3/8/10	1135	GW	4						4		2		2												
1003089-19	IR69-GW08-10A	3/8/10	1130	GW	4						4		2		2												

Sample Unpacked By: K Planning
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Residual Chlorine Present?
Yes ____ No ✓

Relinquished by:	Date/Time: 3/11/10 1600	Received by: K Planning	Date/Time: 03-12-10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 1.2 °C

Samples stored 60 days after date report mailed at no extra charge.

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CHAIN OF CUSTODY

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Phone: 919-379-4100 Fax 919-379-4040

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Lynn Buckley
Phone #: 757-671-6792
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab Sample ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other None	8260B 2-1L	8270C/8270-SIM/Amber 2-40ml	RSK 175 MEE VOA HCl 2-1L	3550B/8081A/8082/Amber 2-40ml VOAs	TOC 1-250ml H2SO4	CN-AIK 1-250ml poly, none	Sulfide 1-500ml poly Zn Ac, NaOH	TAL 1-500ml 6010B/METALS poly, HNO3	Dissolved 1-500ml poly FIELD FILTERED 6010B/metals HNO3 FILTERED					
10003089-17	IR69-EB-030710-SB	3/7/10	1700	W	5			1			4		2		2				1				<2		
10003089-19	IR69-GW08-10A	3/8/10	1130	GW	7	2	1	1	2		1			2		2	1	1	1			<2	>9	<2	
-20	IR69-GW08D-10A	3/8/10	1135	GW	7	2	1	1	2		1			2		2	1	1	1			<2	>9	<2	

Lab Use Only

Sample Unpacked By: Diane Byrd
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

~~Residual Chlorine Present?~~
Yes ____ No ✓

Relinquished by:	Date/Time: 3/10/10 1755	Received by: Diane Byrd	Date/Time: 3/12/10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:
Subcontact? Y or N If yes, where?		Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 0.6 °C

Samples stored 60 days after date report mailed at no extra charge.

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20524

CHAIN OF CUSTODY

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2MHill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Caven Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp LeJ Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other None	8260B	8270C/8270C-SIM 1-2L Ambers	BSK 175 MEE 2-40mL VOAs HCL	355DB 8081A 8082 2-1L Ambers	TOC 2-40mL VOAs H2SO4	CNNS-AIK 1-250mL Poly 2 NaOH	Sulfide 1-500mL poly 1-500mL ZnAce 6N NaOH	6010B TAT Metals 1-500mL poly 2 HNO3	6010B Dissolved Metals 1-500mL Poly HNO3 Field Filtered						
1003089-21	IR69-EB-030810-GW	3/8/10	0930	W	11	2	1	1	2		5		2	2	2	2	1	1	1			<2	>9	<2		

Lab Use Only

Sample Unpacked By: K. Manning
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or N/A
625 & Phenol samples checked for chlorine? Y or N/A
608 samples checked for pH between 5.0-9.0? Y or N/A

* Temp. blank present. KM-03-12-10

Residual Chlorine Present?
Yes ____ No ✓

Sample Custody

Relinquished by: [signature]	Date/Time: 3-11-10 17:10	Received by: K. Manning	Date/Time: 03-12-10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 1.6 °C

Samples stored 60 days after date report mailed at no extra charge.

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SN005

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Sample ID Cross Reference

LAB WO	Project	Sample #	Field ID	Sample Date	Receive Date	DueDate	Chain of Custody ID
1003089	CTO-081 SITE 69/289017.SA.DM/N624	1003089-01	EB01-030410-SS	03/04/2010	03/11/2010	04/06/2010	IR69-EB01-030410-SS
1003089	CTO-081 SITE 69/289017.SA.DM/N624	1003089-02	IR69-GW27IW	03/06/2010	03/11/2010	04/06/2010	IR69-GW27IW-10A
1003089	CTO-081 SITE 69/289017.SA.DM/N624	1003089-03	IR69-GW27DW	03/06/2010	03/11/2010	04/06/2010	IR69-GW27DW-10A
1003089	CTO-081 SITE 69/289017.SA.DM/N624	1003089-04	IR69-GW09IW	03/06/2010	03/11/2010	04/06/2010	IR69-GW09IW-10A
1003089	CTO-081 SITE 69/289017.SA.DM/N624	1003089-05	IR69-GW09DW	03/06/2010	03/11/2010	04/06/2010	IR69-GW09DW-10A
1003089	CTO-081 SITE 69/289017.SA.DM/N624	1003089-06	IR69-GW02DD	03/06/2010	03/11/2010	04/06/2010	IR69-GW02DD-10A
1003089	CTO-081 SITE 69/289017.SA.DM/N624	1003089-07	IR69-GW15IW	03/06/2010	03/11/2010	04/06/2010	IR69-GW15IW-10A
1003089	CTO-081 SITE 69/289017.SA.DM/N624	1003089-08	EB01-030610-GW	03/06/2010	03/11/2010	04/06/2010	IR69-EB01-030610-GW
1003089	CTO-081 SITE 69/289017.SA.DM/N624	1003089-09	EB01-030710-GW	03/07/2010	03/11/2010	04/06/2010	IR69-EB01-030710-GW
1003089	CTO-081 SITE 69/289017.SA.DM/N624	1003089-10	IR69-GW03D	03/07/2010	03/11/2010	04/06/2010	IR69-GW03D-10A
1003089	CTO-081 SITE 69/289017.SA.DM/N624	1003089-11	IR69-GW03	03/07/2010	03/11/2010	04/06/2010	IR69-GW03-10A
1003089	CTO-081 SITE 69/289017.SA.DM/N624	1003089-12	IR69-GW03DW	03/07/2010	03/11/2010	04/06/2010	IR69-GW03DW-10A
1003089	CTO-081 SITE 69/289017.SA.DM/N624	1003089-13	IR69-GW15	03/07/2010	03/11/2010	04/06/2010	IR69-GW15-10A
1003089	CTO-081 SITE 69/289017.SA.DM/N624	1003089-14	FB01-031010-10	03/10/2010	03/11/2010	04/06/2010	IR69-FB01-031010-10
1003089	CTO-081 SITE 69/289017.SA.DM/N624	1003089-15	EB01-030710-SB	03/07/2010	03/11/2010	04/06/2010	IR69-EB01-030710-SB
1003089	CTO-081 SITE 69/289017.SA.DM/N624	1003089-16	IR69-TB01-030810	03/08/2010	03/11/2010	04/06/2010	
1003089	CTO-081 SITE 69/289017.SA.DM/N624	1003089-17	EB01-030710-SB	03/11/2010	03/12/2010	04/06/2010	IR69-EB01-030710-SB

LAB WO	Project	Sample #	Field ID	Sample Date	Receive Date	DueDate	Chain of Custody ID
1003089	CTO-081 SITE 69/289017.SA.DM/N624	1003089-18	IR69-GW06	03/09/2010	03/12/2010	04/06/2010	IR69-GW06-10A
1003089	CTO-081 SITE 69/289017.SA.DM/N624	1003089-19	IR69-GW08	03/08/2010	03/11/2010	04/06/2010	IR69-GW08-10A
1003089	CTO-081 SITE 69/289017.SA.DM/N624	1003089-20	IR69-GW08D	03/08/2010	03/11/2010	04/06/2010	IR69-GW08D-10A
1003089	CTO-081 SITE 69/289017.SA.DM/N624	1003089-21	EB01-030810-GW	03/08/2010	03/12/2010	04/06/2010	IR69-EB01-030810-GW

Data Completeness

The data package was received complete and intact. Resubmissions were not required. (SW846 Method 8260B)

Laboratory: CompuChem

Holding Times

Sampling Date: 3-04-10-10
Received Date: 3-11-10
Analysis Dates: 3-16-17-10

Cooler Temp: 0.2-1.4°C

All prep and analysis holding time requirements were met.

Calibrations

Mass assignments were verified by the injection of BFB.

The initial and continuing calibrations required qualifications due to high %D values and low RRFs; see attached FormVI and VIIs.

Internal Standards

All criteria met.

Blank Summary

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying criteria.
- Qualification Action codes where applied as stated in table below:
-

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Storage, Field, Trip, Instrument	Detects	Not detected	No qualifications
	< CRQL*	< CRQL*	Report CRQL value with a U
		≥ CRQL*	Use professional judgment
	≥ CRQL*	< CRQL*	Report CRQL value with a U
		≥ CRQL* and < blank concentration	Report the concentration for the sample with a U, or qualify the data as unusable R
		≥ CRQL* and ≥ blank concentration	Use professional judgment
	= CRQL*	< CRQL*	Report CRQL value with a U
		≥ CRQL*	Use professional judgment
	Gross contamination	Detects	Qualify results as unusable R

*2x the CRQL for methylene chloride, 2-butanone and acetone

Method blank contamination was exhibited- qualifications were required. The associated field QC for this data package was: IR69-TB01-031110 and IR69-TB01-030810- trip blanks; IR69-EB01-030810-GW, IR69-EB01-030610-GW, IR69-EB-030710-GW and IR69-EB01-031410-GW-equipment blanks; IR69-FB01-031010 - field blank.

Blank Contamination and Qualification Summaries

Blank ID	Compound	Concentration	Reporting Limit
VBLKHK	acetone	0.73J ug L	2.5 ug L
	methylene chloride	0.038	0.5
	cis-1,2-dichloroethene	0.091	0.5
VBLKHJ	acetone	0.52J	2.5
	methylene chloride	0.026J	0.5
IR69-TB01-031110	acetone	1.6J	2.5
	methylene chloride	0.052J	0.5
	cyclohexane	0.25J	0.5
IR69-TB01-030810	acetone	1.8J	2.5
	cis-1,2-dichloroethene	0.032J	0.5
IR69-EB01-030810-GW	carbon disulfide	0.13J	0.5
	acetone	11	2.5
	methylene chloride	8.4	0.5
	2-butanone	1.9J	2.5
	chloroform	0.17J	0.5
	benzene	0.13J	0.5
	toluene	2.4	0.5
	chlorobenzene	0.22J	0.5
	o-xylene	0.065J	0.5
IR69-EB01-030610-GW	acetone	4.7	2.5
	methylene chloride	8.2	0.5
	cis-1,2-dichloroethene	0.057J	0.5
	2-butanone	1.3J	2.5
	chloroform	0.16J	0.5
	toluene	2.8	0.5
	chlorobenzene	0.33J	0.5
	o-xylene	0.038J	0.5
IR69-EB01-030710-GW	acetone	6.5	2.5
	methylene chloride	5.3	0.5
	cis-1,2-dichloroethene	0.048J	0.5
	2-butanone	1.2J	2.5
	chloroform	0.11J	0.5
	benzene	0.15J	0.5
	toluene	1.7	0.5
	chlorobenzene	0.19J	0.5
	ethylbenzene	0.051J	0.5
	o-xylene	0.067J	0.5
IR69-FB01-031010	acetone	5.5	2.5
	methylene chloride	10	0.5

	cis-1,2-dichloroethene	0.035	0.5
	2-butanone	1.8J	0.5
	chloroform	0.19J	0.5
	benzene	0.12J	0.5
	toluene	2.6	0.5
	chlorobenzene	0.23J	0.5
	ethylbenzene	0.064J	0.5
	o-xylene	0.062J	0.5

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Qual Code
IR69-GW02DD-10A, IR69-GW03-10A, IR69-GW03D-10A, IR69-GW03DW-10A, IR69-GW06-10A, IR69-GW08-10A, IR69-GW08D-10A, IR69-GW15-10A, IR69-GW27DW-10A, IR69-GW27IW-10A	acetone	U at RL	MBL
IR69-GW03DW-10A, IR69-GW09IW-10A, IR69-GW27DW-10A, IR69-GW27IW-10A	methylene chloride	U at RL	MBL
IR69-GW03DW-10A	cis-1,2-dichloroethene	U at RL	MBL
IR69-GW02DD-10A, IR69-GW03D-10A, IR69-GW06-10A, IR69-GW08-10A, IR69-GW08D-10A, IR69-GW09DW-10A, IR69-GW09IW-10A, IR69-GW15-10A, IR69-GW15IW-10A, IR69-GW27DW-10A, IR69-GW27IW-10A	toluene	U at RL	FBL
IR69-GW03-10A, IR69-GW09DW-10A	ethylbenzene	U at RL	FBL
IR69-GW03D-10A	benzene	U at RL	FBL
IR69-GW09DW-10A	methylene chloride	U	EBL
IR69-GW09DW-10A	cis-1,2-dichloroethene	U at RL	FBL
IR69-GW09DW-10A	chloroform	U at RL	EBL
IR69-GW09DW-10A, IR69-GW15-10A, IR69-GW15IW-10A	benzene	U at RL	FBL
IR69-GW15IW-10A	acetone	U	EBL

Surrogates

All criteria were met.

Laboratory Control Sample

All criteria were met.

Matrix Spike/Spike Duplicate Samples

An MS/MSD was submitted for sample IR69-GW06-10A; no qualifications were required.

Field Duplicate Sample

A field duplicate was submitted for samples IR69-GW03-10A and IR69-GW08-10A; no qualifications were required.

Specific Comments:

All sample results were reported within the calibration range of the instruments. Dilutions were required for samples IR69-GW03-10A, IR69-GW09IW-10A and IR69-GW15IW-10A to obtain results within the calibration range.

Detection limits were acceptable. Raw data and calculations were verified.

We have limited the supporting documentation, found with these worksheets, to those forms that indicate qualifications were required.

Validator Signature: _____ **Date:** 7/13/10

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Lab File ID: 0C16005-TUN171 BFB Injection Date: 03/16/10

Instrument ID: 5972HP71 BFB Injection Time: 1112

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.0
75	30.0 - 60.0% of mass 95	54.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	84.0
175	5.0 - 9.0% of mass 174	6.6 (7.8)1
176	95.0 - 101.0% of mass 174	84.8 (100.9)1
177	5.0 - 9.0% of mass 176	5.3 (6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD001	0C16005-CAL	0C16005-CAL271	03/16/10	1241
02	VSTD0.5	0C16005-CAL	0C16005-CAL171	03/16/10	1308
03	VSTD005	0C16005-CAL	0C16005-CAL371	03/16/10	1336
04	VSTD010	0C16005-CAL	0C16005-CAL471	03/16/10	1404
05	VSTD020	0C16005-CAL	0C16005-CAL571	03/16/10	1432
06	VSTD040	0C16005-CAL	0C16005-CAL671	03/16/10	1459
07	VBLKHJ	0031616-BLK	0031616-BLK171	03/16/10	1606
08	VHJLCS	0031616-BS1	0031616-BS171	03/16/10	1642
09	VHJLCSD	0031616-BSD	0031616-BSD171	03/16/10	1738
10	EB01-030410-SS	1003089-01	1003089-0171	03/16/10	1819
11	IR69-GW27IW	1003089-02	1003089-0271	03/16/10	1847
12	IR69-GW27DW	1003089-03	1003089-0371	03/16/10	1914
13	IR69-GW09IW	1003089-04	1003089-0471	03/16/10	1942
14	IR69-GW09DW	1003089-05	1003089-0571	03/16/10	2010
15	IR69-GW02DD	1003089-06	1003089-0671	03/16/10	2037
16	IR69-GW15IW	1003089-07	1003089-0771	03/16/10	2105
17	IR69-GW03	1003089-11	1003089-1171	03/16/10	2256
18					
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FORM V VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Instrument ID: 5972HP71 Calibration Date(s): 03/16/10 03/16/10

Column: SPB-624 ID: 0.32 (mm) Calibration Time(s): 1241 1459

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2	MAX %RSD OR R^2
Dichlorodifluoromethane	AVRG		0.43727028	9.199	15.000
Chloromethane	AVRG		0.28225356	3.820	15.000
Vinyl Chloride	AVRG		0.27657164	5.502	30.000
Bromomethane	LINR	0.07461460	5.00545219	0.9992858	0.9900000
Chloroethane	AVRG		0.15193990	7.308	15.000
Trichlorofluoromethane	AVRG		0.54653601	5.978	15.000
1,1-Dichloroethene	AVRG		0.24096332	4.852	30.000
Carbon disulfide	AVRG		0.81456429	5.796	15.000
1,1,2-trichloro-1,2,2-triflu	AVRG		0.19916813	10.798	15.000
Acetone	AVRG		0.03377963	4.891	15.000
Methyl acetate	AVRG		0.07835184	12.844	15.000
Methylene Chloride	AVRG		0.22827015	8.598	15.000
trans-1,2-Dichloroethene	AVRG		0.27280676	7.851	15.000
Methyl-tert-butyl ether	AVRG		0.48310055	9.461	15.000
1,1-Dichloroethane	AVRG		0.52266702	8.278	15.000
cis-1,2-Dichloroethene	AVRG		0.27231977	8.106	15.000
2-butanone	AVRG		0.04190146	7.220	15.000
oroform	AVRG		0.58478325	8.623	30.000
,1-Trichloroethane	AVRG		0.60228959	9.026	15.000
Carbon Tetrachloride	AVRG		0.57641982	6.793	15.000
Benzene	AVRG		0.85459647	7.566	15.000
1,2-Dichloroethane	AVRG		0.43734975	8.537	15.000
Trichloroethene	AVRG		0.32530970	5.887	15.000
1,2-Dichloropropane	AVRG		0.21314121	11.358	30.000
Bromodichloromethane	AVRG		0.40411465	10.284	15.000
cis-1,3-Dichloropropene	AVRG		0.36453291	8.645	15.000
4-Methyl-2-pentanone	AVRG		0.13832511	3.805	15.000
Toluene	AVRG		0.77835865	10.137	30.000
trans-1,3-Dichloropropene	AVRG		0.45286970	4.338	15.000
1,1,2-Trichloroethane	AVRG		0.19409783	5.460	15.000
Tetrachloroethene	LINR	-0.1585526	3.12550551	0.9973473	0.9900000
2-hexanone	AVRG		0.09951239	3.548	15.000
Dibromochloromethane	AVRG		0.35118797	3.863	15.000
1,2-Dibromoethane	AVRG		0.23762859	5.839	15.000
Chlorobenzene	AVRG		0.98896596	13.046	15.000
Ethylbenzene	AVRG		0.53260817	18.092	30.000
m,p-Xylene	LINR	-0.2976084	1.81937053	0.9972324	0.9900000
o-Xylene	AVRG		0.61409623	12.730	15.000
Styrene	AVRG		0.96464603	7.322	15.000
Bromoform	AVRG		0.19760123	6.211	15.000
Isopropyl Benzene	LINR	-0.1264470	0.61918351	0.9978621	0.9900000
1,1,2,2-Tetrachloroethane	AVRG		0.39467620	5.348	15.000
1,3-Dichlorobenzene	AVRG		1.73878542	25.242	15.000
1,4-Dichlorobenzene	LINR	-0.1210993	0.70629454	0.9993515	0.9900000

FORM VI VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Lab File ID: 0C17004-TUN171 BFB Injection Date: 03/17/10

Instrument ID: 5972HP71 BFB Injection Time: 0941

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.3
75	30.0 - 60.0% of mass 95	53.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	90.5
175	5.0 - 9.0% of mass 174	6.6 (7.2)1
176	95.0 - 101.0% of mass 174	88.9 (98.3)1
177	5.0 - 9.0% of mass 176	5.9 (6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005	0C17004-CCV	0C17004-CCV171	03/17/10	1008
02	VBLKHK	0031702-BLK	0031702-BLK171	03/17/10	1055
03	VHKLCS	0031702-BS1	0031702-BS171	03/17/10	1138
04	VHKLCSD	0031702-BSD	0031702-BSD171	03/17/10	1206
05	EB01-030610-GW	1003089-08	1003089-08R71	03/17/10	1240
06	EB01-030710-GW	1003089-09	1003089-09R71	03/17/10	1308
07	IR69-GW09IWDL	1003089-04R	1003089-04D71	03/17/10	1335
08	IR69-GW03D	1003089-10	1003089-10D71	03/17/10	1403
09	IR69-GW03DL	1003089-11R	1003089-11D71	03/17/10	1431
10	IR69-GW03DW	1003089-12	1003089-1271	03/17/10	1526
11	IR69-GW15	1003089-13	1003089-1371	03/17/10	1554
12	FB01-031010-10	1003089-14	1003089-1471	03/17/10	1621
13	EB01-030710-SB	1003089-15	1003089-1571	03/17/10	1649
14	IR69-TB01-030810	1003089-16	1003089-1671	03/17/10	1717
15	IR69-GW06	1003089-18	1003089-1871	03/17/10	1744
16	IR69-GW08	1003089-19	1003089-1971	03/17/10	1812
17	IR69-GW08D	1003089-20	1003089-2071	03/17/10	1840
18	EB01-030810-GW	1003089-21	1003089-2171	03/17/10	1907
19	IR69-GW06MS	0031702-MS1	0031702-MS171	03/17/10	1935
20	IR69-GW06MSD	0031702-MSD	0031702-MSD171	03/17/10	2003
21	IR69-GW15IWDL	1003089-07R	1003089-07D271	03/17/10	2031
22					

FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Instrument ID: 5972HP71 Calibration Date: 03/17/10 Time: 1008

Lab File ID: 0C17004-CCV171 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1241 1459

GC Column: SPB-624 ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF5 or AMOUNT	CCAL RRF5	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dichlorodifluoromethane	0.4372700	0.3882361	0.3882361	0.001	-11.21	90.00	AVRG
Chloromethane	0.2822500	0.2413804	0.2413804	0.1	-14.48	90.00	AVRG
Vinyl Chloride	0.2765700	0.2293891	0.2293891	0.001	-17.06	20.00	AVRG
Bromomethane	109.21103	125.00000	0.1596088	0.001	-12.63	90.00	LINR
Chloroethane	0.1519400	0.1415684	0.1415684	0.001	-6.83	90.00	AVRG
Trichlorofluoromethane	0.5465400	0.7203326	0.7203326	0.001	31.80	90.00	AVRG
1,1-Dichloroethene	0.2409600	0.2345761	0.2345761	0.001	-2.65	20.00	AVRG
Carbon disulfide	0.8145600	0.7643187	0.7643187	0.001	-6.17	90.00	AVRG
1,1,2-trichloro-1,2,2-triflu	0.1991700	0.1893845	0.1893845	0.001	-4.91	90.00	AVRG
Acetone	0.0337800	0.0322508	0.0322508	0.001	-4.53	90.00	AVRG
Methyl acetate	0.0783500	0.0740178	0.0740178	0.001	-5.53	90.00	AVRG
Methylene Chloride	0.2282700	0.2295918	0.2295918	0.001	0.58	90.00	AVRG
trans-1,2-Dichloroethene	0.2728000	0.2804419	0.2804419	0.001	2.80	90.00	AVRG
Methyl-tert-butyl ether	0.4831000	0.4614367	0.4614367	0.001	-4.48	90.00	AVRG
-Dichloroethane	0.5226700	0.5158501	0.5158501	0.1	-1.30	90.00	AVRG
-1,2-Dichloroethene	0.2723200	0.2970186	0.2970186	0.001	9.07	90.00	AVRG
2-butanone	0.0419000	0.0388537	0.0388537	0.001	-7.27	90.00	AVRG
Chloroform	0.5847800	0.6333249	0.6333249	0.001	8.30	20.00	AVRG
1,1,1-Trichloroethane	0.6022900	0.6634590	0.6634590	0.001	10.16	90.00	AVRG
Carbon Tetrachloride	0.5764200	0.6047377	0.6047377	0.001	4.91	90.00	AVRG
Benzene	0.8546000	0.8458322	0.8458322	0.001	-1.02	90.00	AVRG
1,2-Dichloroethane	0.4373500	0.4712453	0.4712453	0.001	7.75	90.00	AVRG
Trichloroethene	0.3253100	0.3312174	0.3312174	0.001	1.82	90.00	AVRG
1,2-Dichloropropane	0.2131400	0.2136765	0.2136765	0.001	0.25	20.00	AVRG
Bromodichloromethane	0.4041100	0.4478707	0.4478707	0.001	10.83	90.00	AVRG
cis-1,3-Dichloropropene	0.3645300	0.3727412	0.3727412	0.001	2.25	90.00	AVRG
4-Methyl-2-pentanone	0.1383200	0.1280918	0.1280918	0.001	-7.39	90.00	AVRG
Toluene	0.7783600	0.7428713	0.7428713	0.001	-4.56	20.00	AVRG
trans-1,3-Dichloropropene	0.4528700	0.4406929	0.4406929	0.001	-2.69	90.00	AVRG
1,1,2-Trichloroethane	0.1941000	0.1907861	0.1907861	0.001	-1.71	90.00	AVRG
Tetrachloroethene	90.805125	125.00000	0.2831521	0.001	-27.36	90.00	LINR
2-hexanone	0.0995100	0.1312773	0.1312773	0.001	31.92	90.00	AVRG
Dibromochloromethane	0.3511900	0.3580820	0.3580820	0.001	1.96	90.00	AVRG
1,2-Dibromoethane	0.2376300	0.2327101	0.2327101	0.001	-2.07	90.00	AVRG
Chlorobenzene	0.9889600	0.9736012	0.9736012	0.3	-1.55	90.00	AVRG
Ethylbenzene	0.5326100	0.5050035	0.5050035	0.001	-5.18	20.00	AVRG
m,p-Xylene	249.80522	250.00000	0.6310013	0.001	-0.08	90.00	LINR
o-Xylene	0.6141000	0.5970263	0.5970263	0.001	-2.78	90.00	AVRG
Styrene	0.9646400	0.9677003	0.9677003	0.001	0.32	90.00	AVRG
Bromoform	0.1976000	0.2081557	0.2081557	0.1	5.34	90.00	AVRG
Isopropyl Benzene	119.61104	125.00000	1.7496192	0.001	-4.31	90.00	LINR
1,1,2,2-Tetrachloroethane	0.3946800	0.3660491	0.3660491	0.3	-7.25	90.00	AVRG

FORM VII VOA

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKHJ

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Lab File ID: 0031616-BLK171_T Lab Sample ID: 0031616-BLK1

Date Analyzed: 03/16/10 Time Analyzed: 1606

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

Instrument ID: 5972HP71

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VHJLCS	0031616-BS1	0031616-BS17	1642
02	VHJLCSD	0031616-BSD1	0031616-BSD1	1738
03	EB01-030410-SS	1003089-01	1003089-0171	1819
04	IR69-GW27IW	1003089-02	1003089-0271	1847
05	IR69-GW27DW	1003089-03	1003089-0371	1914
06	IR69-GW09IW	1003089-04	1003089-0471	1942
07	IR69-GW09DW	1003089-05	1003089-0571	2010
08	IR69-GW02DD	1003089-06	1003089-0671	2037
09	IR69-GW15IW	1003089-07	1003089-0771	2105
10	IR69-GW03	1003089-11	1003089-1171	2256
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30				

COMMENTS: Acetone 0.52J ug/L
MC 0.026J

page 1 of 1

FORM IV VOA

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKHK

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Lab File ID: 0031702-BLK171_D Lab Sample ID: 0031702-BLK1

Date Analyzed: 03/17/10 Time Analyzed: 1055

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

Instrument ID: 5972HP71

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VHKLCS	0031702-BS1	0031702-BS17	1138
02	VHKLCSD	0031702-BSD1	0031702-BSD1	1206
03	EB01-030610 GW	1003089-08	1003089-08R7	1240
04	EB01-030710-GW	1003089-09	1003089-09R7	1308
05	IR69-GW09IWDL	1003089-04RE1	1003089-04D7	1335
06	IR69-GW03D	1003089-10	1003089-10D7	1403
07	IR69-GW03DL	1003089-11RE1	1003089-11D7	1431
08	IR69-GW03DW	1003089-12	1003089-1271	1526
09	IR69-GW15	1003089-13	1003089-1371	1554
10	FB01-031010-10	1003089-14	1003089-1471	1621
11	EB01-030710-SB	1003089-15	1003089-1571	1649
12	IR69-TB01-030810	1003089-16	1003089-1671	1717
13	IR69-GW06	1003089-18	1003089-1871	1744
14	IR69-GW08	1003089-19	1003089-1971	1812
15	IR69-GW08D	1003089-20	1003089-2071	1840
16	EB01-030810-GW	1003089-21	1003089-2171	1907
17	IR69-GW06MS	0031702-MS1	0031702-MS17	1935
18	IR69-GW06MSD	0031702-MSD1	0031702-MSD1	2003
19	IR69-GW15IWDL	1003089-07RE1	1003089-07D2	2031
20				
21				
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25				
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27				
28				
29				
30				

COMMENTS: Acetone 0.73J ug/L
MIC 0.035J
Cis-1,2-dichloroethene 0.091J

FORM IV VOA

Initial Calibration Date: 3/16/2010

RRF and %RSD Calculations:

Compound Name: vinyl chloride
Lab Value: 0.2696

Area of Compound	1283863
Area of Internal STD	595297
Conc. of Internal STD	125
Conc. of Compound	1000
Calculated RRF	0.270

Compound Name: 2-hexanone
Lab Value: 3.5

RRF of STD 1	0.1012
RRF of STD 2	0.0988
RRF of STD 3	0.0946
RRF of STD 4	0.1053
RRF of STD 5	0.0990
RRF of STD 6	0.0982
Calculated % RSD	3.5

Continuing Calibration File ID: 3/17/2010

RRF and %D Calculations:

Compound Name: methylene chloride
Lab Value: 0.230

Area of Compound	107603
Area of Internal STD	468671
Conc. of Internal STD	125
Conc. of Compound	125
Calculated RRF	0.230

Compound Name: toluene
Lab Value: 4.6

Average RRF	0.778
Calibration Check RRF	0.743
Calculated % D	4.6

FIELD DUPLICATE SAMPLE SUMMARY

Sample ID: IR69-GW03-10A
Duplicate Sample ID: IR69-GW03D-10A

Water: RPD>75%
Soil: RPD>100%

Compound	Sample Conc.	Dup. Sample Conc.	%RPD
vinyl chloride	5.2	4.8	8
trans-1,2-dichloroethene	3.2	3.9	20
cis-1,2-dichloroethene	180	170	6
benzene	0.58	0.66	13
1,2-dichloroethane	0.76	0.72	5
trichloroethene	3.2	3.5	9
toluene	0.73	0.74	1
chlorobenzene	7.1	7.5	5
			#DIV/0!
			#DIV/0!
			#DIV/0!
			#DIV/0!
			#DIV/0!
			#DIV/0!
			#DIV/0!
			#DIV/0!
			#DIV/0!
			#DIV/0!

COMMENTS: No qualifications

* result below the CRQL

CompuChem

A division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1003089
PROTOCOL: SW-846
SAMPLE IDENTIFICATIONS: EB01-030410-SS, IR69-GW27IW, IR69-GW27DW, IR69-GW09IW, IR69-GW09DW, IR69-GW02DD, IR69-GW15IW, EB01-030610-GW, EB01-030710-GW, IR69-GW03D, IR69-GW03, IR69-GW03DW, IR69-GW15, FB01-031010-10, EB01-030710-SB, IR69-TB01-030810, IR69-GW06, IR69-GW08, IR69-GW08D, and EB01-030810-GW

The 20 aqueous samples listed above were received intact, refrigerated at 0.2°C, 1.3°C, and 1.4°C, with proper documentation, in sealed shipping containers, on March 11th and 12th, 2010. The samples were scheduled for the requested analyses of the volatile fraction. SW-846, 3rd Edition, Update 3, 8260B was used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices for SDG 1003089 are included in the sample data sections.

Analysis holding time requirements was met for the samples. The pH values of the samples were equal to 1, except for sample IR69-GW03, vial A, which had pH value of 5. There were volatile Project/Target Compound List (TCL) analytes above the Contract Required Quantitation Limit (CRQL) identified in sixteen/20 of the samples. All of the system monitoring compounds met recovery criteria in the analyses of the samples. All of the internal standards met response and retention time criteria in the analyses of the samples.

In the initial analyses of samples, IR69-GW09IW, IR69-GW15IW, and IR69-GW03, the on-column amounts exceeded the instrument's analytical range as defined by the highest concentration level of the Initial Calibration. The samples were reanalyzed using smaller aliquot of raw samples to bring the on-column amounts into ranges. We have reported both analyses of the samples IR69-GW09IW, IR69-GW15IW, and IR69-GW03. Due to the result of the screen sample, IR69-GW03D, was initially analyzed using dilution of raw sample. The screen Reconstructed Ion Chromatogram (RIC) is included in the sample data package immediately following the RIC for the sample's reportable run.

All Bromofluorobenzene (BFB) abundance criteria were met for tunes associated to this SDG. Overall QC criteria were met for all initial and continuing calibration standards associated to this SDG. Manual integration was performed on sample file 1003089-0771. The reason has been coded with explanations provided in the notice included in the narrative section of the SDG. The associated method blanks met all quality control criteria. The associated Laboratory Control Samples (VHJLCS/VHJLCSD and VHKLCS/VHKLCSD) met all accuracy and precision criteria. Sample IR69-GW06 was requested for matrix spike/matrix spike duplicate (MS/MSD) for the volatile fraction with this SDG. The MS/MSD bias high %Recovery criteria for Trichlorofluoromethane.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

DataQual

From: Cathy Dover [cdover@compuchemlabs.com]
Sent: Thursday, July 29, 2010 1:56 PM
To: dataqual@charter.net
Cc: Anita Dodson; Gwen.Buckley@CH2M.com; Jackie Cleveland
Subject: RE: xylene questions for CTO-81

Hi Laura,

I spoke with a data reviewer that has been here for a while and then the manager by phone. I was able to read off the quant report results, form 1 results and EDD results for the 5 samples. He said that the total xylenes should have been the same J value result as the o-xylene hit on the 5 samples below.

The data reviewer/analyst works a split shift, but I was able to catch him before work today! He was very helpful! He remembered the change that had to be made to the "part of total" line items on the quant report and he thought that it only affected a small amount of data for approximately a week in March. This only affected the 25ml 8260B DOD waters for that short time. They have everything correct now for the reporting for xylenes in that method.

The manager said that the RL for the total is lower than the m,p-xylene RL so that any J values from the o-xylene or m,p-xylene will show up on the form 1.

I apologize for the oversight on the quant reports that was causing the total xylene issue! Let me know if you need anything else.

Cathy

Cathy Dover
Supervisor of Project Management
Compuchem
501 Madison Ave.
Cary, N.C. 27513
(919)379-4089 office
(919)379-4050 fax

From: dataqual@charter.net [mailto:dataqual@charter.net]
Sent: Thursday, July 29, 2010 11:55 AM
To: Cathy Dover
Cc: Anita Dodson; Gwen.Buckley@CH2M.com; Jackie Cleveland
Subject: Re: xylene questions for CTO-81

Cathy,

So to verify the total xylene detection limit should have reported at the m,p xylene detection limit of 1.0 and NOT the limit it was reported at of the o xylene limit at 0.5? If this is confirmed by the lab I will make the corrections to the Form 1s and EDD so we can get this to CH2M HILL.

Thank you,
Laura

Sent via BlackBerry by AT&T

From: "Cathy Dover" <cdover@compuchemlabs.com>

Date: Thu, 29 Jul 2010 10:25:07 -0400
To: DataQual<dataqual@charter.net>
Cc: <Anita.Dodson@CH2M.com>; <Gwen.Buckley@CH2M.com>; <cleve137@charter.net>
Subject: RE: xylene questions for CTO-81

Hi Everyone,

I checked the few sample IDs listed below and for these there was no hit (not even a J value result) for m,p-xylene.

I learned something new with this data inquiry!

Let me know if you need anything else.

Thanks,

Cathy

Cathy Dover
Supervisor of Project Management
Compuchem
501 Madison Ave.
Cary, N.C. 27513
(919)379-4089 office
(919)379-4050 fax

From: DataQual [mailto:dataqual@charter.net]
Sent: Sunday, July 25, 2010 5:24 PM
To: Cathy Dover
Subject: RE: xylene questions for CTO-81

Thanks, Cathy!

From: Cathy Dover [mailto:cdover@compuchemlabs.com]
Sent: Sunday, July 25, 2010 2:13 PM
To: DataQual
Cc: Jacqueline Cleveland; gwen.buckley@ch2m.com
Subject: RE: xylene questions for CTO-81

Hi Laura,

I am not exactly how the xylene reporting has changed so I passed your e-mail along to the lab manager to help. He is out on vacation, but has been e-mailing back a few times a day.

I have asked him to let me know what needs to be done with the examples you listed below.

We will get back to you ASAP.

Have a great day!

Cathy

Cathy Dover
Supervisor of Project Management
Compuchem

501 Madison Ave.
Cary, N.C. 27513
(919)379-4089 office
(919)379-4050 fax

From: DataQual [mailto:dataqual@charter.net]
Sent: Saturday, July 24, 2010 3:11 PM
To: Cathy Dover
Cc: 'Jacqueline Cleveland'; gwen.buckley@ch2m.com
Subject: xylene questions for CTO-81

Hi Cathy,

I have looked further into the xylene issue that we discussed earlier and it appears that the only cases that I have found that are in question are the ones listed below:

Sample 1003102-08: o-xylene reported at 0.076 , no total xylene reported

Sample 1003089-08: o-xylene reported at 0.038, no total xylene reported

Sample 1003089-09: o-xylene reported at 0.067, no total xylene reported

Sample 1003089-14: o-xylene reported at 0.062, no total xylene reported

Sample 1003089-21: o-xylene reported at 0.065, no total xylene reported

In all cases the MDL for both o-xylene and total xylene are 0.03. I can make any changes to the EDD that may be required, please submit and hard copy corrections.

Thanks,
Laura

Laura Maschhoff
DataQual Environmental Services, LLC
dataqual@charter.net

Data Completeness

The data package was received complete and intact. Resubmissions were not required. (SW846 Method 8270C)
All field sample and QC blank IDs were missing the first four (IR69) and or the last four (-10A) characters. The characters were added to the Form 1s in the DV reports by the data validator

Laboratory: CompuChem

Holding Times

Sampling Date: 3 04-10 10
Received Date: 3 11 10
Extraction Date: 3 11-15 10
Analysis Dates: 3 23-26 10
Cooler Temp: 0.2-1.4°C

All prep and analysis holding time requirements were met.

Calibrations

Mass assignments were verified by the injection of DFTPP.
The continuing calibrations required qualifications due to high %D values; see attached Form VIIs.

Internal Standards
All criteria met with the exception of the sample IR69-GW08D-10A which exhibited low recovery for perylene-d12; therefore all result associated with this standard were qualified as estimated (J UJ). The sample was re-analyzed with non-compliant results exhibited; therefore this analysis was excluded in favor of the initial analysis.

Blank Summary
Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying criteria.
- Qualification Action codes where applied as stated in table below:

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Field	Detects	Not detected	No qualifications
	< CRQL*	< CRQL*	Report CRQL value with a U
		> CRQL*	Use professional judgment
	> CRQL*	< CRQL*	Report CRQL value with a U
		> CRQL* and < blank concentration	Report the concentration for the sample with a U, or qualify the data as unusable R
		> CRQL* and > blank concentration	Use professional judgment
	= CRQL*	< CRQL*	Report CRQL value with a U
		> CRQL*	Use professional judgment
	Gross contamination	Detects	Qualify results as unusable R

*5x the CRQL for bis(2-ethylhexyl)phthalate

Method blank contamination was not exhibited- qualifications were not required. The associated field QC for this data package was: IR69-EB01-030810-GW (no positive results), IR69-EB01-030610-GW (no positive results), IR69-EB-030710-GW (no positive results) and IR69-EB01-031410-GW-equipment blanks; IR69-FB01-031010 - field blank.

Blank Contamination and Qualification Summaries

Blank ID	Compound	Concentration	Reporting Limit	Action Level	Qualifer
IR69-EB01-031410-GW-SIM	naphthalene	0.072J ug L	0.20 ug L	RL	U at RL
IR69-FB01-031010-SIM	naphthalene	0.063J	0.20	RL	U at RL

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Qual Code
PAH SIM: IR69-GW03-10A, IR69-GW03D-10A	naphthalene	U at RL	FBL

Surrogates

All criteria were met.

Laboratory Control Sample

No qualifications were required.

Matrix Spike/Spike Duplicate Samples

An MS/MSD was submitted for sample IR69-GW06-10A- several recoveries exhibited high results however there were no positive results therefore no qualifications were required.

Field Duplicate Sample

A field duplicate was submitted for samples IR69-GW03-10A and IR69-GW08-10A, no positive results were exhibited in either duplicate pair--no qualifications required.

Specific Comments:

All sample results were reported within the calibration range of the instruments.

Detection limits were acceptable. Raw data and calculations were verified.

We have limited the supporting documentation, found with these worksheets, to those forms that indicate qualifications were required.

Validator Signature: _____ **Date:** 7/22/10

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Lab File ID: 0C25004-TUN1C70 DFTPP Injection Date: 03/25/10

Instrument ID: 5972HP70 DFTPP Injection Time: 0325

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	39.5
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	57.8
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 75.0% of mass 198	47.6
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.2
275	10.0 - 30.0% of mass 198	22.2
365	Greater than 0.75% of mass 198	3.77
441	Present, but less than mass 443	13.8
442	40.0 - 110.0% of mass 198	88.5
443	15.0 - 24.0% of mass 442	16.7 (18.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050NK	0C25004-CCV1	0C25004-CCV1C7	03/25/10	0346
02	IR69-GW27DW	1003089-03	1003089-03C70	03/25/10	0623
03	IR69-GW09IW	1003089-04	1003089-04C70	03/25/10	0713
04	IR69-GW02DD	1003089-06	1003089-06C70	03/25/10	0854
05	IR69-GW15IW	1003089-07	1003089-07C70	03/25/10	0944
06	EB01-030610-GW	1003089-08	1003089-08C70	03/25/10	1034
07	IR69-GW03	1003089-11	1003089-11C70	03/25/10	1312
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Instrument ID: 5972HP70 Calibration Date: 03/25/10 Time: 0346

Lab File ID: 0C25004-CCV1C7 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1501 1820

GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
N-Nitrosodiphenylamine	0.4960000	0.4646862	0.01	-6.31	20.00	AVRG
4-Bromophenyl-phenylether	0.1950000	0.1833919	0.01	-5.95	50.00	AVRG
Hexachlorobenzene	0.2480000	0.2369058	0.01	-4.47	50.00	AVRG
Atrazine	0.1990000	0.1962248	0.01	-1.39	50.00	AVRG
Pentachlorophenol	0.1610000	0.1367190	0.05	-15.08	20.00	AVRG
Phenanthrene	0.8790000	0.8075190	0.01	-8.13	50.00	AVRG
Anthracene	0.8770000	0.8154347	0.01	-7.02	50.00	AVRG
Carbazole	0.8600000	0.8030069	0.01	-6.63	50.00	AVRG
Di-n-butylphthalate	1.3630000	1.2833447	0.01	-5.84	50.00	AVRG
Fluoranthene	1.0220000	0.9712850	0.01	-4.96	20.00	AVRG
Pyrene	0.9450000	0.8644737	0.01	-8.52	50.00	AVRG
Butylbenzylphthalate	0.5940000	0.5416991	0.01	-8.80	50.00	AVRG
3,3'-Dichlorobenzidine	0.2850000	0.2623801	0.01	-7.94	50.00	AVRG
bis(2-ethylhexyl)Phthalate	0.8340000	0.7513835	0.01	-9.91	50.00	AVRG
enzo(a)anthracene	0.9020000	0.8116709	0.01	-10.01	50.00	AVRG
chrysene	0.8450000	0.7656247	0.01	-9.39	50.00	AVRG
Di-n-octylphthalate	1.4240000	1.2949886	0.01	-9.06	20.00	AVRG
Benzo(b)fluoranthene	1.0060000	0.8764076	0.01	-12.88	50.00	AVRG
Benzo(k)fluoranthene	0.9530000	0.8578541	0.01	-9.98	50.00	AVRG
Benzo(a)pyrene	0.8940000	0.7928709	0.01	-11.31	20.00	AVRG
Indeno(1,2,3-cd)pyrene	0.8520000	0.6468694	0.01	-24.08	50.00	AVRG
Dibenzo(a,h)anthracene	0.8340000	0.6813724	0.01	-18.30	50.00	AVRG
Benzo(g,h,i)perylene	0.8520000	0.6593502	0.01	-22.61	50.00	AVRG
2-Fluorophenol	1.0350000	0.9410560	0.01	-9.08	50.00	AVRG
Phenol-d5	1.4070000	1.4404568	0.01	2.38	50.00	AVRG
Nitrobenzene-d5	0.3840000	0.3444772	0.01	-10.29	50.00	AVRG
2-Fluorobiphenyl	1.1620000	1.0904737	0.01	-6.16	50.00	AVRG
2,4,6-Tribromophenol	0.2870000	0.2687977	0.01	-6.34	50.00	AVRG
Terphenyl-d14	0.5850000	0.5305981	0.01	-9.30	50.00	AVRG

FORM VII SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Lab File ID: 0C26006-TUN1C70 DFTPP Injection Date: 03/26/10

Instrument ID: 5972HP70 DFTPP Injection Time: 0352

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	38.5
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	56.5
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 75.0% of mass 198	43.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	23.7
365	Greater than 0.75% of mass 198	4.21
441	Present, but less than mass 443	14.5
442	40.0 - 110.0% of mass 198	92.4
443	15.0 - 24.0% of mass 442	18.2 (19.7)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050NM	0C26006-CCV1	0C26006-CCV1C7	03/26/10	0416
02	IR69-GW15	1003089-13	1003089-13JC70	03/26/10	0508
03	EB01-030710-SB	1003089-17	1003089-17JC70	03/26/10	0558
04					
05					
06					
07					
08					
09					
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21					
22					

page 1 of 1

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Instrument ID: 5972HP70 Calibration Date: 03/26/10 Time: 0416

Lab File ID: 0C26006-CCV1C7 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1501 1820

GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzaldehyde	0.8340000	0.7582298	0.01	-9.08	50.00	AVRG
Phenol	1.3110000	1.1522565	0.01	-12.11	20.00	AVRG
Bis(2-chloroethyl)ether	1.0880000	0.9215256	0.01	-15.30	50.00	AVRG
2-Chlorophenol	1.0800000	0.9661732	0.01	-10.54	50.00	AVRG
2-Methylphenol	0.9860000	0.9512650	0.01	-3.52	50.00	AVRG
2,2'-oxybis(1-Chloropropane)	1.7770000	1.5457357	0.01	13.01	50.00	AVRG
Acetophenone	1.6440000	1.6717201	0.01	1.69	50.00	AVRG
4-Methylphenol	1.0780000	1.0116312	0.01	-6.16	50.00	AVRG
N-Nitroso-di-N-propylamine	0.9210000	0.8859860	0.05	-3.80	50.00	AVRG
Hexachloroethane	0.6820000	0.6630533	0.01	-2.78	50.00	AVRG
Nitrobenzene	0.3740000	0.3520616	0.01	-5.86	50.00	AVRG
Isophorone	0.6830000	0.7188560	0.01	5.25	50.00	AVRG
2-Nitrophenol	0.1880000	0.1759578	0.01	6.40	20.00	AVRG
2,4-Dimethylphenol	0.2260000	0.2242873	0.01	-0.76	50.00	AVRG
is(2-chloroethoxy)methane	0.3960000	0.3892820	0.01	-1.70	50.00	AVRG
2,4-Dichlorophenol	0.2560000	0.2361386	0.01	-7.76	20.00	AVRG
Naphthalene	0.8750000	0.8285200	0.01	-5.31	50.00	AVRG
4-Chloroaniline	0.3490000	0.3712811	0.01	6.38	50.00	AVRG
Hexachlorobutadiene	0.1980000	0.1975359	0.01	-0.23	20.00	AVRG
Caprolactam	0.0620000	0.0770955	0.01	24.35	50.00	AVRG
4-Chloro-3-methylphenol	0.2970000	0.2850549	0.01	-4.02	20.00	AVRG
2-Methylnaphthalene	0.5320000	0.4952083	0.01	-6.92	50.00	AVRG
Hexachlorocyclopentadiene	0.4430000	0.4100112	0.05	-7.45	50.00	AVRG
2,4,6-Trichlorophenol	0.3660000	0.3276322	0.01	-10.48	20.00	AVRG
2,4,5-Trichlorophenol	0.3820000	0.3748482	0.01	-1.87	50.00	AVRG
1,1'-Biphenyl	1.2390000	1.1114353	0.01	-10.30	50.00	AVRG
2-Chloronaphthalene	1.0350000	0.9552180	0.01	-7.71	50.00	AVRG
2-Nitroaniline	0.4070000	0.3946302	0.01	-3.04	50.00	AVRG
Dimethylphthalate	1.3010000	1.2536060	0.01	-3.64	50.00	AVRG
2,6-Dinitrotoluene	0.3140000	0.3181663	0.01	1.33	50.00	AVRG
Acenaphthylene	1.6650000	1.5868602	0.01	-4.69	50.00	AVRG
3-Nitroaniline	0.3570000	0.3611693	0.01	1.17	50.00	AVRG
Acenaphthene	0.9400000	0.8869336	0.01	-5.64	20.00	AVRG
2,4-Dinitrophenol	0.2350000	0.2371345	0.05	0.91	50.00	AVRG
4-Nitrophenol	0.2320000	0.2232862	0.05	-3.76	50.00	AVRG
2,4-Dinitrotoluene	0.4310000	0.4301119	0.01	-0.21	50.00	AVRG
Dibenzofuran	1.4690000	1.4017320	0.01	-4.58	50.00	AVRG
Diethylphthalate	1.4290000	1.3960717	0.01	-2.30	50.00	AVRG
4-Chlorophenyl-phenylether	0.5720000	0.5484259	0.01	-4.12	50.00	AVRG
Fluorene	1.1560000	1.1322964	0.01	-2.05	50.00	AVRG
4-Nitroaniline	0.3390000	0.3388884	0.01	-0.03	50.00	AVRG
4,6-Dinitro-2-methylphenol	0.1760000	0.1813241	0.01	3.02	50.00	AVRG

FORM VII SV

COMPUCHEM a Division of Liberty Analytical Corp

GC/MS SEMIVOLATILE RUN LOG

COMPUCHEM LOGBOOK 4 V (4) 21 (5972hp60)

DATE 3/26/10 INITIAL TIME OF TUNE 1236 SHIFT/S (A) ✓ (B) ____ (C) ____

TIME TUNE EXPIRES 0036

METHOD: 625 8270C 8270D OLC03.2 OLM04.3 SOM01.2 (Circle One) or Other: PAHs in DW SIM: (Y/N)

PREVENTIVE MAINTENANCE None

701

	SEQUENCE#		FILENAME		DATE	TIME	CLIENT ID	SDG#	AMOUNT INJECTED	CHEMIST	COMMENTS
1	OC26010		N/A	/	3 26 '10	1236	FC43	—	N/A	2658	SCD=LCD
2			5100326A60	/	/ /	1247	55TD3.0DBD	—	2µl		
3			1003089-12A60	/	/ /	1338	IR69-EW03DW	1003089			
4			13A60	/	/ /	1429	EW15				
5			17A60	/	/ /	1520	EB-030710-SB				
6					/ /						
7					/ /						
8					/ /						
9					/ /						
10					/ /						
11					/ /						
12					/ /						
13					/ /						
14					/ /						
15					/ /						
16					/ /						
17					/ /						
18					/ /						
19					/ /						
20					/ /						
21					/ /						
22					/ /						
23					/ /						
24					/ /						

DFTPP Lot #/Exp. Date:	Calibration STD Lot#/Exp. Date:	Internal STD Lot#/Exp. Date:	Methylene Chloride Lot#/Exp. Date:	Column Type:
N/A	Full SIM OC25026 6/25/10	040 62510 4/21/10	H33500 2/18/13	RTX-5MS 0.32mm

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

REVIEWED BY: DM DATE 3/26/10

5/19/09: jr

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Instrument ID: 5972HP60 Calibration Date: 03/26/10 Time: 1247

Lab File ID: 0C26010-CCV1A6 Init. Calib. Date(s): 03/22/10 03/22/10

Init. Calib. Times: 1314 1731

GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF3.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Naphthalene	0.8480000	0.7990802	0.01	-5.77	50.00	AVRG
2-Methylnaphthalene	0.9140000	0.8981597	0.01	-1.73	50.00	AVRG
Acenaphthylene	1.6520000	1.6085890	0.01	-2.63	50.00	AVRG
Acenaphthene	0.9460000	0.8958995	0.01	-5.30	20.00	AVRG
Fluorene	0.6610000	0.6460786	0.01	-2.26	50.00	AVRG
Phenanthrene	0.9510000	0.8728867	0.01	-8.21	50.00	AVRG
Anthracene	0.8630000	0.8082119	0.01	-6.35	50.00	AVRG
Fluoranthene	0.9950000	1.0576283	0.01	6.29	20.00	AVRG
Pyrene	1.0590000	1.1127912	0.01	5.08	50.00	AVRG
Benzo(a)anthracene	0.8790000	0.8527426	0.01	-2.99	50.00	AVRG
Chrysene	0.9260000	0.8884019	0.01	-4.06	50.00	AVRG
Benzo(b)fluoranthene	0.9040000	0.9074567	0.01	0.38	50.00	AVRG
Benzo(k)fluoranthene	1.0260000	1.0595607	0.01	3.27	50.00	AVRG
Benzo(a)pyrene	0.8800000	0.8435585	0.01	-4.14	20.00	AVRG
Indeno(1,2,3-cd)pyrene	0.7900000	0.6368281	0.01	-19.39	50.00	AVRG
Dibenzo(a,h)anthracene	0.8040000	0.6340771	0.01	-21.13	50.00	AVRG
Benzo(g,h,i)perylene	0.9010000	0.7228942	0.01	-19.77	50.00	AVRG

FORM VII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Lab File ID (Standard): 0C23003-CCV1A70 Date Analyzed: 03/23/10

Instrument ID: 5972HP70 Time Analyzed: 1142

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	994596	22.30	1151001	30.26	1236547	33.67
	UPPER LIMIT	1989192	22.80	2302002	30.76	2473094	34.17
	LOWER LIMIT	497298	21.80	575501	29.76	618273	33.17
	CLIENT SAMPLE NO.						
01	SBLKNG	665853	22.28	790400	30.24	851762	33.67
02	SNGLCS	1172757	22.32	1421161	30.29	1451237	33.71
03	SNGLCSD	1247236	22.29	1461203	30.27	1529433	33.69
04	IR69-GW06MS	1320242	22.29	1544206	30.27	1597061	33.69
05	IR69-GW06MSD	1208831	22.29	1493216	30.27	1617251	33.68
06	IR69-GW08D	497392	22.25	601141	30.23	500387*	33.64
07	EB01-030810-GW	1261468	22.27	1599977	30.24	1694208	33.66
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Lab File ID (Standard): 0C24002-CCV1C70 Date Analyzed: 03/24/10

Instrument ID: 5972HP70 Time Analyzed: 0122

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	382428	7.97	1559885	11.06	905062	15.67
	UPPER LIMIT	764856	8.47	3119770	11.56	1810124	16.17
	LOWER LIMIT	191214	7.47	779943	10.56	452531	15.17
	CLIENT SAMPLE NO.						
01	IR69-GW06	320610	7.96	1289870	11.04	771844	15.67
02	IR69-GW08	254605	7.96	935471	11.04	503889	15.65
03	IR69-GW08DRE *	237190	7.95	709755*	11.02	413698*	15.64
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

page 1 of 1

FORM VIII SV

* not used in favor of initial analysis

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Lab File ID (Standard): 0C24002-CCV1C70 Date Analyzed: 03/24/10

Instrument ID: 5972HP70 Time Analyzed: 0122

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	1328008	22.28	1481944	30.24	1442923	33.66
	UPPER LIMIT	2656016	22.78	2963888	30.74	2885846	34.16
	LOWER LIMIT	664004	21.78	740972	29.74	721461	33.16
	CLIENT SAMPLE NO.						
01	IR69-GW06	1174250	22.26	1479783	30.24	1484460	33.65
02	IR69-GW08	807055	22.24	1022832	30.22	1065389	33.63
03	IR69-GW08DRE *	634077*	22.25	795931	30.23	815489	33.64
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

* not used in favor of initial analysis

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CompuChem
A division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1003089
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS: EB01-030410-SS, IR69-GW27IW, IR69-GW27DW, IR69-GW09IW, IR69-GW09DW, IR69-GW02DD, IR69-GW15IW, EB01-030610-GW, EB01-030710-GW, IR69-GW03D, IR69-GW03, IR69-GW03DW, IR69-GW15, EB01-030710-SB, IR69-GW06, IR69-GW08, IR69-GW08D, EB01-030810-GW.

The 18 water samples listed above were received intact, properly refrigerated between 0.1-4.9°C, with proper documentation, in sealed shipping containers, on March 11-12, 2010. The samples were scheduled for the requested analyses of the semivolatile fraction. SW-846, 3rd Edition, Update 3, Separatory Funnel extraction (Method 3510C), Method 8270C and Selected Ion Monitoring (SIM) were used to prepare and analyze these samples, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance Notices are included in the narrative section and all pertinent Laboratory Notices for SDG # 1003089 are included in the sample data sections. Extraction and analysis holding time requirements were met for all of these samples

There were no semivolatile project analytes identified above the quantitation limit in any of these samples in the full scan and SIM analyses. Manual quantitations were performed on one or more of the process files associated with this SDG. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.

Between 900 mL and 975 mL of raw sample were used to extract IR69-GW27IW, IR69-GW02DD, IR69-GW15IW, EB01-030710-SB, IR69-GW06, IR69-GW08, IR69-GW08D and EB01-030810-GW, rather than the method-specified amount of 1000 mL. The use of this lower volume of raw sample resulted in slightly higher detection limits.

In the initial analysis of IR69-GW08D, the response of multiple internal standards failed quality control criteria. The sample was reinjected and the internal standard again failed response criteria. We have attributed the failing internal standard responses to the particular matrix of the sample. Therefore we have reported both analyses of IR69-GW08D.

All decafluorotriphenylphosphine (DFTPP) abundance criteria were met for tunes associated with this SDG. Tailing factor criteria were met for pentachlorophenol and benzidine. The breakdown criterion was met for DDT. These three compounds have been added to the DFTPP solution and analyzed together. Mass assignments were verified by the injections of perfluorotributylamine (PFTBA). Overall quality control criteria were met for all initial and continuing calibration standards associated to this SDG. All of the surrogates met recovery criteria in the analyses of these samples. All of the internal standards, not previously discussed, met response and retention time criteria in the analyses of these samples. The associated method blank met all quality control criteria. IR69-GW06 was used as the original to prepare the duplicate matrix spikes as requested. The associated duplicate matrix spikes met overall advisory accuracy and precision criteria. The associated Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) met overall accuracy and precision criteria, in the full scan and SIM analyses.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Rebecca K. Mead

Rebecca K. Mead, Ph.D.
Laboratory Technical Manager
March 31, 2010

Holding Times

Sampling Date: 3 4, 3 6, 3 8, 3 9, 3 10
Received Date: 3 11, 3 12
Extraction Date: 3 11, 3 12, 3 13
Analysis Dates: 3 19, 3 24, 3 27, 3 29

All extraction and analysis holding times were met for the samples in this SDG in the initial extraction. No qualifications were required. Sample receipt data is in order. Cooler temperature was within acceptable range.

Calibrations

Initial calibrations were performed according to the method with a five-point curve for the single component pesticides, toxaphene, chlordane and the PCB target compounds 1016 & 1660. Single points were included for the other Aroclors. Three sequences were submitted. Calibration factors were calculated. %RSDs were within QC limits. Continuing calibration standards were analyzed per the SW-846 methods requested. All PEM breakdowns and %D criteria were met. All continuing calibration criteria were within QC limits (average %D rule applied) for target compounds in associated standards with the exception of two compounds in the CCVs associated with the RF of the MSD. Column resolution was acceptable. The correct analytical sequences were run. All required instrument blanks were analyzed Raw data was verified. No qualifications were required due to calibration issues

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Any compound detected in the sample, and the associated blank, must be qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than five (5) times the blank concentration.
- Sample weight, volume or dilution factor must be taken into consideration when applying the 5X criteria.
- Apply the same data validation guidelines to any associated rinse and field blanks and all associated samples.
- Qualification Action codes:
-

No Action -	The sample result is greater than the RL and greater than five times (5X) the blank value.
U at RL-	The sample result is less than the RL when the blank contamination level is less than the RL.

No contamination that resulted in qualification of the data was noted in the associated method or instrument blanks or the submitted field QC blanks.

SURROGATE RECOVERIES

Surrogate recoveries were fine. No qualifications were required.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

The associated MS MSD pair exhibited some high recoveries but there were no positive results reported in the native sample . No qualifications were required in the samples.

LABORATORY CONTROL SAMPLES

The submitted LCS samples submitted exhibited some high recoveries and some qualifications were required. See report for specifics.

FIELD DUPLICATE SAMPLE SUMMARY

Sample ID: IR69-GW03-10A **Duplicate ID:** IR69-GW03D-10A

Compound	Sample Conc.	Duplicate Conc.	RPD
beta-BHC	0.19	0.14	30%
alpha-BHC	0.077	0.075	3%
delta-BHC	1.5	1.4	7%

Comments: no qualifications

Sample ID: IR69-GW08-10A **Duplicate ID:** IR69-GW08D-10A

Compound	Sample Conc.	Duplicate Conc.	RPD
beta-BHC			#DIV/0!
alpha-BHC			#DIV/0!
delta-BHC			#DIV/0!

Comments: no qualifications

SAMPLE RESULT VERIFICATION

Calculations were verified. All P flagged results were qualified as estimated J (column quantitation %Ds >40.) Dilutions were required for samples GW03 & GW03D.

Reviewer JACleveland **Date:** 7/24/10

CompuChem

a division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1003089
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS: EB01-030410-SS, IR69-GW27IW, IR69-GW27DW, IR69-GW09IW, IR69-GW09DW, IR69-GW02DD, IR69-GW15IW, EB01-030610-GW, EB01-030710-GW, IR69-GW03D, IR69-GW03, IR69-GW03DW, IR69-GW15, EB01-030710-SB, IR69-GW06, IR69-GW08, IR69-GW08D, EB01-030810-GW.

The 18 water samples listed above were received intact, refrigerated between 0.1-4.9°C, with proper documentation, in sealed shipping containers, on March 11-12, 2010. The samples were scheduled for the requested analysis of the Pesticide/PCB fraction. SW-846, 3rd Edition, Update 3, Method 8081A and 8082 were used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section and all pertinent Laboratory notices for SDG # 1003089 are included in the sample data sections.

Pesticide/PCB

Extraction and analysis holding time requirements were met for the samples. Target analytes confirmed above the reporting limits in four of these samples. Manual quantitations were performed on one or more of the process files associated with this SDG. Please see the manual integration summary spreadsheets directly following the narrative for specific information regarding manual integrations. The reasons for these manual integrations have been coded with explanations provided in the notice included in the narrative section of the SDG.

Samples IR69-GW03D and IR69-GW03 were analyzed and reported at a 5x dilution due to target analytes that exceeded the calibration range.

All QC criteria were met for all initial and continuing calibration standards associated to this SDG. All surrogate recoveries were with the method specified limits. The method blank associated with the samples met all quality control criteria.

Duplicate matrix spikes were performed with sample IR69-GW06, and met over all recovery and precision criteria, with bias high for multiple compounds. The Laboratory Control Samples (LCSs) prepared and analyzed with the samples met overall recovery and precision criteria, with bias high for multiple compounds.

An uncertainty of these test results may be estimated from the recovery of the surrogates added to the sample prior to sample preparation or from the recovery of spiked compound(s) in the associated laboratory control sample. Further information is available upon request. I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on CD has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Rebecca K Mead

Rebecca K. Mead, PhD
Laboratory Technical Manager
March 31, 2010

3E

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix Spike - EPA Sample No.: IR69-GW06

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Aldrin	0.17	0.0	0.17	100	25-140
beta-BHC	0.17	0.0	0.22	129*	65-125
alpha-BHC	0.17	0.0	0.22	129	60-130
delta-BHC	0.17	0.0	0.25	147*	45-135
gamma-BHC (Lindane)	0.17	0.0	0.21	124	25-135
4,4'-DDD	0.42	0.0	0.57	136	25-150
4,4'-DDE	0.42	0.0	0.54	128	35-140
4,4'-DDT	0.42	0.0	0.52	124	45-140
Dieldrin	0.42	0.0	0.57	136*	60-130
Endosulfan I	0.17	0.0	0.20	118*	50-110
Endosulfan II	0.42	0.0	0.45	107	30-130
Endosulfan sulfate	0.42	0.0	0.46	110	55-135
Endrin	0.42	0.0	0.37	88	55-135
Endrin Aldehyde	0.42	0.0	0.33	78	55-135
Heptachlor	0.17	0.0	0.22	129	40-130
Heptachlor Epoxide	0.17	0.0	0.23	135*	60-130
Methoxychlor	0.42	0.0	0.57	136	55-150
Endrin Ketone	0.42	0.0	0.54	128*	75-125
gamma-Chlordane	0.17	0.0	0.21	124	60-125
alpha-Chlordane	0.17	0.0	0.23	135*	65-125

NQ- not results

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

3E

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix Spike - EPA Sample No.: IR69-GW06

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aldrin	0.17	0.18	106	6	40	25-140
beta-BHC	0.17	0.20	118	10	40	65-125
alpha-BHC	0.17	0.22	129	0	40	60-130
delta-BHC	0.17	0.24	141*	4	40	45-135
gamma-BHC (Lindane)	0.17	0.20	118	5	40	25-135
4,4'-DDD	0.42	0.56	133	2	40	25-150
4,4'-DDE	0.42	0.53	126	2	40	35-140
4,4'-DDT	0.42	0.52	124	0	40	45-140
Dieldrin	0.42	0.57	136*	0	40	60-130
Endosulfan I	0.17	0.19	112*	5	40	50-110
Endosulfan II	0.42	0.51	121	12	40	30-130
Endosulfan sulfate	0.42	0.52	124	12	40	55-135
Endrin	0.42	0.52	124	34	40	55-135
Endrin Aldehyde	0.42	0.34	81	3	40	55-135
Heptachlor	0.17	0.22	129	0	40	40-130
Heptachlor Epoxide	0.17	0.24	141*	4	40	60-130
Methoxychlor	0.42	0.57	136	0	40	55-150
Endrin Ketone	0.42	0.55	131*	2	40	75-125
gamma-Chlordane	0.17	0.21	124	0	40	60-125
alpha-Chlordane	0.17	0.23	135*	0	40	65-125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 20 outside limits
Spike Recovery: 13 out of 40 outside limits

COMMENTS:

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLKMR

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Lab Sample ID: 0031130-BLK1 Lab File ID: 041W0031130-BLK1

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup (Y/N) N Date Extracted: 03/11/10

Date Analyzed (1): 03/19/10 Date Analyzed (2): 03/19/10

Time Analyzed (1): 1516 Time Analyzed (2): 1516

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column (1): CLPEST ID: 0.32(mm) GC Column (2): CLPEST2 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	PMRLCS	0031130-BS1	03/19/10	03/19/10
02	PMTLCS	0031130-BS2	03/19/10	03/19/10
03	PMRLCSD	0031130-BSD1	03/19/10	03/19/10
04	PMTLCSD	0031130-BSD2	03/19/10	03/19/10
05	EB01-030410-	1003089-01	03/19/10	03/19/10
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COMMENTS:

FORM IV PEST

3E
WATER PESTICIDE LAB CONTROL SAMPLE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

LCS ID: PMRLCS Matrix Spike - EPA Sample No.: PMRLCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.	
Aldrin	0.15		0.16	107	25-140	
beta-BHC	0.15		0.17	113	65-125	
alpha-BHC	0.15		0.19	127	60-130	
delta-BHC	0.15		0.20	133	45-135	
gamma-BHC (Lindane)	0.15		0.17	113	25-135	
4,4'-DDD	0.38		0.48	126	25-150	
4,4'-DDE	0.38		0.46	121	35-140	
4,4'-DDT	0.38		0.43	113	45-140	
Dieldrin	0.38		0.49	129	60-130	
Endosulfan I	0.15		0.17	113*	50-110	NQ
Endosulfan II	0.38		0.43	113	30-130	
Endosulfan sulfate	0.38		0.41	108	55-135	
Endrin	0.38		0.29	76	55-135	
Endrin Aldehyde	0.38		0.32	84	55-135	
Heptachlor	0.15		0.20	133*	40-130	NQ
Heptachlor Epoxide	0.15		0.19	127	60-130	
Methoxychlor	0.38		0.48	126	55-150	
Endrin Ketone	0.38		0.53	139*	75-125	NQ
gamma-Chlordane	0.15		0.18	120	60-125	
alpha-Chlordane	0.15		0.20	133*	65-125	NQ

LCSD OK

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

3E
WATER PESTICIDE LAB CONTROL SAMPLE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

LCS ID: PMRLCS Matrix Spike - EPA Sample No.: PMRLCS

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aldrin	0.15	0.15	100	6	40	25-140
beta-BHC	0.15	0.15	100	12	40	65-125
alpha-BHC	0.15	0.17	113	11	40	60-130
delta-BHC	0.15	0.18	120	10	40	45-135
gamma-BHC (Lindane)	0.15	0.16	107	6	40	25-135
4,4'-DDD	0.38	0.44	116	9	40	25-150
4,4'-DDE	0.38	0.42	110	9	40	35-140
4,4'-DDT	0.38	0.39	103	10	40	45-140
Dieldrin	0.38	0.44	116	11	40	60-130
Endosulfan I	0.15	0.15	100	12	40	50-110
Endosulfan II	0.38	0.40	105	7	40	30-130
Endosulfan sulfate	0.38	0.38	100	8	40	55-135
Endrin	0.38	0.42	110	37	40	55-135
Endrin Aldehyde	0.38	0.25	66	24	40	55-135
Heptachlor	0.15	0.18	120	10	40	40-130
Heptachlor Epoxide	0.15	0.18	120	5	40	60-130
Methoxychlor	0.38	0.45	118	6	40	55-150
Endrin Ketone	0.38	0.43	113	21	40	75-125
gamma-Chlordane	0.15	0.16	107	12	40	60-125
alpha-Chlordane	0.15	0.18	120	10	40	65-125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 20 outside limits
Spike Recovery: 4 out of 40 outside limits

COMMENTS:

4C
PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLKNE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Lab Sample ID: 0031304-BLK1 Lab File ID: 028Y0031304-BLK1

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup (Y/N) N Date Extracted: 03/15/10

Date Analyzed (1): 03/24/10 Date Analyzed (2): 03/24/10

Time Analyzed (1): 0430 Time Analyzed (2): 0430

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column (1): CLPEST ID: 0.32(mm) GC Column (2): CLPEST2 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	PNELCS	0031304-BS1	03/24/10	03/24/10
02	PNFLCS	0031304-BS2	03/24/10	03/24/10
03	PNELCSD	0031304-BSD1	03/24/10	03/24/10
04	PNFLCSD	0031304-BSD2	03/24/10	03/24/10
05	IR69-GW06MS	0031304-MS1	03/24/10	03/24/10
06	IR69-GW06PCB	0031304-MS2	03/24/10	03/24/10
07	IR69-GW06MSD	0031304-MSD1	03/24/10	03/24/10
08	IR69-GW06PCB	0031304-MSD2	03/24/10	03/24/10
09	IR69-GW06	1003089-18	03/24/10	03/24/10
10	IR69-GW08	1003089-19	03/24/10	03/24/10
11	IR69-GW08D	1003089-20	03/24/10	03/24/10
12	EB01-030810-	1003089-21	03/24/10	03/24/10
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS:

FORM IV PEST

3E
WATER PESTICIDE LAB CONTROL SAMPLE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

LCS ID: PNELCS Matrix Spike - EPA Sample No.: PNELCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.	
Aldrin	0.15		0.16	107	25-140	
beta-BHC	0.15		0.20	133*	65-125	NQ
alpha-BHC	0.15		0.21	140*	60-130	NQ
delta-BHC	0.15		0.23	153*	45-135	J+
gamma-BHC (Lindane)	0.15		0.20	133	25-135	
4,4'-DDD	0.38		0.54	142	25-150	
4,4'-DDE	0.38		0.51	134	35-140	
4,4'-DDT	0.38		0.51	134	45-140	
Dieldrin	0.38		0.55	145*	60-130	J+
Endosulfan I	0.15		0.19	127*	50-110	NQ
Endosulfan II	0.38		0.49	129	30-130	
Endosulfan sulfate	0.38		0.50	132	55-135	
Endrin	0.38		0.38	100	55-135	
Endrin Aldehyde	0.38		0.37	97	55-135	
Heptachlor	0.15		0.20	133*	40-130	NQ
Heptachlor Epoxide	0.15		0.22	147*	60-130	↓
Methoxychlor	0.38		0.54	142	55-150	
Endrin Ketone	0.38		0.58	153*	75-125	NQ
gamma-Chlordane	0.15		0.20	133*	60-125	
alpha-Chlordane	0.15		0.23	153*	65-125	↓

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

GW06
08
08D

COMMENTS: EB01-030810-GW

3E
WATER PESTICIDE LAB CONTROL SAMPLE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

LCS ID: PNELCS Matrix Spike - EPA Sample No.: PNELCS

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aldrin	0.15	0.15	100	6	40	25-140
beta-BHC	0.15	0.23	153* NQ	14	40	65-125
alpha-BHC	0.15	0.21	140*	0	40	60-130
delta-BHC	0.15	0.22	147* J+	4	40	45-135
gamma-BHC (Lindane)	0.15	0.18	120	10	40	25-135
4,4'-DDD	0.38	0.50	132	8	40	25-150
4,4'-DDE	0.38	0.47	124	8	40	35-140
4,4'-DDT	0.38	0.47	124	8	40	45-140
Dieldrin	0.38	0.50	132* J+	10	40	60-130
Endosulfan I	0.15	0.18	120* NQ	5	40	50-110
Endosulfan II	0.38	0.46	121	6	40	30-130
Endosulfan sulfate	0.38	0.46	121	8	40	55-135
Endrin	0.38	0.46	121	19	40	55-135
Endrin Aldehyde	0.38	0.31	82	18	40	55-135
Heptachlor	0.15	0.19	127	5	40	40-130
Heptachlor Epoxide	0.15	0.20	133* NQ	10	40	60-130
Methoxychlor	0.38	0.52	137	4	40	55-150
Endrin Ketone	0.38	0.49	129*	17	40	75-125
gamma-Chlordane	0.15	0.19	127*	5	40	60-125
alpha-Chlordane	0.15	0.21	140*	9	40	65-125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 20 outside limits
Spike Recovery: 19 out of 40 outside limits

COMMENTS:

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

EB01-030410-SS

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Lab Sample ID: 1003089-01 Date(s) Analyzed: 03/19/10 03/19/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Dieldrin	1	14.89	14.86	15.00	0.041	
	2	14.52	14.51	14.65	0.0046	159.6 J
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

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FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

EB01-030710-GW

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Lab Sample ID: 1003089-09 Date(s) Analyzed: 03/27/10 03/27/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Dieldrin	1	14.81	14.78	14.92	0.034	
	2	14.41	14.40	14.54	0.0028	169.6 J
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

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FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

EB01-030710-SB

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Lab Sample ID: 1003089-17 Date(s) Analyzed: 03/27/10 03/27/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
delta-BHC	1	10.81	10.74	10.88	0.046	
	2	10.84	10.78	10.92	0.025	59.2 J
Dieldrin	1	14.81	14.78	14.92	0.027	
	2	14.41	14.40	14.54	0.0068	119.5 J
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

EB01-030810-GW

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Lab Sample ID: 1003089-21 Date(s) Analyzed: 03/24/10 03/24/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
delta-BHC	1	10.90	10.85	10.99	0.053	
	2	11.03	10.91	11.05	0.0089	142.5 J
Dieldrin	1	14.93	14.91	15.05	0.044	
	2	14.55	14.54	14.68	0.0060	152.0 J
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-GW03

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Lab Sample ID: 1003089-11 Date(s) Analyzed: 03/27/10 03/27/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
beta-BHC	1	10.44	10.31	10.46	0.19	
	2	10.16	10.09	10.23	0.024	155.1 J
alpha-BHC	1	9.32	9.26	9.39	0.077	
	2	9.02	8.95	9.09	0.059	26.5
delta-BHC	1	10.81	10.74	10.88	1.5	
	2	10.85	10.78	10.92	1.5	0.0
4,4'-DDT	1	16.12	16.04	16.18	0.0050	
	2	16.10	15.99	16.13	0.0052	3.9
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

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FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-GW03D

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Lab Sample ID: 1003089-10 Date(s) Analyzed: 03/27/10 03/27/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
beta-BHC	1	10.44	10.31	10.46	0.14	
	2	10.15	10.09	10.23	0.024	141.5 J
alpha-BHC	1	9.32	9.26	9.39	0.075	
	2	9.02	8.95	9.09	0.058	25.6
delta-BHC	1	10.81	10.74	10.88	1.5	
	2	10.85	10.78	10.92	1.5	0.0
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

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FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-GW03DDL

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Lab Sample ID: 1003089-10RE1 Date(s) Analyzed: 03/29/10 03/29/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
alpha-BHC	1	9.31	9.26	9.39	0.071	
	2	9.00	8.95	9.09	0.054	27.2
delta-BHC	1	10.80	10.74	10.88	1.4	
	2	10.84	10.78	10.92	1.4	0.0
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

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FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-GW03DL

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Lab Sample ID: 1003089-11RE1 Date(s) Analyzed: 03/29/10 03/29/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
alpha-BHC	1	9.32	9.26	9.39	0.069	
	2	9.02	8.95	9.09	0.056	20.8
delta-BHC	1	10.81	10.74	10.88	1.4	
	2	10.85	10.78	10.92	1.5	6.9
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

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FORM X PEST-1

10B
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

EPA SAMPLE NO.

IR69-GW15

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Lab Sample ID: 1003089-13 Date(s) Analyzed: 03/27/10 03/27/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
	1	14.85	14.78	14.91	1.8		
Aroclor-1260	2	15.44	15.37	15.51	1.8		
	3	16.28	16.21	16.35	0.79		
COLUMN 1	4	16.81	16.74	16.88	0.77		
	5	17.46	17.39	17.53	1.0	1.2	
	1	14.87	14.79	14.93	1.7		
	2	15.31	15.23	15.37	1.7		
	3	16.25	16.18	16.32	0.81		
COLUMN 2	4	16.87	16.80	16.94	0.87		
	5	17.39	17.32	17.46	1.1	1.2	0.0
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						
	1						
	2						
	3						
COLUMN 1	4						
	5						
	1						
	2						
	3						
COLUMN 2	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

FORM X PEST-2

10B
PESTICIDE IDENTIFICATION SUMMARY
FOR MULTICOMPONENT ANALYTES

EPA SAMPLE NO.

IR69-GW15IW

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Lab Sample ID: 1003089-07 Date(s) Analyzed: 03/27/10 03/27/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	MEAN CONCENTRATION	RPD
Aroclor-1260 COLUMN 1	1	16.28	16.21	16.35	0.61		
	2	16.81	16.74	16.88	0.30		
	3	17.46	17.39	17.53	0.092		
	4						
	5					0.34	
COLUMN 2	1	16.25	16.18	16.32	0.60		
	2	16.87	16.80	16.94	0.33		
	3	17.39	17.32	17.46	0.088		
	4						
	5					0.34	0.0
COLUMN 1	1						
	2						
	3						
	4						
	5						
COLUMN 2	1						
	2						
	3						
	4						
	5						
COLUMN 1	1						
	2						
	3						
	4						
	5						
COLUMN 2	1						
	2						
	3						
	4						
	5						

At least 3 peaks are required for identification of multicomponent analytes.

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FORM X PEST-2

Initial Calibration Date: 3 18-19 10

RRF and %RSD Calculations:

Compound Name: METHOXYCHLOR in level 2

Lab Value: 196820.0000

Area of Compound	19682
Conc. of Compound	0.1
Calculated RRF	196820.0000

Compound Name: methoxychlor

Lab Value: 11.2

RRF of STD 1	231720.0000
RRF of STD 2	196820.0000
RRF of STD 3	177370.0000
RRF of STD 4	195092.5000
RRF of STD 5	178765.0000
RRF of STD 6	
Calculated % RSD	11.19

Continuing Calibration File ID: 050INDC3WH.d

RRF and %D Calculations:

Compound Name: 4,4'-DDT

Lab Value: 454807.00000

Area of compound	18192
Conc. Of compound	0.04
Calculated CF	454800.000

Compound Name: 4,4'-DDT

Lab Value: 0.1

Avg. CF from ICAL	455096.25000
CF of CCV	454800.00000
Calculated % D	0.1

rounding differences noted - no quals required

Initial Calibration Date: 3-23-24-2010

RRF and %RSD Calculations:

Compound Name: endrin in level 3 on C2
Lab Value: 255650.0000

Area of Compound	5113
Conc. of Compound	0.02
Calculated RRF	255650.0000

Compound Name: endrin
Lab Value: 7.6

RRF of STD 1	291400.0000
RRF of STD 2	255650.0000
RRF of STD 3	288600.0000
RRF of STD 4	250412.5000
RRF of STD 5	252838.5000
RRF of STD 6	
Calculated % RSD	7.62

Continuing Calibration File ID:

RRF and %D Calculations:

Compound Name: endosulfan I
Lab Value: 328400.00000

Area of compound	6568
Conc. Of compound	0.02
Calculated CF	328400.000

Compound Name: endosulfan I
Lab Value: 1.4

Avg. CF from ICAL	333097.00000
CF of CCV	328400.00000
Calculated % D	1.4

rounding differences noted - no quals required

Initial Calibration Date: 3/26/2010

RRF and %RSD Calculations:

Compound Name: heptachlor in level 1 on C1

Lab Value: 742200.0000

Area of Compound	3712
Conc. of Compound	0.005
Calculated RRF	742400.0000

Compound Name: heptachlor

Lab Value: 6.7

RRF of STD 1	742200.0000
RRF of STD 2	699900.0000
RRF of STD 3	673500.0000
RRF of STD 4	652700.0000
RRF of STD 5	623462.0000
RRF of STD 6	
Calculated % RSD	6.69

Continuing Calibration File ID: 100ZINDC3ZP

RRF and %D Calculations:

Compound Name: aldrin

Lab Value: 625657.50000

Area of compound	12513
Conc. Of compound	0.02
Calculated CF	625650.000

Compound Name: alrin

Lab Value: 0.2

Avg. CF from ICAL	626935.00000
CF of CCV	625650.00000
Calculated % D	0.2

rounding differences noted - no quals required

SAMPLE CALCULATION

Sample ID: IR69-GW02-10ADL
Standard ID: ICAL curve 3/26/10
Compound: delta-BHC
Concnetration: 1.5D ug/L

	Water (ug/L)	Soil (ug/Kg)
Area of Compound	28443	
Calibration Factor of Compound	488632	
Dilution Factor	5	
Weight/Volume of Sample	1000	
Final Volume extract	5000	
% Moisture	NA	
conversion factor	1	
Concentration	1.45524	#DIV/0!

This SDG contains select metals analysis using SW-846 6010B 7470A 7471A.

HOLDING TIMES

Sampling Date: 3 4, 3 6-3 10
Received Date: 3 11-3 12 Cooler temps: OK
Prep. Dates: 3 26 ICP, 3 15 Hg
Analysis Dates: 3 27-28 10 ICP, 3 16 Hg
All holding time requirements were met.

CALIBRATIONS

All initial calibration criteria were met. Single point calibration was analyzed for ICP. Calibration verification criteria were met for all ICV and CCV standards. The RL standards were analyzed and met method criteria for all analytes. Interference check standards were analyzed and met criteria in all standards. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if an analyte is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying the criteria.
- Apply the same data validation guidelines to any associated calibration, preparation, and field QC blanks and all associated samples.
- Qualification Action codes:
  - No Action - The sample result is greater than the CRDL and greater than ten times (10X) the blank value.
  - U - The sample result is greater than or equal to the MDL but less than or equal to the RL, result is reported as non-detect at the RL.
  - R or J. The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator.

Blank Contamination and Qualification Summaries

Blank ID	Analyte	Concentration	Action Level	Q Flag	Q Code
PBW	calcium	192.547B ug L	RL	U	MBL
	magnesium	47.368B ug L	RL	U	MBL
	potassium	36.310B ug L	RL	U	MBL
CCB	iron	19.9B ug L	RL	U	MBL
	nickel	1.1B ug L	RL	U	MBL
IR69-FB01-030310	copper	2.3B ug L	RL	U	FBL
IR69-EB01-030610-GW	zinc	1.0B ug L	RL	U	EBL
IR69-EB01-030710-GW	zinc	0.73B ug L	RL	U	EBL

The concentration noted for the CCBs is the highest concentration in all the CCBs. However, when qualifying samples for CCB contamination associated samples are those just prior to or just following a CCB. Therefore, not all analytes in all samples are flagged for noted CCB contamination. See worksheets for associations. Samples are qualified for field QC blank contamination based on QC tracking provided by CH2M HILL. Negative contamination in a prep blank or CCB, if less than the analyte CRDL, is qualified based on professional judgment.

Please note that based on the National Functional Guidelines, for contamination above the CRDL, results in the field samples that are greater than the RL up to 10X the blank contamination level should be qualified as estimated and considered biased high or they should be rejected. Associated samples and required qualifications are noted in the following table.

Sample ID	Analyte	Q Flag	Q Code
IR69-GW06-10A, IR69-GW08-10A	calcium	U at RL	MBL
all field samples >MDL ≥RL	magnesium	U at RL	MBL
all field samples >MDL < RL	potassium	U at RL	MBL
IR69-GW06-10A	iron	U at RL	MBL
IR69-GW03-10A, IR69-GW03D-10A, IR69-GW15-10A, IR69-GW27IW-10A	nickel	U at RL	MBL
all field samples >MDL ≥RL	copper	U at RL	FBL
IR69-GW02DD-10A, IR69-GW09DW-10A, IR69-GW09IW-10A, IR69-GW15-10A, IR69-GW15IW-10A, IR69-GW27DW-10A, IR69-GW27IW-10A, IR69-GW03DW-10A	zinc	U at RL	FBL

MATRIX SPIKE/DUPLICATE SUMMARY

Spike recoveries were acceptable in the MS or the MSD except selenium. All PDS recoveries were acceptable. Selenium exhibited a low %R in the MS but was OK in the MSD. All LCS recoveries and RPDs were acceptable. No qualifications were required for spike issues.

SERIAL DILUTIONS

The serial dilution results were OK.

Sample ID: IR69-GW03-10A Duplicate Sample ID: IR69-GW03D-10A

Analyte	Sample Conc.	Duplicate Conc.	RPD
aluminum	942	704	29%
barium			#DIV/0!
calcium	7390	7360	0%
chromium			#DIV/0!
iron	13600	12300	10%
lead			#DIV/0!
magnesium			#DIV/0!
manganese	130	129	1%
sodium	12500	12200	2%
zinc	4760	4660	2%

Comments: flag Al as estimated J in both samples

FIELD DUPLICATE SAMPLE SUMMARY

Note: Field duplicate results are assessed only if both results are above the RL.

Sample ID: IR69-GW08-10A Duplicate Sample ID: IR69-GW08D-10A

Analyte	Sample Conc.	Duplicate Conc.	RPD
aluminum			#DIV/0!
barium			#DIV/0!
calcium			#DIV/0!
chromium			#DIV/0!
iron			#DIV/0!
lead			#DIV/0!
magnesium			#DIV/0!
manganese			#DIV/0!
sodium			#DIV/0!
zinc			#DIV/0!

Comments: results in dup were all < RL (no positive results were reported)

SAMPLE CALCULATION

EPA SAMPLE ID: IR69-GW09IW-10A
ANALYTE: calcium
CONCENTRATION: 57400 ug/L
%Solids NA

Raw Data result: 57354.6 ug/L. Water results are direct read from the instrument.

SAMPLE RESULT VERIFICATION

Specific Comments:

All sample results were reported within the calibration linear range of the instruments. Detection limits were acceptable. Raw data was verified. All positive results reported at concentrations between the IDL and the RL were qualified as estimated J by the laboratory. All field sample and QC blank IDs were missing either the first 4 or the last four characters. The characters (-10A) were added for the field samples and the characters IR69 were added for the field QC blanks to the Form 1s in the DV reports by the data validator.

Reviewer JACleveland **Date:** 72410

CompuChem
a Division of Liberty Analytical Corp.
501 Madison Avenue
Cary, NC 27513

SDG NARRATIVE
SDG # 1003089

The indicated Sample Delivery Group (SDG) consisting of seventeen (17) water samples was received into the laboratory information management system (LIMS) on March 11 and 12, 2010 intact and in good condition with Chain of Custody (COC) Records in order, unless otherwise noted in any attachments or Quality Assurance Notices. The temperature of the samples upon receipt was 0.3 to 2.6°C. Sample ID's reported in this data package are noted by the receiving department on the COC if they differ from those listed by the samplers on the COC.

The samples were prepared and analyzed in accordance with SW846 methodology for the requested TAI metals and mercury.

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (ICV & CCV) and blanks (ICB & CCB) associated with this data were confirmed to be within allowable limits.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verification (PBW & LCSW) was found to be within acceptable ranges and the field samples were analyzed within the specified holding times. The metals samples were re-digested and re-analyzed due to lead contamination in the prep blank.

MATRIX RELATED QUALITY CONTROL:

The sample matrix spikes, CCN # 1003089-18 ID IR89-GW06S and IR89-GW06SD were inside control limits for the requested analytes except selenium.

Control limits for matrix spikes recoveries are set at 75% to 125% of the analyte quantity added unless original sample concentrations exceed the true values of these "spikes" by a factor of four or more. In this case, affected analytes are not flagged even if recoveries are outside percentage recovery control limits.

The sample matrix duplicate, CCN # 1003089-18 ID IR89-GW06D was inside control limits for the requested analytes.

CLP control limits for duplicate determinations are +/- 20% Relative Percent Difference (RPD) for concentrations greater than or equal to five times the CRDL in both the original and duplicate samples, and +/- the CRDL for concentrations less than five times the CRDL. The RPD is not calculated if both the original and duplicate values fall below the IDL.

A five-fold serial dilution of sample, CCN # 1003089-18 ID IR89-GW06L was performed in accordance with requirements for ICP and mercury analysis.

The adjusted sample concentration was inside control limits for the requested analytes.

AMENDED DATA

The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice.

Susan Bass

Susan W. Bass
Senior Chemist
March 30, 2010

AMENDED DATA

Jacqueline Cleveland

From: Cathy Dover [cdover@compuchemlabs.com]
Sent: Wednesday, July 28, 2010 11:43 AM
To: Jacqueline Cleveland
Cc: DataQual; Gwen.Buckley@CH2M.com
Subject: RE: CTO-81 Lejeune Resubmission Status
Attachments: CTO-081 site 69 revised metals narratives.pdf

Hi Jackie,

Sorry for the delay! I have attached the three revised metals case narratives (WO#1003029, 1003032 & 1003089).

Ken, who was helping with the xylene issue is on vacation I have been trying to reach him so he can verify the list you sent in the e-mail this week I wanted him to answer the data inquiry since the xylene reporting has changed recently.

I will call and see if I can reach him so that I can respond back to you today.

Cathy

Cathy Dover
Supervisor of Project Management
Compuchem
501 Madison Ave.
Cary, N.C. 27513
(919)379-4089 office
(919)379-4050 fax

From: Jacqueline Cleveland [mailto:cleve137@charter.net]
Sent: Wednesday, July 28, 2010 11:28 AM
To: Cathy Dover
Cc: 'DataQual'; Gwen.Buckley@CH2M.com
Subject: CTO-81 Lejeune Resubmission Status
Importance: High

Cathy,

Good Morning! Laura and I have two outstanding issues for the CTO-81 data packages that we are checking up on. I am waiting for metals case narratives for three SDGs (to explain REs) and Laura has a question regarding xylene results. Do you have an idea when we might see these items? Thanks for the info!

Jackie

Jacqueline Cleveland
Vice President
DataQual, US, LLC
636-352-9391
cleve137@charter.net

Jacqueline Cleveland

From: Jacqueline Cleveland [cleve137@charter.net]
Sent: Thursday, July 22, 2010 8:46 AM
To: 'Cathy Dover'
Cc: 'DataQual'; 'Anita.Dodson@CH2M.com'; 'Rebekha.Shaw@CH2M.com'; 'Gwen.Buckley@CH2M.com'
Subject: FW: CTO-81 Lejeune

Importance: High

Cathy,

I am just checking on the status of the request below – I sent it over Monday and don't believe that I have heard back on it. Please let me know!

Thanks, Jackie

From: Jacqueline Cleveland [mailto:cleve137@charter.net]
Sent: Monday, July 19, 2010 12:00 PM
To: 'Cathy Dover'
Cc: 'DataQual'; 'Rebekha.Shaw@CH2M.com'; 'Gwen.Buckley@CH2M.com'
Subject: CTO-81 Lejeune

Dear Cathy,

I have a request regarding the metals data packages for SDGs 1003029, 1003032 and 1003089. Based on the sample summary in the front of the data packages, it looks like most of the samples were re-digested and/or reanalyzed for some reason. There is no mention of this in the case narratives. Please provide revised narratives that addresses these RE samples and explains the reason for the RE suffix. Thanks so much!

Jackie

Jacqueline Cleveland
Vice-President
DataQual, ES, LLC
636-352-9391
cleve137@charter.net

Jacqueline Cleveland

From: Cathy Dover [cdover@compuchemlabs.com]
Sent: Thursday, July 22, 2010 9:02 AM
To: Jacqueline Cleveland
Cc: DataQual; Anita.Dodson@CH2M.com; Gwen.Buckley@CH2M com
Subject: FW: New CH2M HILL, INC. Inquiry: 1593, Due Date: 7/20/2010

Hi Jackie,

I have been waiting to speak with both the Inorganic supervisor and lab director since he e-mailed me the response below. I have already asked him to please ask the reviewer to mention instances like this even though holding times were meet. I will update you as soon as we meet to discuss.

Cathy

Cathy Dover
Supervisor of Project Management
Compuchem
501 Madison Ave
Cary, N.C. 27513
(919)379-4089 office
(919)379-4050 fax

From: James Feldhaus
Sent: Monday, July 19, 2010 2:10 PM
To: Cathy Dover; Rebecca K. Mead
Cc: Bob Meierer
Subject: RE: New CH2M HILL, INC. Inquiry: 1593, Due Date: 7/20/2010

Cathy

It is not policy to state in the narrative why batch QC or instrument QC required either a re-digestion or reanalysis if samples met required holding times.

Jim Feldhaus
Inorganic Manager
Compuchem Laboratories
Cary, NC 27513
(919)-379-4039

From: cdover@compuchemlabs.com [mailto:cdover@compuchemlabs.com]
Sent: Monday, July 19, 2010 1:59 PM
To: James Feldhaus
Cc: Cathy Dover; William Waring; Mark Ross; Rebecca K. Mead; Jennifer Rebman; Bob Meierer; Cathy Dover
Subject: New CH2M HILL, INC. Inquiry: 1593, Due Date: 7/20/2010

You have a new Client Inquiry (1593) waiting for review.
View

Contract Required TAT: 1 day

Penalty Assessment:

Originator:	Catherine Dover
Inquiry Date:	7/19/2010
Client:	CH2M HILL, INC.
Project Name:	CTO-081 SITE 69/289017.SA.DM/N62470-08-D-1000
Client Contact:	GWEN BUCKLEY
Work Order(s):	
1003029	
1003032	
1003089	
Required Response Date:	7/20/2010
Department(s):	
Inorganics	
Categories(s):	
Other	
Questions/Issues:	Please see attached e-mail copy requesting a response for why the samples were re-prepped.
Resolution:	

SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum	200.0	U	200.0	U	200.0	U	200.0	U	200.000	U	P
Antimony	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P
Arsenic	10.0	U	3.0	B	10.0	U	10.0	U	10.000	U	P
Barium	200.0	U	200.0	U	200.0	U	200.0	U	200.000	U	P
Beryllium	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P
Cadmium	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P
Calcium	5000.0	U	5000.0	U	130.3	B	130.1	B	192.547	B	P
Chromium	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P
Cobalt	5.0	U	0.8	B	5.0	U	5.0	U	5.000	U	P
Copper	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P
Iron	100.0	U	100.0	U	100.0	U	100.0	U	100.000	U	P
Lead	3.0	U	-1.9	B	3.0	U	3.0	U	3.000	U	P
Magnesium	5000.0	U	20.6	B	29.1	B	32.7	B	47.368	B	P
Manganese	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P
Mercury	0.200	U	0.200	U	0.200	U	-0.101	B	0.106	B	CV
Nickel	5.0	U	1.1	B	5.0	U	5.0	U	5.000	U	P
Potassium	5000.0	U	20.6	B	5000.0	U	5000.0	U	36.310	B	P
Selenium	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P
Silver	5.0	U	1.0	B	5.0	U	5.0	U	5.000	U	P
Sodium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	5000.000	U	P
Thallium	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P
Vanadium	20.0	U	1.1	B	20.0	U	20.0	U	20.000	U	P
Zinc	20.0	U	20.0	U	20.0	U	20.0	U	20.000	U	P

See PBLK

See PBLK

NQ

NQ

GW06
GW27IW
GW27DW

none asbl

SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum			200.0	U	200.0	U					P
Antimony			10.0	U	10.0	U					P
Arsenic			10.0	U	10.0	U					P
Barium			200.0	U	200.0	U					P
Beryllium			5.0	U	5.0	U					P
Cadmium			5.0	U	5.0	U					P
Calcium			5.0000.0	U	5000.0	U					P
Chromium			10.0	U	10.0	U					P
Cobalt			5.0	U	5.0	U					P
Copper			5.0	U	5.0	U					P
Iron			19.9	B	100.0	U					P
Lead			3.0	U	3.0	U					P
Magnesium			41.0	B	41.8	B	See PBLK				P
Manganese			10.0	U	10.0	U					P
Mercury			0.200	U	0.200	U	0.200	U			CV
Nickel			1.1	B	5.0	U					P
Potassium			5000.0	U	5000.0	U					P
Selenium			5.0	U	5.0	U					P
Silver			5.0	U	5.0	U					P
Sodium			5000.0	U	5000.0	U					P
Thallium			10.0	U	5.5	B	NQ				P
Vanadium			20.0	U	20.0	U					P
Zinc			20.0	U	20.0	U					P

GW06
GW27IW
GW27DW

GW09IW
DW
GW20D
GW15IW
GW03D
GW03
GW03DW
GW15

✓ flag as noted in report

SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Mercury			0.200	U	-0.113	B	NQ				CV

SW846 - METALS

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

IR69-GW06S

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	1981.8630		200.0000	U	2000.00	99.1		P
Antimony	75 - 125	516.5924		10.0000	U	500.00	103.3		P
Arsenic	75 - 125	40.1280		10.0000	U	40.00	100.3		P
Barium	75 - 125	2135.7950		20.7404	B	2000.00	105.8		P
Beryllium	75 - 125	52.4480		5.0000	U	50.00	104.9		P
Cadmium	75 - 125	51.5864		5.0000	U	50.00	103.2		P
Chromium	75 - 125	209.2424		1.7916	B	200.00	103.7		P
Cobalt	75 - 125	528.7098		5.0000	U	500.00	105.7		P
Copper	75 - 125	259.7279		5.0000	U	250.00	103.9		P
Iron	75 - 125	1071.3240		31.4858	B	1000.00	104.0		P
Lead	75 - 125	21.0341		3.0000	U	20.00	105.2		P
Manganese	75 - 125	525.2705		2.4959	B	500.00	104.6		P
Mercury	75 - 125	1.1100		0.2000	U	1.00	111.0		CV
Nickel	75 - 125	522.2024		5.0000	U	500.00	104.4		P
Selenium	75 - 125	7.2552		5.0000	U	10.00	72.6	N	P
Silver	75 - 125	52.2883		5.0000	U	50.00	104.6		P
Thallium	75 - 125	54.2160		10.0000	U	50.00	108.4		P
Vanadium	75 - 125	534.8172		20.0000	U	500.00	107.0		P
Zinc	75 - 125	501.5960		2.6915	B	500.00	99.8		P

NQ

Comments:

SW846 - METALS

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

IR69-GW06SD

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	2007.6690		200.0000	U	2000.00	100.4		P
Antimony	75 - 125	515.4818		10.0000	U	500.00	103.1		P
Arsenic	75 - 125	40.2813		10.0000	U	40.00	100.7		P
Barium	75 - 125	2140.2220		20.7404	B	2000.00	106.0		P
Beryllium	75 - 125	52.3124		5.0000	U	50.00	104.6		P
Cadmium	75 - 125	51.4081		5.0000	U	50.00	102.8		P
Chromium	75 - 125	209.8048		1.7916	B	200.00	104.0		P
Cobalt	75 - 125	527.0225		5.0000	U	500.00	105.4		P
Copper	75 - 125	261.5865		5.0000	U	250.00	104.6		P
Iron	75 - 125	1067.2090		31.4858	B	1000.00	103.6		P
Lead	75 - 125	22.7049		3.0000	U	20.00	113.5		P
Manganese	75 - 125	524.2820		2.4959	B	500.00	104.4		P
Mercury	75 - 125	1.0900		0.2000	U	1.00	109.0		CV
Nickel	75 - 125	523.7862		5.0000	U	500.00	104.8		P
Selenium	75 - 125	10.8901		5.0000	U	10.00	108.9		P
Silver	75 - 125	51.7596		5.0000	U	50.00	103.5		P
Thallium	75 - 125	57.3837		10.0000	U	50.00	114.8		P
Vanadium	75 - 125	534.6075		20.0000	U	500.00	106.9		P
Zinc	75 - 125	504.5375		2.6915	B	500.00	100.4		P

Comments:

SW846 - METALS

5B

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

IR69-GW06A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Selenium		7.87		5.00	U	10.0	78.7		P

Comments:

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69 EB01-030410-SS

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 WW 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-01A70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/11/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

WW 072210

WW 081210

054

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRW EB01-030410-SS

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 WM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-01A70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/11/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

WM 072210

WM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRLA EB01-030410-SS

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 MM 012210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-01A60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/11/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

MM 012210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030610-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-08C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IP109 EB01-030610-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 WM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-08C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	~~U~~ UJ CCL
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	~~U~~ UJ CCL

(1) - Cannot be separated from Diphenylamine

WM 072210

WM 081210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030610-GW

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-08C60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRL 69 | EB01-030710-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-09

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1003089-09JA70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.3	U
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.3	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.3	U
98-86-2	Acetophenone	5.3	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.3	U
67-72-1	Hexachloroethane	5.3	U
98-95-3	Nitrobenzene	5.3	U
78-59-1	Isophorone	5.3	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.3	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.3	~~U~~ exclude RE
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.3	U
105-60-2	Caprolactam	5.3	~~U~~ ~~UJ~~ ~~CCH~~ U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.3	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.3	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.3	U
91-58-7	2-Chloronaphthalene	5.3	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.3	U
606-20-2	2,6-Dinitrotoluene	5.3	U
208-96-8	Acenaphthylene	5.3	~~U~~ exclude RE
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.3	~~U~~ exclude RE

FORM I SV 8270C

LM 072210

1 correction LM 072310

LM 080210

070

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69 EB01-030710-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 WM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-09

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1003089-09JA70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.3	U
132-64-9	Dibenzofuran	5.3	U
84-66-2	Diethylphthalate	5.3	U
7005-72-3	4-Chlorophenyl-phenylether	5.3	U
86-73-7	Fluorene	5.3	~~U~~ exclude RE
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.3	U
101-55-3	4-Bromophenyl-phenylether	5.3	U
118-74-1	Hexachlorobenzene	5.3	U
1912-24-9	Atrazine	5.3	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.3	~~U~~ exclude RE
120-12-7	Anthracene	5.3	~~U~~ exclude RE
86-74-8	Carbazole	5.3	U
84-74-2	Di-n-butylphthalate	5.3	U
206-44-0	Fluoranthene	5.3	~~U~~ exclude RE
129-00-0	Pyrene	5.3	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.3	U
91-94-1	3,3'-Dichlorobenzidine	5.3	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.3	U
56-55-3	Benzo(a)anthracene	5.3	~~U~~ exclude RE
218-01-9	Chrysene	5.3	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.3	U
205-99-2	Benzo(b)fluoranthene	5.3	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.3	U
50-32-8	Benzo(a)pyrene	5.3	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.3	U
53-70-3	Dibenzo(a,h)anthracene	5.3	U
191-24-2	Benzo(g,h,i)perylene	5.3	U

(1) - Cannot be separated from Diphenylamine

WM 08210

WM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030710-GW

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-09

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1003089-09C60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.21	U
91-57-6	2-Methylnaphthalene	0.21	U
208-96-8	Acenaphthylene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	U
206-44-0	Fluoranthene	0.21	U
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U
53-70-3	Dibenzo(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRG EB01-030710-SB

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 MM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-17

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-17JC70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.1	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.1	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.1	U
98-86-2	Acetophenone	5.1	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.1	U
67-72-1	Hexachloroethane	5.1	U
98-95-3	Nitrobenzene	5.1	U
78-59-1	Isophorone	5.1	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.1	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.1	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.1	U
105-60-2	Caprolactam	5.1	~~U~~ UJ CCH
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.1	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.1	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.1	U
91-58-7	2-Chloronaphthalene	5.1	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.1	U
606-20-2	2,6-Dinitrotoluene	5.1	U
208-96-8	Acenaphthylene	5.1	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.1	~~U~~ exclude RE

FORM I SV 8270C

MM 072210

MM 061210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69 EB01-030710-SB

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 WM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-17

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-17JC70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.1	U
132-64-9	Dibenzofuran	5.1	U
84-66-2	Diethylphthalate	5.1	U
7005-72-3	4-Chlorophenyl-phenylether	5.1	U
86-73-7	Fluorene	5.1	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.1	U
101-55-3	4-Bromophenyl-phenylether	5.1	U
118-74-1	Hexachlorobenzene	5.1	U
1912-24-9	Atrazine	5.1	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.1	~~U~~ exclude RE
120-12-7	Anthracene	5.1	~~U~~ exclude RE
86-74-8	Carbazole	5.1	U
84-74-2	Di-n-butylphthalate	5.1	U
206-44-0	Fluoranthene	5.1	~~U~~ exclude RE
129-00-0	Pyrene	5.1	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.1	U exclude RE
91-94-1	3,3'-Dichlorobenzidine	5.1	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.1	U
56-55-3	Benzo(a)anthracene	5.1	~~U~~ exclude RE
218-01-9	Chrysene	5.1	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.1	U
205-99-2	Benzo(b)fluoranthene	5.1	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.1	U
50-32-8	Benzo(a)pyrene	5.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.1	U
53-70-3	Dibenzo(a,h)anthracene	5.1	U
191-24-2	Benzo(g,h,i)perylene	5.1	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

WM 072210

WM 081210

074

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030710-SB

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-17

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-17A60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.21	U
91-57-6	2-Methylnaphthalene	0.21	U
208-96-8	Acenaphthylene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	U
206-44-0	Fluoranthene	0.21	U
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U
53-70-3	Dibenzo(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IH09 EB01-030810-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 WM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-21

Sample wt/vol: 900 (g/mL) ML Lab File ID: 1003089-21A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.6	U
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.6	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.6	U
98-86-2	Acetophenone	5.6	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.6	U
67-72-1	Hexachloroethane	5.6	U
98-95-3	Nitrobenzene	5.6	U
78-59-1	Isophorone	5.6	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.6	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.6	~~U~~ exclude RE
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.6	U
105-60-2	Caprolactam	5.6	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.6	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.6	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.6	U
91-58-7	2-Chloronaphthalene	5.6	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.6	U
606-20-2	2,6-Dinitrotoluene	5.6	U
208-96-8	Acenaphthylene	5.6	~~U~~ exclude RE
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.6	~~U~~ exclude RE

FORM I SV 8270C

WM 072210

WM 081210

076

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030810-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-21

Sample wt/vol: 900 (g/mL) ML Lab File ID: 1003089-21A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.6	U
132-64-9	Dibenzofuran	5.6	U
84-66-2	Diethylphthalate	5.6	U
7005-72-3	4-Chlorophenyl-phenylether	5.6	U
86-73-7	Fluorene	5.6	U
100-01-6	4-Nitroaniline	5.6	~~U~~ exclude RE
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	11	U
101-55-3	4-Bromophenyl-phenylether	5.6	U
118-74-1	Hexachlorobenzene	5.6	U
1912-24-9	Atrazine	5.6	U
87-86-5	Pentachlorophenol	5.6	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	5.6	~~U~~ exclude RE
86-74-8	Carbazole	5.6	~~U~~ exclude RE
84-74-2	Di-n-butylphthalate	5.6	U
206-44-0	Fluoranthene	5.6	U
129-00-0	Pyrene	5.6	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.6	~~U~~ exclude RE
91-94-1	3,3'-Dichlorobenzidine	5.6	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.6	U
56-55-3	Benzo(a)anthracene	5.6	U
218-01-9	Chrysene	5.6	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.6	~~U~~ exclude RE
205-99-2	Benzo(b)fluoranthene	5.6	U
207-08-9	Benzo(k)fluoranthene	5.6	~~U~~ exclude RE
50-32-8	Benzo(a)pyrene	5.6	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.6	U
53-70-3	Dibenzo(a,h)anthracene	5.6	U
191-24-2	Benzo(g,h,i)perylene	5.6	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

LM 072210

LM 08/12/10

U77

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030810-GW

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-21

Sample wt/vol: 900 (g/mL) ML Lab File ID: 1003089-21C60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.22	U
91-57-6	2-Methylnaphthalene	0.22	U
208-96-8	Acenaphthylene	0.22	U
83-32-9	Acenaphthene	0.22	U
86-73-7	Fluorene	0.22	U
85-01-8	Phenanthrene	0.22	U
120-12-7	Anthracene	0.22	U
206-44-0	Fluoranthene	0.22	U
129-00-0	Pyrene	0.22	U
56-55-3	Benzo(a)anthracene	0.22	U
218-01-9	Chrysene	0.22	U
205-99-2	Benzo(b)fluoranthene	0.22	U
207-08-9	Benzo(k)fluoranthene	0.22	U
50-32-8	Benzo(a)pyrene	0.22	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.22	U
53-70-3	Dibenzo(a,h)anthracene	0.22	U
191-24-2	Benzo(g,h,i)perylene	0.22	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02DD - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-06

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-06C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.1	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.1	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.1	U
98-86-2	Acetophenone	5.1	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.1	U
67-72-1	Hexachloroethane	5.1	U
98-95-3	Nitrobenzene	5.1	U
78-59-1	Isophorone	5.1	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.1	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.1	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.1	U
105-60-2	Caprolactam	5.1	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.1	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.1	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.1	U
91-58-7	2-Chloronaphthalene	5.1	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.1	U
606-20-2	2,6-Dinitrotoluene	5.1	U
208-96-8	Acenaphthylene	5.1	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.1	~~U~~ exclude RE

LM 072210

LM 081210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02DD-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-06

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-06C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.1	U
132-64-9	Dibenzofuran	5.1	U
84-66-2	Diethylphthalate	5.1	U
7005-72-3	4-Chlorophenyl-phenylether	5.1	U
86-73-7	Fluorene	5.1	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.1	U
101-55-3	4-Bromophenyl-phenylether	5.1	U
118-74-1	Hexachlorobenzene	5.1	U
1912-24-9	Atrazine	5.1	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.1	~~U~~ exclude RE
120-12-7	Anthracene	5.1	~~U~~ exclude RE
86-74-8	Carbazole	5.1	U
84-74-2	Di-n-butylphthalate	5.1	U
206-44-0	Fluoranthene	5.1	~~U~~ exclude RE
129-00-0	Pyrene	5.1	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.1	U
91-94-1	3,3'-Dichlorobenzidine	5.1	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.1	U
56-55-3	Benzo(a)anthracene	5.1	~~U~~ exclude RE
218-01-9	Chrysene	5.1	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.1	U
205-99-2	Benzo(b)fluoranthene	5.1	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.1	U
50-32-8	Benzo(a)pyrene	5.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.1	~~U~~ UJ CCL
53-70-3	Dibenzo(a,h)anthracene	5.1	U
191-24-2	Benzo(g,h,i)perylene	5.1	~~U~~ UJ CCL

(1) - Cannot be separated from Diphenylamine

LM 081210

LM 072210

080

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02DD 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-06

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-06C60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.21	U
91-57-6	2-Methylnaphthalene	0.21	U
208-96-8	Acenaphthylene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	U
206-44-0	Fluoranthene	0.21	U
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U
53-70-3	Dibenzo(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-11

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-11C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

WM 06/12/10

WM 07/22/10

002

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-11

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-11C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	~~U~~ UJ CCL
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	~~U~~ UJ CCL

(1) - Cannot be separated from Diphenylamine

LM 072210

LM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-11

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-11C60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	~~0.20~~ 0.051	~~J~~ UFBL
91-57-6	2-Methylnaphthalene	0.13	J
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03D-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-10

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-10JA70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

LM 032210

LM 032210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03D-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-10

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-10JA70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

VM 072210

VM 081210

VM 072210

086

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03D-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-10

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-10C60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	~~0.068~~ 0.20	~~J~~ U FBL
91-57-6	2-Methylnaphthalene	0.12	J
208-96-8	Acenaphthylene	0.010	J
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03DW-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 VM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-12

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-12A70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

VM 072210

VM 08/2/10

088

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03DW-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 WM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-12

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-12A70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

WM 08/12/10

WM 072210

069

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03DW 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-12

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-12A60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

UJ CCL

072210

U90

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW06-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 WM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-18

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1003089-18JC70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.3	U
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.3	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.3	U
98-86-2	Acetophenone	5.3	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.3	U
67-72-1	Hexachloroethane	5.3	U
98-95-3	Nitrobenzene	5.3	U
78-59-1	Isophorone	5.3	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.3	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.3	~~U~~ exclude RE
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.3	U
105-60-2	Caprolactam	5.3	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.3	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.3	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.3	U
91-58-7	2-Chloronaphthalene	5.3	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.3	U
606-20-2	2,6-Dinitrotoluene	5.3	U
208-96-8	Acenaphthylene	5.3	~~U~~ exclude RE
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.3	~~U~~ exclude RE

WM 081210

WM 072210

091

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW06 -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 VM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-18

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1003089-18JC70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.3	U
132-64-9	Dibenzofuran	5.3	U
84-66-2	Diethylphthalate	5.3	U
7005-72-3	4-Chlorophenyl-phenylether	5.3	U
86-73-7	Fluorene	5.3	~~U~~ exclude RE
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.3	U
101-55-3	4-Bromophenyl-phenylether	5.3	U
118-74-1	Hexachlorobenzene	5.3	U
1912-24-9	Atrazine	5.3	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.3	~~U~~ exclude RE
120-12-7	Anthracene	5.3	~~U~~ exclude RE
86-74-8	Carbazole	5.3	U
84-74-2	Di-n-butylphthalate	5.3	U
206-44-0	Fluoranthene	5.3	~~U~~ exclude RE
129-00-0	Pyrene	5.3	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.3	U
91-94-1	3,3'-Dichlorobenzidine	5.3	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.3	U
56-55-3	Benzo(a)anthracene	5.3	~~U~~ exclude RE
218-01-9	Chrysene	5.3	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.3	U
205-99-2	Benzo(b)fluoranthene	5.3	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.3	U
50-32-8	Benzo(a)pyrene	5.3	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.3	U
53-70-3	Dibenzo(a,h)anthracene	5.3	U
191-24-2	Benzo(g,h,i)perylene	5.3	U

(1) - Cannot be separated from Diphenylamine

VM 081210

VM 072210

092

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW06 -10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 012210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-18

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1003089-18A60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/13/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.21	U
91-57-6	2-Methylnaphthalene	0.21	U
208-96-8	Acenaphthylene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	U
206-44-0	Fluoranthene	0.21	U
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U
53-70-3	Dibenzo(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U

LM 012210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW08 -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 WM 07210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-19

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-19J2C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.1	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.1	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.1	U
98-86-2	Acetophenone	5.1	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.1	U
67-72-1	Hexachloroethane	5.1	U
98-95-3	Nitrobenzene	5.1	U
78-59-1	Isophorone	5.1	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.1	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.1	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.1	U
105-60-2	Caprolactam	5.1	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.1	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.1	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.1	U
91-58-7	2-Chloronaphthalene	5.1	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.1	U
606-20-2	2,6-Dinitrotoluene	5.1	U
208-96-8	Acenaphthylene	5.1	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.1	~~U~~ exclude RE

WM 05/2/10

WM 07210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW08 ~ 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-19

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-19J2C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.1	U
132-64-9	Dibenzofuran	5.1	U
84-66-2	Diethylphthalate	5.1	U
7005-72-3	4-Chlorophenyl-phenylether	5.1	U
86-73-7	Fluorene	5.1	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.1	U
101-55-3	4-Bromophenyl-phenylether	5.1	U
118-74-1	Hexachlorobenzene	5.1	U
1912-24-9	Atrazine	5.1	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.1	~~U~~ exclude RE
120-12-7	Anthracene	5.1	~~U~~ exclude RE
86-74-8	Carbazole	5.1	U
84-74-2	Di-n-butylphthalate	5.1	U
206-44-0	Fluoranthene	5.1	~~U~~ exclude RE
129-00-0	Pyrene	5.1	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.1	U
91-94-1	3,3'-Dichlorobenzidine	5.1	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.1	U
56-55-3	Benzo(a)anthracene	5.1	~~U~~ exclude RE
218-01-9	Chrysene	5.1	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.1	U
205-99-2	Benzo(b)fluoranthene	5.1	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.1	U
50-32-8	Benzo(a)pyrene	5.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.1	U
53-70-3	Dibenzo(a,h)anthracene	5.1	U
191-24-2	Benzo(g,h,i)perylene	5.1	U

(1) - Cannot be separated from Diphenylamine

LM 061210

LM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW08 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-19

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-19A60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:03/13/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.21	U
91-57-6	2-Methylnaphthalene	0.21	U
208-96-8	Acenaphthylene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	U
206-44-0	Fluoranthene	0.21	U
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U
53-70-3	Dibenzo(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U

LM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW08D-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-20

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003089-20A70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.4	U
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.4	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.4	U
98-86-2	Acetophenone	5.4	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.4	U
67-72-1	Hexachloroethane	5.4	U
98-95-3	Nitrobenzene	5.4	U
78-59-1	Isophorone	5.4	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.4	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.4	~~U~~ exclude RE
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.4	U
105-60-2	Caprolactam	5.4	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.4	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.4	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.4	U
91-58-7	2-Chloronaphthalene	5.4	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.4	U
606-20-2	2,6-Dinitrotoluene	5.4	U
208-96-8	Acenaphthylene	5.4	~~U~~ exclude RE
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.4	~~U~~ exclude RE

WM 032210

WM 032210

037

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW08D -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-20

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003089-20A70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.4	U
132-64-9	Dibenzofuran	5.4	U
84-66-2	Diethylphthalate	5.4	U
7005-72-3	4-Chlorophenyl-phenylether	5.4	U
86-73-7	Fluorene	5.4	~~U~~ exclude RE
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.4	U
101-55-3	4-Bromophenyl-phenylether	5.4	U
118-74-1	Hexachlorobenzene	5.4	U
1912-24-9	Atrazine	5.4	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.4	~~U~~ exclude RE
120-12-7	Anthracene	5.4	~~U~~ exclude RE
86-74-8	Carbazole	5.4	U
84-74-2	Di-n-butylphthalate	5.4	U
206-44-0	Fluoranthene	5.4	~~U~~ exclude RE
129-00-0	Pyrene	5.4	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.4	U
91-94-1	3,3'-Dichlorobenzidine	5.4	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.4	U
56-55-3	Benzo(a)anthracene	5.4	~~U~~ exclude RE
218-01-9	Chrysene	5.4	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.4	~~U~~ UJ ISL
205-99-2	Benzo(b)fluoranthene	5.4	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.4	~~U~~
50-32-8	Benzo(a)pyrene	5.4	~~U~~
193-39-5	Indeno(1,2,3-cd)pyrene	5.4	~~U~~
53-70-3	Dibenzo(a,h)anthracene	5.4	~~U~~
191-24-2	Benzo(g,h,i)perylene	5.4	~~U~~

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

WM 081210

WM 072210

038

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW08D -10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-20

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003089-20A60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/13/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.22	U
91-57-6	2-Methylnaphthalene	0.22	U
208-96-8	Acenaphthylene	0.22	U
83-32-9	Acenaphthene	0.22	U
86-73-7	Fluorene	0.22	U
85-01-8	Phenanthrene	0.22	U
120-12-7	Anthracene	0.22	U
206-44-0	Fluoranthene	0.22	U
129-00-0	Pyrene	0.22	U
56-55-3	Benzo(a)anthracene	0.22	U
218-01-9	Chrysene	0.22	U
205-99-2	Benzo(b)fluoranthene	0.22	U
207-08-9	Benzo(k)fluoranthene	0.22	U
50-32-8	Benzo(a)pyrene	0.22	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.22	U
53-70-3	Dibenzo(a,h)anthracene	0.22	U
191-24-2	Benzo(g,h,i)perylene	0.22	U

LM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW08DRE-1DA

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-20

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003089-20J2C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.4	U
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.4	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.4	U
98-86-2	Acetophenone	5.4	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.4	U
67-72-1	Hexachloroethane	5.4	U
98-95-3	Nitrobenzene	5.4	U
78-59-1	Isophorone	5.4	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.4	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.4	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.4	U
105-60-2	Caprolactam	5.4	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.4	U
77-47-4	Hexachlorocyclopentadiene	5.4	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.4	U
91-58-7	2-Chloronaphthalene	5.4	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.4	U
606-20-2	2,6-Dinitrotoluene	5.4	U
208-96-8	Acenaphthylene	5.4	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.4	U

exclude RE

100

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW08DRE-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-20

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003089-20J2C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.4	U
132-64-9	Dibenzofuran	5.4	U
84-66-2	Diethylphthalate	5.4	U
7005-72-3	4-Chlorophenyl-phenylether	5.4	U
86-73-7	Fluorene	5.4	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.4	U
101-55-3	4-Bromophenyl-phenylether	5.4	U
118-74-1	Hexachlorobenzene	5.4	U
1912-24-9	Atrazine	5.4	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.4	U
120-12-7	Anthracene	5.4	U
86-74-8	Carbazole	5.4	U
84-74-2	Di-n-butylphthalate	5.4	U
206-44-0	Fluoranthene	5.4	U
129-00-0	Pyrene	5.4	U
85-68-7	Butylbenzylphthalate	5.4	U
91-94-1	3,3'-Dichlorobenzidine	5.4	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.4	U
56-55-3	Benzo(a)anthracene	5.4	U
218-01-9	Chrysene	5.4	U
117-84-0	Di-n-octylphthalate	5.4	U
205-99-2	Benzo(b)fluoranthene	5.4	U
207-08-9	Benzo(k)fluoranthene	5.4	U
50-32-8	Benzo(a)pyrene	5.4	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.4	U
53-70-3	Dibenzo(a,h)anthracene	5.4	U
191-24-2	Benzo(g,h,i)perylene	5.4	U

Exclude RE

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

101

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09DW-1DA

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 WW 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-05JA70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

WW 072210

WW 072210

102

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09DW-1DA

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 WM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-05JA70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

WM 0A210

WM 072210

103

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09DW-1DA

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-05C60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

LM 072210

104

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09IW~10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-04C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

WM 051210

WM 072210

105

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09IW-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 WM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-04C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	~~U~~ UJ CCL
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	~~U~~ UJ CCL

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

WM 072210

WM 072210

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW09IW-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-04C60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 LM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-13

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-13JC70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

LM 072210

LM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-13

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-13JC70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-13

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-13A60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.013	J
129-00-0	Pyrene	0.018	J
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15IW ~ 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-07

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-07C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.1	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.1	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.1	U
98-86-2	Acetophenone	5.1	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.1	U
67-72-1	Hexachloroethane	5.1	U
98-95-3	Nitrobenzene	5.1	U
78-59-1	Isophorone	5.1	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.1	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.1	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.1	U
105-60-2	Caprolactam	5.1	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.1	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.1	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.1	U
91-58-7	2-Chloronaphthalene	5.1	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.1	U
606-20-2	2,6-Dinitrotoluene	5.1	U
208-96-8	Acenaphthylene	5.1	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.1	~~U~~ exclude RE

FORM I SV 8270C

WM 072210

WM 081210

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15IW - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089 WM 072210

Matrix: (soil/water) WATER Lab Sample ID: 1003089-07

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-07C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.1	U
132-64-9	Dibenzofuran	5.1	U
84-66-2	Diethylphthalate	5.1	U
7005-72-3	4-Chlorophenyl-phenylether	5.1	U
86-73-7	Fluorene	5.1	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.1	U
101-55-3	4-Bromophenyl-phenylether	5.1	U
118-74-1	Hexachlorobenzene	5.1	U
1912-24-9	Atrazine	5.1	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.1	~~U~~ exclude RE
120-12-7	Anthracene	5.1	~~U~~ exclude RE
86-74-8	Carbazole	5.1	U
84-74-2	Di-n-butylphthalate	5.1	U
206-44-0	Fluoranthene	5.1	~~U~~ exclude RE
129-00-0	Pyrene	5.1	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.1	U
91-94-1	3,3'-Dichlorobenzidine	5.1	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.1	U
56-55-3	Benzo(a)anthracene	5.1	~~U~~ exclude RE
218-01-9	Chrysene	5.1	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.1	U
205-99-2	Benzo(b)fluoranthene	5.1	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.1	U
50-32-8	Benzo(a)pyrene	5.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.1	~~U~~ ~~UJ~~ ~~CCL~~
53-70-3	Dibenzo(a,h)anthracene	5.1	U
191-24-2	Benzo(g,h,i)perylene	5.1	~~U~~ ~~UJ~~ ~~CCL~~

(1) - Cannot be separated from Diphenylamine

WM 072210

WM 072210

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15IW 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-07

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003089-07C60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.21	U
91-57-6	2-Methylnaphthalene	0.21	U
208-96-8	Acenaphthylene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	U
206-44-0	Fluoranthene	0.21	U
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U
53-70-3	Dibenzo(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW27DW 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-03C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

LM 072210

LM 081210

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW27DW ~ 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-03C70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	~~U~~ UJ CCL
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	~~U~~ UJ CCL

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

VM 072210

VM 081210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW27DW 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-03 UM 072210

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003089-03C60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

UM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW27IW — 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-02 WM 07/2010

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003089-02JA70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.4	U
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.4	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.4	U
98-86-2	Acetophenone	5.4	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.4	U
67-72-1	Hexachloroethane	5.4	U
98-95-3	Nitrobenzene	5.4	U
78-59-1	Isophorone	5.4	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.4	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.4	~~U~~ exclude RE
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.4	U
105-60-2	Caprolactam	5.4	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.4	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.4	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.4	U
91-58-7	2-Chloronaphthalene	5.4	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.4	U
606-20-2	2,6-Dinitrotoluene	5.4	U
208-96-8	Acenaphthylene	5.4	~~U~~ exclude RE
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.4	~~U~~ exclude RE

WM 07/2010

WM 08/2010

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW27IW – 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-02

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003089-02JA70

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.4	U
132-64-9	Dibenzofuran	5.4	U
84-66-2	Diethylphthalate	5.4	U
7005-72-3	4-Chlorophenyl-phenylether	5.4	U
86-73-7	Fluorene	5.4	~~U~~ exclude RE
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.4	U
101-55-3	4-Bromophenyl-phenylether	5.4	U
118-74-1	Hexachlorobenzene	5.4	U
1912-24-9	Atrazine	5.4	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.4	~~U~~ exclude RE
120-12-7	Anthracene	5.4	~~U~~ exclude RE
86-74-8	Carbazole	5.4	U
84-74-2	Di-n-butylphthalate	5.4	U
206-44-0	Fluoranthene	5.4	~~U~~ exclude RE
129-00-0	Pyrene	5.4	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.4	U
91-94-1	3,3'-Dichlorobenzidine	5.4	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.4	U
56-55-3	Benzo(a)anthracene	5.4	~~U~~ exclude RE
218-01-9	Chrysene	5.4	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.4	U
205-99-2	Benzo(b)fluoranthene	5.4	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.4	U
50-32-8	Benzo(a)pyrene	5.4	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.4	U
53-70-3	Dibenzo(a,h)anthracene	5.4	U
191-24-2	Benzo(g,h,i)perylene	5.4	U

(1) - Cannot be separated from Diphenylamine

WM 072210

WM 081210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW27IW 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-02

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003089-02C60

Level: (low/med) LOW Date Received: 03/11/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/12/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/26/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.22	U
91-57-6	2-Methylnaphthalene	0.22	U
208-96-8	Acenaphthylene	0.22	U
83-32-9	Acenaphthene	0.22	U
86-73-7	Fluorene	0.22	U
85-01-8	Phenanthrene	0.22	U
120-12-7	Anthracene	0.22	U
206-44-0	Fluoranthene	0.012	J
129-00-0	Pyrene	0.011	J
56-55-3	Benzo(a)anthracene	0.22	U
218-01-9	Chrysene	0.22	U
205-99-2	Benzo(b)fluoranthene	0.22	U
207-08-9	Benzo(k)fluoranthene	0.22	U
50-32-8	Benzo(a)pyrene	0.22	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.22	U
53-70-3	Dibenzo(a,h)anthracene	0.22	U
191-24-2	Benzo(g,h,i)perylene	0.22	U

Metals

Contamination was noted in associated blanks and qualification was required in the associated samples. Required action is noted in the following tables.

Blank ID	Analyte	Concentration	Action Level	Q Flag	Q Code
PBW	calcium	192.547B ug/L	RL	U	MBL
	magnesium	47.368B ug/L	RL	U	MBL
	potassium	36.310B ug/L	RL	U	MBL
CCB	iron	19.9B ug/L	RL	U	MBL
	nickel	1.1B ug/L	RL	U	MBL
IR69-FB01-030310	copper	2.3B ug/L	RL	U	FBL
IR69-EB01-030610-GW	zinc	1.0B ug/L	RL	U	EBL
IR69-EB01-030710-GW	zinc	0.73B ug/L	RL	U	EBL

Associated samples and required qualifications are noted in the following table.

Sample ID	Analyte	Q Flag	Q Code
IR69-GW06-10A, IR69-GW08-10A	calcium	U at RL	MBL
all field samples >MDL ≤RL	magnesium	U at RL	MBL
all field samples >MDL ≤RL	potassium	U at RL	MBL
IR69-GW06-10A	iron	U at RL	MBL
IR69-GW03-10A, IR69-GW03D-10A, IR69-GW15-10A, IR69-GW27IW-10A	nickel	U at RL	MBL
all field samples >MDL ≤RL	copper	U at RL	FBL
IR69-GW02DD-10A, IR69-GW09DW-10A, IR69-GW09IW-10A, IR69-GW15-10A, IR69-GW15IW-10A, IR69-GW27DW-10A, IR69-GW27IW-10A, IR69-GW03DW-10A	zinc	U at RL	EBL

Internal Standards

SVOA

The sample IR69-GW08D-10A exhibited low recovery for perylene-d12; therefore all result associated with this standard were qualified as estimated (J/UJ), qualifier code: ISL. The sample was re-analyzed with non-compliant results exhibited; therefore this analysis was excluded in favor of the initial analysis.

Laboratory Control Samples

Pesticides/PCBs

The LCS pair associated with one group of water samples exhibited high recoveries for several compounds. Most of the associated samples did not exhibit positive results. Qualifications were required in one rinse blank sample, IR69-EB01-030810-GW, for the compounds δ-BHC (153/147) and dieldrin (145/132) with a qualifier code of BSH.

DataQual

Environmental Services, LLC

CH2M HILL
5700 Cleveland Street
Suite 101
Virginia Beach, VA 23462

July 30, 2010
SDG# 1003102, CompuChem
MCB Camp Lejeune, CTO-81

Dear Ms. Buckley,

The following Data Validation report is provided as requested for the parameters noted in the table below for SDG # 1003102. The data validation was performed in accordance with the SW846 Method 8260B for volatiles, 8270C and 8270C-SIM for semivolatiles and PAH, 8081A for pesticides, 8082 for PCBs, and 6010B/7470A/7471A for metals and mercury and good professional judgment. Also used in the validation of these samples were The National Functional Guidelines for Organic Data Review (June, 2008) and the National Functional Guidelines for Inorganic Data Review (October, 2004), as applicable. All areas of concern are discussed in the body of the report and a summary of data qualifications is provided.

Sample ID	Lab ID	Matrix	VOA	SVOA	LL PAH	Pest	PCBs	Metals
IR69-EB01-030910-GW	1003102-08	water	X	X	X	X	X	X
IR69-EB01-031310-GW	1003102-21	water	X	X	X	X	X	X
IR69-EB01-031310-SS	1003102-22	water	X	X	X	X	X	X
IR69-EB01-031410-SD	1003102-19	water	X	X	X			X
IR69-FB01-031010	1003102-11	water		X	X	X	X	X
IR69-GW01-10A	1003102-01	water	X	X	X	X	X	X
IR69-GW01D-10A	1003102-02	water	X	X	X	X	X	X
IR69-GW02BCH-10A	1003102-06	water	X	X	X	X	X	X
IR69-GW03BCH-10A	1003102-05	water	X	X	X	X	X	X
IR69-GW04-10A	1003102-14	water	X	X	X	X	X	X
IR69-GW05-10A	1003102-03	water	X	X	X	X	X	X
IR69-GW05D-10A	1003102-04	water	X	X	X	X	X	X
IR69-GW05DW-10A	1003102-17	water	X	X	X	X	X	X
IR69-GW05IW-10A	1003102-18	water	X	X	X	X	X	X
IR69-GW07-10A	1003102-09	water	X	X	X	X	X	X
IR69-GW07D-10A	1003102-07	water	X	X	X	X	X	X
IR69-GW10-10A	1003102-10	water	X	X	X	X	X	X
IR69-GW11DW-10A	1003102-16	water	X	X	X	X	X	X
IR69-GW11IW-10A	1003102-15	water	X	X	X	X	X	X
IR69-GW15BCH-10A	1003102-20	water	X	X	X	X	X	X
IR69-TB01-031010	1003102-13	water	X					
IR69-TB01-031110	1003102-12	water	X					
IR69-GW04-10A MS	1003102-14MS	water	X	X		X	X	X
IR69-GW04-10A MSD	1003102-14MSD	water	X	X		X	X	X

The following quality control samples were provided with this SDG: sample IR69-GW01D-10A-field duplicate of sample IR69-GW01-10A; sample IR69-GW05D-10A-field duplicate of sample IR69-GW05-10A; sample IR69-GW07D-10A-field duplicate of sample IR69-GW07-10A; samples IR69-EB01-030910-GW, IR69-EB01-03130-GW,

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IR69-EB01-031310-SS and IR69-EB01-031410-SD-equipment blanks; sample IR69-FB01-031010-field blank; and samples IR69-TB01-031010 and IR69-TB01-031110-trip blanks.

The samples were evaluated based on the following criteria:

• Data Completeness	*
• Technical Holding Times	*
• GC/MS Tunes	*
• GC Performance	*
• Initial/Continuing Calibrations	
• CRI Standards	*
• Interference Check Sample	*
• Blanks	
• Internal Standards	*
• Surrogates	*
• Laboratory Control Samples	*
• Matrix Spike Recoveries	*
• Matrix Duplicate RPDs	
• Post Digestion Spike Recoveries	*
• Serial Dilutions	*
• Field Duplicates	
• Identification/Quantitation	
• Reporting Limits	*
• Tentatively Identified Compounds	NA

* - indicates that no qualifications were required based on this criteria

Overall Evaluation of Data/Potential Usability Issues

A summary of qualifications applied to the sample results are noted below for the fractions validated. Specific details regarding qualification of the data are addressed in the Specific Evaluation section of this narrative. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte the validator has chosen the qualifier that best indicates possible bias in the results and flagged the data accordingly. However, information regarding all quality control issues is provided in the body of the report and on the qualification summary page. Please note that when a compound or analyte is flagged due to blank contamination the BL qualifier code takes precedence over all other qualifier codes except a code that explains rejected data.

VOA

Several sample compounds were qualified as estimated based on high %Ds which were exhibited in the continuing calibrations. Qualifications were also required based on low RRF values in the initial calibrations.

Blank contamination was exhibited in the method and/or QC blanks that resulted in qualifications to the data.

Dilutions were required to obtain results within the calibration range.

SVOA

Several sample compounds were qualified as estimated based on high %Ds which were exhibited in the continuing calibrations.

Blank contamination was exhibited in the method and/or QC blanks that resulted in qualifications to the data.

Pesticides/PCBs

Reported positive results exhibited column quantitation %Ds greater than 40%. These P flagged results were qualified as estimated J.

Metals

Qualifications were required in the samples due to laboratory and field QC blank contamination.

One analyte required qualification in the samples due to non-compliant matrix duplicate results.

All results reported between the MDL and the RL (B flagged by the laboratory) were qualified as estimated J.

Specific Evaluation of Data

Data Completeness

The SDG was received complete and intact. Resubmissions were not required. Please note: All field sample and QC blank IDs were missing the first four (IR69) and/or the last four (-10A) characters. The characters were added to the Form 1s in the DV reports by the data validator.

Technical Holding Times

According to chain of custody records, sampling was performed on 3/8-14/10 and samples were received at the laboratory 3/12-17/10. All sample preparation and analysis was performed within method holding time requirements.

Initial/Continuing Calibration

VOA

Calibration standards exhibited %Ds and RRFs that were non-compliant. A summary of these non-compliances and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	RRF, %RSD, %D	Samples	Q Flag	Q Code
IC 3/16/10	acetone 2-butanone	0.0337 0.0419	IR69-GW01-10A, IR69-GW01D-10A, IR69-GW05-10A, IR69-GW05D-10A, IR69-GW03BCH-10A, IR69-GW02BCH-10A, IR69-GW07D-10A, IR69-EB01-030910-GW, IR69-GW07-10A	J R	ICL
CC 3/19/10	trichlorofluoromethane 1,1,1-trichloroethane carbon tetrachloride	41.72 21.22 20.53	IR69-GW01-10A	J UJ	CCH
	1,3-dichlorobenzene 1,4-dichlorobenzene 1,2-dibromo-3-chloropropane 1,2,4-trichlorobenzene	-25.39 -21.53 -25.83 -32.38		J UJ	CCL
CC 3/19/10	dichlorodifluoromethane bromomethane 1,2-dibromo-3-chloropropane 1,2,4-trichlorobenzene	-24.19 -23.07 -23.89 -21.62	IR69-GW01D-10A, IR69-GW05-10A, IR69-GW05D-10A, IR69-GW03BCH-10A, IR69-GW02BCH-10A, IR69-GW07D-10A, IR69-EB01-030910-GW, IR69-GW07-10A	J UJ	CCL
IC 3/22/10	2-butanone	0.0366	IR69-GW10-10A, IR69-TB01-031110, IR69-TB01-031010	J R	ICL
IC 3/23/10	acetone 2-butanone	0.0308 0.0416	IR69-EB01-031310-SS, IR69-GW04-10A, IR69-GW11W-10A, IR69-GW11DW-10A, IR69-GW05DW-10A, IR69-GW05IW-10A, IR69-EB01-031410-SD, IR69-GW15BCH-10A, IR9-EB01-031310-GW	J R	ICL

SVOA

Calibration standards exhibited %Ds that were non-compliant. A summary of these non-compliances and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	RRF, %RSD, %D	Samples	Q Flag	Q Code
CC 3/24/10	indeno(g,h,i)perylene, dibenzo(a,h)anthracene benzo(g,h,i)perylene	-23.75 -21.66 -26.19	IR69-GW01-10A, IR69-GW01D-10A, IR69-GW05-10A, IR69-GW05D-10A, IR69-GW03BCH-10A, IR69-GW02BCH-10A	J UJ	CCL
CC 3/25/10	indeno(g,h,i)perylene, benzo(g,h,i)perylene	-24.08 -22.61	IR69-GW10-10A	J UJ	CCL
CC 3/30/10	benzaldehyde 3,3'-dichlorobenzidine	-33.30 -27.86	IR69-GW04-10A, IR69-GW05DW-10A, IR69-EB01-031410-SD	J UJ	CCL
CC 3/31/10	4,6-dinitro-2-methylphenol 4-bromophenyl-phenylether	23.16 30.94	IR69-GW11IW-10A, IR69-GW11DW-10A, IR69-GW05IW-10A, IR69-GW15BCH-10A, IR69-EB01-031310-GW, IR69-EB01-031310-SS	J UJ	CCH

Blanks

VOA

The associated method and/or QC blanks exhibited contamination as noted in the following table. Compounds for which there was no action required, are not included in the following table.

Blank ID	Compound	Concentration	Reporting Limit
VBLKRV	methylene chloride	0.061J ug/L	0.5 ug/L
VBLKHP	acetone	1.1	2.5
VBLKHX	acetone	0.47J	2.5
	methylene chloride	0.066J	0.5
VBLKHQ	methylene chloride	0.027J	0.5
	1,2-dichlorobenzene	0.070J	0.5
	1,2,4-trichlorobenzene	0.12J	0.5
IR69-TB01-031110	acetone	1.6J	2.5
	methylene chloride	0.052J	0.5
	cyclohexane	0.25J	0.5
IR69-TB01-031310	acetone	2.1J	2.5

Blank ID	Compound	Concentration	Reporting Limit
IR69-EB01-030810-GW	carbon disulfide	0.13J	0.5
	acetone	11	2.5
	methylene chloride	8.4	0.5
	2-butanone	1.9J	0.5
	chloroform	0.17J	0.5
	benzene	0.13J	0.5
	toluene	2.4	0.5
IR69-EB01-030910-GW	carbon disulfide	0.022J	0.5
	acetone	13	2.5
	methylene chloride	7.9	0.5
	2-butanone	2.5	0.5
	chloroform	0.17J	0.5
	benzene	0.18J	0.5
	toluene	2.2	0.5
	ethylbenzene	0.070J	0.5
IR69-EB-031310-GW	carbon disulfide	0.024J	0.5
	acetone	4.7	2.5
	methylene chloride	6.3	0.5
	2-butanone	2.4J	2.5
	chloroform	1.5	0.5
	bromodichloromethane	0.10J	0.5
	toluene	1.0	0.5
IR69-EB01-031410-GW	acetone	2.8	2.5
	methylene chloride	6.3	0.5
	2-butanone	1.5J	2.5
	chloroform	1.3	0.5
	bromodichloromethane	0092J	0.5
	toluene	1.6	0.5
IR69-FB01-031010	acetone	5.5	2.5
	methylene chloride	10	0.5
	cis-1,2-dichloroethene	0.035	0.5
	2-butanone	1.8J	0.5
	chloroform	0.19J	0.5
	benzene	0.12J	0.5
	toluene	2.6	0.5
	ethylbenzene	0.064J	0.5
IR69-FB01-031910	acetone	7.8	2.5
	methylene chloride	1.4	0.5
	2-butanone	1.8J	0.5
	chloroform	2.4	0.5
	benzene	0.17J	0.5
	toluene	2.1	0.5
	ethylbenzene	0.076J	0.5

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Q Code
IR69-GW01D-10A, IR69-GW02BCH-10A, IR69-GW03BCH-10A, IR69-GW04-10A, IR69-GW05-10A, IR69-GW05DW-10A, IR69-GW05IW-10A, IR69-GW07-10A, IR69-GW07D-10A, IR69-GW11IW-10A	acetone	U at RL	MBL
IR69-GW01-10A, IR69-GW04-10A, IR69-GW05DW-10A, IR69-GW05IW-10A, IR69-GW10-10A, IR69-GW11DW-10A, IR69-GW11IW-10A	methylene chloride	U at RL	MBL
IR69-GW10-10A	1,2-dichlorobenzene	U at RL	MBL
IR69-GW10-10A	1,2,4-trichlorobenzene	U at RL	MBL
IR69-G11DW-10A, IR69-GW15BCH-10A	acetone	U	MBL
IR69-GW01D-10A, IR69-GW05-10A	cis-1,2-dichloroethene	U at RL	EBL
IR69-GW02BCH-10A, IR69-GW11DW-10A, IR69-GW11IW-10A	carbon disulfide	U at RL	EBL
IR69-GW02BCH-10A, IR69-GW03BCH-10A, IR69-GW05DW-10A, IR69-GW05IW-10A, IR69-GW07-10A, IR69-GW07D-10A, IR69-GW10-10A, IR69-GW11DW-10A, IR69-GW11IW-10A, IR69-GW15BCH-10A	toluene	U at RL	EBL
IR69-GW03BCH-10A, IR69-GW07-10A	methylene chloride	U at RL	TBL
IR69-GW10-10A	acetone	U at RL	TBL
IR69-GW04-10A, IR69-GW05DW-10A, IR69-GW11DW-10A	ethylbenzene	U at RL	EBL
IR69-GW05-10A, IR69-GW05D-10A, IR69-GW05DW-10A, IR69-GW05IW-10A	chloroform	U at RL	EBL
IR69-GW11DW-10A	2-butanone	U at RL	EBL
IR69-GW11DW-10A, IR69-GW11IW-10A	benzene	U at RL	EBL
IR69-GW11DW-10A	bromodichloromethane	U at RL	EBL

SVOA

The associated method and/or QC blanks exhibited contamination as noted in the following table. Compounds for which there was no action required, are not included in the following table.

Blank ID	Compound	Concentration	Reporting Limit	Action Level
IR69-EB01-031310-GW-SIM	naphthalene	0.054J	0.21	< RL
	2-methylnaphthalene	0.017	0.21	< RL

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Q Code
PAH SIM: IR69-GW11IW-10A	2-methylnaphthalene	U at RL	EBL

Metals

Contamination was noted in associated blanks and qualification was required in the associated samples. Required action is noted in the following tables.

Blank ID	Analyte	Concentration	Action Level	Q Flag	Q Code
CCB	magnesium	26.5B ug/L	RL	U	MBL
	copper	1.6B ug/L	RL	U	MBL
FB01-031910	zinc	0.97B ug/L	RL	U	FBL
FB01-031010	sodium	559B ug/L	RL	U	FBL
EB01-030910-GW	lead	1.8B ug/L	RL	U	EBL
EB01-031410-GW	aluminum	72.9B ug/L	RL	U	EBL

Associated samples and required qualifications are noted in the following table.

Sample ID	Analyte	Q Flag	Q Code
all field samples >MDL ≤ RL	magnesium	U at RL	MBL
IR69-GW07D-10A, IR69-GW11DW-10A, IR69-GW05DW-10A, IR69-GW05IW-10A	copper	U at RL	MBL
IR69-GW05IW-10A, IR69-GW05DW-10A, IR69-GW11IW-10A	zinc	U at RL	FBL
IR69-GW05D-10A	sodium	U at RL	FBL
IR69-GW03BCH-10A	lead	U at RL	EBL
IR69-GW05DW-10A, IR69-GW15BCH-10A	aluminum	U at RL	EBL

Matrix Duplicates

Metals

One of the associated matrix duplicate analyses exhibited a non-compliant RPD for one analyte. Specific action is noted in the following table.

MD	Analyte	Samples Affected	RPD	Q Flag	Q Code
IR69-GW04-10A	aluminum	all field samples	21.5	J/UJ	MDP

Field Duplicates

Metals

The field duplicate pair of samples IR69-GW05-10A and IR69-GW05D-10A exhibited a non-compliant RPD for iron (68%). The reported positive results for iron in the field duplicate pair were qualified as estimated J with a FD qualifier code.

Identification/Quantitation

VOA

Samples IR69-GW11DW-10A and IR69-GW11IW-10A required a dilution to obtain results within the calibration range. All E-flagged results are excluded in favor of the corresponding D-flagged results from the dilution analysis. All results except corresponding D-flagged results in the dilution analysis are excluded in favor of the results reported from the undiluted analysis.

Pesticides/PCBs

All positive results reported with a P flag to indicate column quantitation %Ds greater than 40% are qualified as estimated J with a qualifier code of 2C.

Metals

All mercury results reported between the IDL and the RL (B flagged by laboratory) were qualified as estimated J. No qualification code was required.

A summary of qualifications required is provided on the following page. Please do not hesitate to contact DataQual ES with any questions regarding this validation report.

Sincerely,

Laura Maschhoff
President

Jacqueline Cleveland
Vice-President

Summary of Data Qualifications

VOA

Sample ID	Compound	Results	Q-Flag	Q Code
IR69-GW01-10A, IR69-GW01D-10A, IR69-GW05-10A, IR69-GW05D-10A, IR69-GW03BCH-10A, IR69-GW02BCH-10A, IR69-GW07D-10A, IR69-EB01-030910-GW, IR69-GW07-10A	acetone 2-butanone	+ -	J/R	ICL
IR69-GW01-10A	trichlorofluoromethane 1,1,1-trichloroethane carbon tetrachloride	+ -	J/UJ	CCH
IR69-GW01-10A	1,3-dichlorobenzene 1,4-dichlorobenzene 1,2-dibromo-3-chloropropane 1,2,4-trichlorobenzene	+ -	J/UJ	CCL
IR69-GW01D-10A, IR69-GW05-10A, IR69-GW05D-10A, IR69-GW03BCH-10A, IR69-GW02BCH-10A, IR69-GW07D-10A, IR69-EB01-030910-GW, IR69-GW07-10A	dichlorodifluoromethane bromomethane 1,2-dibromo-3-chloropropane 1,2,4-trichlorobenzene	+ -	J/UJ	CCL
IR69-GW10-10A, IR69-TB01-031110, IR69-TB01-031010	2-butanone	+ -	J/R	ICL
IR69-EB01-031310-SS, IR69-GW04-10A, IR69-GW11IW-10A, IR69-GW11DW-10A, IR69-GW05DW-10A, IR69-GW05IW-10A, IR69-EB01-031410-SD, IR69-GW15BCH-10A, IR9-EB01-031310-GW	acetone 2-butanone	+ -	J/R	ICL
IR69-GW01D-10A, IR69-GW02BCH-10A, IR69-GW03BCH-10A, IR69-GW04-10A, IR69-GW05-10A, IR69-GW05DW-10A, IR69-GW05IW-10A, IR69-GW07-10A, IR69-GW07D-10A, IR69-GW11IW-10A	acetone	+	U/ at RL	MBL
IR69-GW01-10A, IR69-GW04-10A, IR69-GW05DW-10A, IR69-GW05IW-10A, IR69-GW10-10A, IR69-GW11DW-10A, IR69-GW11IW-10A	methylene chloride	+	U/ at RL	MBL
IR69-GW10-10A	1,2-dichlorobenzene	+	U/ at RL	MBL
IR69-GW10-10A	1,2,4-trichlorobenzene	+	U/ at RL	MBL
IR69-G11DW-10A, IR69-GW15BCH-10A	acetone	+	U	MBL
IR69-GW01D-10A, IR69-GW05-10A	cis-1,2-dichloroethene	+	U/ at RL	FBL
IR69-GW02BCH-10A, IR69-GW11DW-10A, IR69-GW11IW-10A	carbon disulfide	+	U/ at RL	EBL
IR69-GW02BCH-10A, IR69-GW03BCH-10A, IR69-GW05DW-10A, IR69-GW05IW-10A, IR69-GW07-10A, IR69-GW07D-10A, IR69-GW10-10A, IR69-GW11DW-10A, IR69-GW11IW-10A, IR69-GW15BCH-10A	toluene	+	U/ at RL	EBL
IR69-GW03BCH-10A, IR69-GW07-10A	methylene chloride	+	U/ at RL	TBL
IR69-GW10-10A	acetone	+	U/ at RL	TBL
IR69-GW04-10A, IR69-GW05DW-10A, IR69-GW11DW-10A	ethylbenzene	+	U/ at RL	FBL

Summary of Data Qualifications

VOA, continued

Sample ID	Compound	Results	Q-Flag	Q Code
IR69-GW05-10A, IR69-GW05D-10A, IR69-GW05DW-10A, IR69-GW05IW-10A	chloroform	+	U at RL	EBL
IR69-GW11DW-10A	2-butanone	+	U at RL	EBL
IR69-GW11DW-10A, IR69-GW11IW-10A	benzene	+	U at RL	FBL
IR69-GW11DW-10A	bromodichloromethane	+	U at RL	EBL
IR69-GW11DW-10A, IR69-GW11IW-10A	all E-flagged compounds	+/-	exclude	DL
IR69-GW11DW-10ADL, IR69-GW11IW-10ADL	all except corresponding D-flagged compounds	+/-	exclude	DL

SVOA

Sample ID	Compound	Results	Q-Flag	Q Code
IR69-GW01-10A, IR69-GW01D-10A, IR69-GW05-10A, IR69-GW05D-10A, IR69-GW03BCH-10A, IR69-GW02BCH-10A	indeno(g,h,i)perylene, dibenzo(a,h)anthracene benzo(g,h,i)perylene	+/-	J/UJ	CCL
IR69-GW10-10A	indeno(g,h,i)perylene, benzo(g,h,i)perylene	+/-	J/UJ	CCL
IR69-GW04-10A, IR69-GW05DW-10A, IR69-EB01-031410-SD	benzaldehyde 3,3'-dichlorobenzidine	+/-	J/UJ	CCL
IR69-GW11IW-10A, IR69-GW11DW-10A, IR69-GW05IW-10A, IR69-GW15BCH-10A, IR69-EB01-031310-GW, IR69-EB01-031310-SS	4,6-dinitro-2-methylphenol 4-bromophenyl-phenylether	+/-	J/UJ	CCH
PAH SIM: IR69-GW11IW-10A	2-methylnaphthalene	+	U at RL	EBL

Pesticides/PCBs

Sample ID	Compound	Results	Q-Flag	Q Code
all samples	all compounds	+P	J	2C

Metals

Sample ID	Analyte	Results	Q-Flag	Q Code
all field samples >MDL ≤ RL	magnesium	+B	U at RL	MBL
IR69-GW07D-10A, IR69-GW11DW-10A, IR69-GW05DW-10A, IR69-GW05IW-10A	copper	+B	U at RL	MBL
IR69-GW05IW-10A, IR69-GW05DW-10A, IR69-GW11IW-10A	zinc	+B	U at RL	FBL
IR69-GW05D-10A	sodium	+B	U at RL	FBL
IR69-GW03BCH-10A	lead	+B	U at RL	EBL
IR69-GW05DW-10A, IR69-GW15BCH-10A	aluminum	+B	U at RL	EBL
all field samples	aluminum	+/-	J/UJ	MDP
IR69-GW05-10A, IR69-GW05D-10A	zinc	+	J	FD
all samples	all analytes	+B	J	

Glossary of Qualification Flags and Abbreviations

Qualification Flags (Q-Flags)

U	not detected above the reported sample quantitation limit
J	estimated value
UJ	reported quantitation limit is qualified as estimated
R	result is rejected; the presence or absence of the analyte cannot be verified
D	result value is based on dilution analysis result
NJ	analyte has been tentatively identified, estimated value
L	analyte present, biased low
UL	not detected, quantitation limit is probably higher
K	analyte present, biased high

Inorganic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 10X the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL and the result is raised to the RL and flagged U.
R or J.	The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator. (see NFG, Rev. date 10/04, p. 17 for extracted blanks (PB))

Organic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 5X (10X for common laboratory contaminants) the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is raised to the RL and flagged U.
U	The sample result for the blank contaminant is greater than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is flagged U at the reported value.

General Abbreviations

RL / MDL	reporting limit/method detection limit
CRQL	contract required quantitation limit
Q Code	qualifier code
+	positive result
-	non-detect result

QUALIFIER CODE REFERENCE

Qualifier	Description
TN	Tune
BSI	Blank Spike LCS - High Recovery
BSH	Blank Spike LCS - Low Recovery
BD	Blank Spike Blank Spike Duplicate (LCS/LCSD) Precision
BRL	Below Reporting Limit
ISL	Internal Standard - Low Recovery
ISH	Internal Standard - High Recovery
MSI	Matrix Spike and or Matrix Spike Duplicate - Low Recovery
MSH	Matrix Spike and or Matrix Spike Duplicate - High Recovery
MI	Matrix interference obscuring the raw data
MDP	Matrix Spike/Matrix Spike Duplicate Precision
2S	Second Source - Bad reproducibility between tandem detectors
SSL	Spiked Surrogate - Low Recovery
SSH	Spiked Surrogate - High Recovery
SD	Serial Dilution Reproducibility
ICL	Initial Calibration - Low Relative Response Factors (RRF)
ICH	Initial Calibration - High Relative Response Factors (RRF)
ICB	Initial Calibration - Bad Linearity or Curve Function
CCI	Continuing Calibration - Low Recovery or %Difference
CCH	Continuing Calibration - High Recovery or %Difference
LD	Lab Duplicate Reproducibility
HT	Holding Time
PD	Pesticide Degradation
2C	Second Column - Poor Dual Column Reproducibility
LR	Concentration Exceeds Linear Range
BL	Blank Contamination (MBL, EBL, FBL)
RE	Redundant Result - due to Re-analysis or Re-extraction
DL	Redundant Result - due to Dilution
FD	Field Duplicate
OT	Other - explained in data validation report
%SOL	High moisture content

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030910-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-08

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-0871

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/20/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ UJ CCL
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	~~U~~ UJ CCL
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.022	J
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	13	~~B~~ J ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	7.9	
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.036	J
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	J ICL
67-66-3	Chloroform	0.17	J
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.18	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	2.2	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR64 EB01-030910-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

LMA 072410

Matrix: (soil/water) WATER Lab Sample ID: 1003102-08

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-0871

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/20/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.17	J
100-41-4	Ethylbenzene	0.070	J
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.076	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	~~U~~ UJ CCL
120-82-1	1,2,4-Trichlorobenzene	0.50	~~U~~ UJ CCL
1330-20-7	Xylene (total)	0.076 ~~0.50~~	~~U~~ J
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

LMA 072910

FORM I VOA

LMA 072910

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IKL EB01-031310-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102 UM 072410

Matrix: (soil/water) WATER Lab Sample ID: 1003102-21

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-2171

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/24/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.024	J
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	4.7	~~B~~ J IKL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	6.3	~~B~~
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.4	~~J~~ J IKL
67-66-3	Chloroform	1.5	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.10	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	1.0	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

UM 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IH04 EB01-031310-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102 LM 072410

Matrix: (soil/water) WATER Lab Sample ID: 1003102-21

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-2171

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/24/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

LM 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031310-SS

Lab Name: COMPUCHEM Method: 8260B JK09

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-22 WM 072410

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-2271

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/23/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	3.0	~~B~~ J ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.86	~~B~~
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	1.7	~~J~~ J ICL
67-66-3	Chloroform	1.7	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	1.1	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

WM 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031310-SS

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-22

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-2271

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/23/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031410-SD

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-19

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-1971

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/24/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	6.2	~~B~~ J ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	5.1	~~B~~
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.0	~~J~~ J ICL
67-66-3	Chloroform	1.0	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.085	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	1.2	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031410-SD

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-19

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-1971

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/24/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW01 — 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-01

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-0171

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/19/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	~~U~~ UJ CCH
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5	~~U~~ R ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.5 ~~0.067 JB~~	U, MBL
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ R ICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	~~U~~ UJ CCH
56-23-5	Carbon Tetrachloride	0.50	~~U~~ UJ CCH
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW01 - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-01 LM 072410

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-0171

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/19/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	~~U~~ USCL
106-46-7	1,4-Dichlorobenzene	0.50	~~U~~ USCL
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	~~U~~ USCL
120-82-1	1,2,4-Trichlorobenzene	0.50	~~U~~ USCL
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

LM 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW01D -10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-02 WM 072410

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-0271

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/19/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ UJ CCL
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	~~U~~ UJ CCL
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5 ~~1.4~~	~~JB~~ ~~U WM~~ RICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.5 ~~0.032~~	~~J~~ U FBL
78-93-3	2-butanone	2.5	~~U~~ RICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

1 correction
WM 072410

WM 072410

82%

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW01D — 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-02

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-0271

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/19/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	~~U~~ UJ CCL
120-82-1	1,2,4-Trichlorobenzene	0.50	~~U~~ UJ CCL
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

VM 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02BCH - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-06

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-0671

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/20/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ UJ CCL
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	~~U~~ UJ CCL
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.5 ~~0.021 J~~	U EPL
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5 ~~1.5 JB~~	U MA RICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ R ICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.5 ~~0.035 J~~	U EPL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

1 correction
LM 072410

LM 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02BCH - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-06

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-0671

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/20/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	~~U~~ UJ CCL
120-82-1	1,2,4-Trichlorobenzene	0.50	~~U~~ UJ CCL
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03BCH — 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-05 LM 072410

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-0571

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/20/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ UJ CCL
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	~~U~~ UJ CCL
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5 ~~1.1 JB~~	~~U~~ RICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.5 ~~0.023~~	~~J~~ U TBL
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ RICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.5 ~~0.040~~	~~J~~ U TBL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

1 correction
LM 072410

LM 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03BCH - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102 LM 072410

Matrix: (soil/water) WATER Lab Sample ID: 1003102-05

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-0571

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/20/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	~~U~~ UJ CCL
120-82-1	1,2,4-Trichlorobenzene	0.50	~~U~~ UJ CCL
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

LM 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04 - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-14

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-1471

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/23/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.21	J
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5 ~~1.7~~	~~JB~~ ~~U MBL~~ LICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.5 ~~0.041~~	~~JB~~ U MBL
156-60-5	trans-1,2-Dichloroethene	0.67	
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	3.1	
78-93-3	2-butanone	2.5	~~U~~ LICL
67-66-3	Chloroform	1.3	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.48	J
79-01-6	Trichloroethene	0.38	J
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	8.3	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

1 correction
LM 072410

LM
072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04 - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-14

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-1471

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/23/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	~~0.25~~	~~J~~
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.17	J
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05 - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-03

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-0371

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/20/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ U5 CCL
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	~~U~~ U5 CCL
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5 ~~0.75~~	~~JB-U NAA~~ CICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.5 ~~0.035~~	~~J~~ U FDL
78-93-3	2-butanone	2.5	~~U~~ U ICL
67-66-3	Chloroform	0.5 ~~0.076~~	~~J~~ U EDL
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

1 correction
LM 072410

LM 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05 - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102 LMM 072410

Matrix: (soil/water) WATER Lab Sample ID: 1003102-03

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-0371

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/20/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	~~U~~ UJ CCL
120-82-1	1,2,4-Trichlorobenzene	0.50	~~U~~ UJ CCL
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

LMM 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05D 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-04

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-0471

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/20/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ 1.5 CCL
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	~~U~~ 1.5 CCL
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5	~~U~~ 2 ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ 2 ICL
67-66-3	Chloroform	0.5	~~0.072 J~~ 0.072
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05D - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-04

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-0471

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/20/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	~~U~~ UJ CCL
120-82-1	1,2,4-Trichlorobenzene	0.50	~~U~~ UJ CCL
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

WM 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05DW 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102 LM 072410

Matrix: (soil/water) WATER Lab Sample ID: 1003102-17

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-1771

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/23/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.064	J
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5 ~~2.1~~ ~~JB~~ ~~U MRL~~ R ICL	
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	~~B~~ U MRL
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.086	J
78-93-3	2-butanone	2.5	~~U~~ R ICL
67-66-3	Chloroform	0.5 ~~0.41~~ ~~J~~ U LCL	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.039	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.5 ~~0.10~~ ~~J~~ U LCL	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

1 correction LM 072410

LM 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05DW - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-17

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-1771

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/23/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.5 ~~0.079~~	~~J~~ UFAL
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

MM 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05IW - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-18

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-1871

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/24/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	1.5 ~~1.7~~	~~JB~~ ~~U MBL~~ RICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.5 ~~0.30~~	~~JB~~ U MBL
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ RICL
67-66-3	Chloroform	0.5 ~~0.32~~	~~J~~ U MBL
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.5 ~~0.043~~	~~J~~ U MBL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

1 correction
LM 072410

LM 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05IW - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-18

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-1871

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/24/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW07 — 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102 LMA 072410

Matrix: (soil/water) WATER Lab Sample ID: 1003102-09

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-0971

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/20/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ UJ CCL
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	~~U~~ UJ CCL
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5 ~~1.2~~	~~JB~~ ~~U MBL~~ RICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.5 ~~0.029~~	~~J~~ U MBL
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ RICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.5 ~~0.069~~	~~J~~ U MBL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

1 correction LMA 072810

LMA 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW07 — 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-09

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-0971

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/20/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	~~U~~ UJ CCL
120-82-1	1,2,4-Trichlorobenzene	0.50	~~U~~ UJ CCL
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

MM 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW07D - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-07

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-0771

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/20/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ UJ CCL
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	~~U~~ UJ CCL
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5 ~~0.86~~ ~~JB~~ ~~H MPA~~ RICL	
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ R ICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	1.5 ~~0.061~~ ~~J~~ UCBL	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

Correction
LM 072410

LM 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW07D — 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-07

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-0771

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/20/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	~~U~~ UJ CCL
120-82-1	1,2,4-Trichlorobenzene	0.50	~~U~~ UJ CCL
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

1111 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW10 — 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-10

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-1073

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/22/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	7.5 ~~1.7~~	~~J~~ U TBL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.5 ~~0.047~~	~~JB~~ U MBL
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ RICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.5 ~~0.072~~	~~J~~ U BTM
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

LMM 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW10 ~ 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-10

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-1073

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/22/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.14	J
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.5 ~~0.074~~	~~JB~~ U MBL
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.5 ~~0.11~~	~~JB~~ U MBL
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.27	J
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11DW - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-16

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-1671

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/23/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	1.4	
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.5 ~~0.043~~	~~J~~ U EPL
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.9	~~B~~ ~~U MBL~~ RICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.5 ~~0.22~~	~~JB~~ ~~U MBL~~
156-60-5	trans-1,2-Dichloroethene	0.45	J
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	52	~~E~~ exclude, DL
78-93-3	2-butanone	0.5 ~~0.61~~	~~J~~ ~~U EPL~~ RICL
67-66-3	Chloroform	1.4	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.5 ~~0.069~~	~~J~~ ~~U EPL~~
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.31	J
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.5 ~~0.23~~	~~J~~ U EPL
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.5 ~~0.48~~	~~J~~ U EPL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

2 Corrections
LM 072410

LM
072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11DW — 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-16

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-1671

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/23/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.5 ~~0.12~~	~~J~~ U PML
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

MM 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11DWDL 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-16RE1 UM

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-16D71 072310

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/24/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 2.1

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.15	DJ exclude, DL
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl Chloride	1.3	D
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
75-15-0	Carbon disulfide	0.094	DJ
76-13-1	1,1,2-trichloro-1,2,2-triflu	1.0	U
67-64-1	Acetone	4.5	DJB
79-20-9	Methyl acetate	1.0	U
75-09-2	Methylene Chloride	0.27	DJB
156-60-5	trans-1,2-Dichloroethene	0.47	DJ
1634-04-4	Methyl-tert-butyl ether	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	51	D
78-93-3	2-butanone	5.2	U exclude, DL
67-66-3	Chloroform	1.4	D
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	0.087	DJ
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	0.31	DJ
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	0.24	DJ
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.2	U
108-88-3	Toluene	0.56	DJ
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-hexanone	5.2	U
124-48-1	Dibromochloromethane	1.0	U

FORM I VOA

UM 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11DWDL 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-16RE1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-16D71

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/24/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 2.1

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
100-41-4	Ethylbenzene	0.16	DJ
108-38-3	m,p-Xylene	2.1	U
95-47-6	o-Xylene	0.063	DJ
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
98-82-8	Isopropyl Benzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	0.11	DJ
106-46-7	1,4-Dichlorobenzene	0.12	DJ
95-50-1	1,2-Dichlorobenzene	0.063	DJ
96-12-8	1,2-Dibromo-3-Chloropropane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U
1330-20-7	Xylene (total)	1.0	U
110-82-7	Cyclohexane	1.0	U
108-87-2	Methylcyclohexane	1.0	U

include, DI

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11IW 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-15 LM 072410

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-1571

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/23/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	11	
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.28	J
75-15-0	Carbon disulfide	0.5 ~~0.026~~	~~J~~ U EPBL
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5 ~~1.6~~	~~JB~~ ~~U MBL~~ R ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.5 ~~0.35~~	~~JB~~ U MBL
156-60-5	trans-1,2-Dichloroethene	9.3	
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	350	E exceeds DL
78-93-3	2-butanone	2.5	~~U~~ R ICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.5 ~~0.097~~	~~J~~ U EPBL
107-06-2	1,2-Dichloroethane	0.12	J
79-01-6	Trichloroethene	6.5	
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.5 ~~0.072~~	~~J~~ U EPBL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

1 correction
LM 072410

LM 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11IW 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-15

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-1571

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/23/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11IWDL 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-15RE1 UA 072410

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-15D71

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/24/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 20.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	10	U exclude, DL
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	13	D
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon disulfide	10	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	10	U
67-64-1	Acetone	50	U
79-20-9	Methyl acetate	10	U
75-09-2	Methylene Chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	D
1634-04-4	Methyl-tert-butyl ether	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	510	D
78-93-3	2-butanone	50	U exclude, DL
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	6.0	DJ
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	0.61	DJ
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-hexanone	50	U
124-48-1	Dibromochloromethane	10	U

FORM I VOA

UA 72410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11IWDL-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-15RE1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-15D71

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/24/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 20.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
108-38-3	m,p-Xylene	20	U
95-47-6	o-Xylene	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropyl Benzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-Chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
1330-20-7	Xylene (total)	10	U
110-82-7	Cyclohexane	10	U
108-87-2	Methylcyclohexane	10	U

Exclude DL

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15BCH 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-20

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-2071

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/24/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	3.6	~~B~~ ~~UMCL~~ R ~~ICH~~ JCL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ R ~~ICH~~ JCL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.049 ~~J~~	U EBL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

3 correction
MM 072410

MM 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15BCH 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-20

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-2071

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/24/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-TB0
1-031010

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-13

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-1373

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/22/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	1.7	J
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.063	JB
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ P-TCHICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

1 correction
MM 072410

MM 072410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-TB0
1-031010

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-13

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-1373

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/22/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.26	J
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-TB0
1-031110

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-12 WM

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-1273 07240

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/22/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	1.6	J
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.052	JB
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ PICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

1 correction
WM 072510

WM 07240

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-TB0
1-031110

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-12

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-1273

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. _____ Date Analyzed: 03/22/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.25	J
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04MS — CA

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 0032408-MS1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 0032408-MS171

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/24/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	2.1	
74-87-3	Chloromethane	3.9	
75-01-4	Vinyl Chloride	4.6	
74-83-9	Bromomethane	4.8	
75-00-3	Chloroethane	4.0	
75-69-4	Trichlorofluoromethane	4.4	
75-35-4	1,1-Dichloroethene	4.8	
75-15-0	Carbon disulfide	5.0	
76-13-1	1,1,2-trichloro-1,2,2-triflu	5.3	
67-64-1	Acetone	31	B
79-20-9	Methyl acetate	5.7	
75-09-2	Methylene Chloride	4.8	B
156-60-5	trans-1,2-Dichloroethene	5.3	
1634-04-4	Methyl-tert-butyl ether	4.8	
75-34-3	1,1-Dichloroethane	5.0	
156-59-2	cis-1,2-Dichloroethene	7.7	
78-93-3	2-butanone	31	
67-66-3	Chloroform	6.1	
71-55-6	1,1,1-Trichloroethane	4.8	
56-23-5	Carbon Tetrachloride	4.5	
71-43-2	Benzene	4.9	
107-06-2	1,2-Dichloroethane	5.3	
79-01-6	Trichloroethene	4.4	
78-87-5	1,2-Dichloropropane	5.3	
75-27-4	Bromodichloromethane	4.9	
10061-01-5	cis-1,3-Dichloropropene	4.6	
108-10-1	4-Methyl-2-pentanone	31	
108-88-3	Toluene	13	
10061-02-6	trans-1,3-Dichloropropene	4.9	
79-00-5	1,1,2-Trichloroethane	5.0	
127-18-4	Tetrachloroethene	4.6	
591-78-6	2-hexanone	32	
124-48-1	Dibromochloromethane	4.3	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04MS 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 0032408-MS1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 0032408-MS171

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/24/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	4.5	
108-90-7	Chlorobenzene	4.5	
100-41-4	Ethylbenzene	5.0	
108-38-3	m,p-Xylene	9.6	
95-47-6	o-Xylene	5.0	
100-42-5	Styrene	5.0	
75-25-2	Bromoform	4.5	
98-82-8	Isopropyl Benzene	4.9	
79-34-5	1,1,2,2-Tetrachloroethane	4.8	
541-73-1	1,3-Dichlorobenzene	4.1	
106-46-7	1,4-Dichlorobenzene	4.1	
95-50-1	1,2-Dichlorobenzene	4.3	
96-12-8	1,2-Dibromo-3-Chloropropane	4.7	
120-82-1	1,2,4-Trichlorobenzene	3.9	
1330-20-7	Xylene (total)	15	
110-82-7	Cyclohexane	4.9	
108-87-2	Methylcyclohexane	4.4	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04MSD 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 0032408-MSD1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 0032408-MSD171

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/24/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	2.1	
74-87-3	Chloromethane	3.9	
75-01-4	Vinyl Chloride	4.7	
74-83-9	Bromomethane	4.6	
75-00-3	Chloroethane	3.9	
75-69-4	Trichlorofluoromethane	4.4	
75-35-4	1,1-Dichloroethene	4.7	
75-15-0	Carbon disulfide	5.1	
76-13-1	1,1,2-trichloro-1,2,2-triflu	5.3	
67-64-1	Acetone	32	B
79-20-9	Methyl acetate	5.7	
75-09-2	Methylene Chloride	4.8	B
156-60-5	trans-1,2-Dichloroethene	5.5	
1634-04-4	Methyl-tert-butyl ether	4.7	
75-34-3	1,1-Dichloroethane	5.0	
156-59-2	cis-1,2-Dichloroethene	7.8	
78-93-3	2-butanone	31	
67-66-3	Chloroform	6.2	
71-55-6	1,1,1-Trichloroethane	4.9	
56-23-5	Carbon Tetrachloride	4.5	
71-43-2	Benzene	4.9	
107-06-2	1,2-Dichloroethane	5.3	
79-01-6	Trichloroethene	4.4	
78-87-5	1,2-Dichloropropane	5.3	
75-27-4	Bromodichloromethane	4.8	
10061-01-5	cis-1,3-Dichloropropene	4.8	
108-10-1	4-Methyl-2-pentanone	32	
108-88-3	Toluene	14	
10061-02-6	trans-1,3-Dichloropropene	4.9	
79-00-5	1,1,2-Trichloroethane	5.1	
127-18-4	Tetrachloroethene	4.8	
591-78-6	2-hexanone	33	
124-48-1	Dibromochloromethane	4.5	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04MSD 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 0032408-MSD1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 0032408-MSD171

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/24/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	4.7	
108-90-7	Chlorobenzene	4.7	
100-41-4	Ethylbenzene	5.2	
108-38-3	m,p-Xylene	10	
95-47-6	o-Xylene	5.2	
100-42-5	Styrene	5.2	
75-25-2	Bromoform	4.7	
98-82-8	Isopropyl Benzene	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	4.9	
541-73-1	1,3-Dichlorobenzene	4.2	
106-46-7	1,4-Dichlorobenzene	4.4	
95-50-1	1,2-Dichlorobenzene	4.4	
96-12-8	1,2-Dibromo-3-Chloropropane	4.9	
120-82-1	1,2,4-Trichlorobenzene	4.1	
1330-20-7	Xylene (total)	16	
110-82-7	Cyclohexane	5.0	
108-87-2	Methylcyclohexane	4.6	

FORM I VOA

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030910-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-08A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRM EB01-030910-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-08A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-030910-GW

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-08C60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRM EB01-031310-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-21

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1003102-21JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.3	U
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.3	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.3	U
98-86-2	Acetophenone	5.3	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.3	U
67-72-1	Hexachloroethane	5.3	U
98-95-3	Nitrobenzene	5.3	U
78-59-1	Isophorone	5.3	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.3	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.3	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.3	U
105-60-2	Caprolactam	5.3	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.3	U
77-47-4	Hexachlorocyclopentadiene	5.3	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.3	U
91-58-7	2-Chloronaphthalene	5.3	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.3	U
606-20-2	2,6-Dinitrotoluene	5.3	U
208-96-8	Acenaphthylene	5.3	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.3	U

MM 07/24/10

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031310-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-21

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1003102-21JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)____ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.3	U
132-64-9	Dibenzofuran	5.3	U
84-66-2	Diethylphthalate	5.3	U
7005-72-3	4-Chlorophenyl-phenylether	5.3	U
86-73-7	Fluorene	5.3	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	~~U~~ UJ CCH
86-30-6	N-Nitrosodiphenylamine (1)	5.3	U
101-55-3	4-Bromophenyl-phenylether	5.3	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.3	U
1912-24-9	Atrazine	5.3	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.3	U
120-12-7	Anthracene	5.3	U
86-74-8	Carbazole	5.3	U
84-74-2	Di-n-butylphthalate	5.3	U
206-44-0	Fluoranthene	5.3	U
129-00-0	Pyrene	5.3	U
85-68-7	Butylbenzylphthalate	5.3	U
91-94-1	3,3'-Dichlorobenzidine	5.3	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.3	U
56-55-3	Benzo(a)anthracene	5.3	U
218-01-9	Chrysene	5.3	U
117-84-0	Di-n-octylphthalate	5.3	U
205-99-2	Benzo(b)fluoranthene	5.3	U
207-08-9	Benzo(k)fluoranthene	5.3	U
50-32-8	Benzo(a)pyrene	5.3	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.3	U
53-70-3	Dibenzo(a,h)anthracene	5.3	U
191-24-2	Benzo(g,h,i)perylene	5.3	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031310-GW

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-21

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1003102-21A60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/27/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.054	J
91-57-6	2-Methylnaphthalene	0.017	J
208-96-8	Acenaphthylene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	U
206-44-0	Fluoranthene	0.21	U
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U
53-70-3	Dibenzo(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69 EB01-031310-SS

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-22

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-22JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IH09 | EB01-031310-SS

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-22

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-22JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	~~U~~ UJ CLH
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CLH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031310-SS

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-22

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-22A60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/27/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.065	J
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031410-SD

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-19

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003102-19C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.1	~~U~~ UJ CCL
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.1	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.1	U
98-86-2	Acetophenone	5.1	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.1	U
67-72-1	Hexachloroethane	5.1	U
98-95-3	Nitrobenzene	5.1	U
78-59-1	Isophorone	5.1	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.1	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.1	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.1	U
105-60-2	Caprolactam	5.1	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.1	U
77-47-4	Hexachlorocyclopentadiene	5.1	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.1	U
91-58-7	2-Chloronaphthalene	5.1	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.1	U
606-20-2	2,6-Dinitrotoluene	5.1	U
208-96-8	Acenaphthylene	5.1	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.1	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IF69 EB01-031410-SD

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-19

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003102-19C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.1	U
132-64-9	Dibenzofuran	5.1	U
84-66-2	Diethylphthalate	5.1	U
7005-72-3	4-Chlorophenyl-phenylether	5.1	U
86-73-7	Fluorene	5.1	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.1	U
101-55-3	4-Bromophenyl-phenylether	5.1	U
118-74-1	Hexachlorobenzene	5.1	U
1912-24-9	Atrazine	5.1	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.1	U
120-12-7	Anthracene	5.1	U
86-74-8	Carbazole	5.1	U
84-74-2	Di-n-butylphthalate	5.1	U
206-44-0	Fluoranthene	5.1	U
129-00-0	Pyrene	5.1	U
85-68-7	Butylbenzylphthalate	5.1	U
91-94-1	3,3'-Dichlorobenzidine	5.1	~~U~~ UJ CCL
117-81-7	bis(2-ethylhexyl)Phthalate	5.1	U
56-55-3	Benzo(a)anthracene	5.1	U
218-01-9	Chrysene	5.1	U
117-84-0	Di-n-octylphthalate	5.1	U
205-99-2	Benzo(b)fluoranthene	5.1	U
207-08-9	Benzo(k)fluoranthene	5.1	U
50-32-8	Benzo(a)pyrene	5.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.1	U
53-70-3	Dibenzo(a,h)anthracene	5.1	U
191-24-2	Benzo(g,h,i)perylene	5.1	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031410-SD

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-19

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003102-19A60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/27/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.062	J
91-57-6	2-Methylnaphthalene	0.21	U
208-96-8	Acenaphthylene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	U
206-44-0	Fluoranthene	0.21	U
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U
53-70-3	Dibenzo(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IH09 | FB01-031010

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-11 UM 072410

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-11A76

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

UM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FB01-031010

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-11

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-11A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FB01-031010

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-11

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-11C60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.063	J
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW01 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-01C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW01 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-01 LLL 072410

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-01C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	~~U~~ UJ CCL
53-70-3	Dibenzo(a,h)anthracene	5.0	~~U~~
191-24-2	Benzo(g,h,i)perylene	5.0	~~U~~

(1) - Cannot be separated from Diphenylamine

LLL 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW01 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-01C60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW01D - 1DA

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-02 LM 072410

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-02C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

LM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW01D 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-02 LMA 072410

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-02C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	~~U~~ UJ CCL
53-70-3	Dibenzo(a,h)anthracene	5.0	~~U~~
191-24-2	Benzo(g,h,i)perylene	5.0	~~U~~

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

LMA 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW01D

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-02

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-02C60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.037	J
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.013	J
129-00-0	Pyrene	0.018	J
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02BCH 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-06 IM 072410

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003102-06C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.1	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.1	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.1	U
98-86-2	Acetophenone	5.1	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.1	U
67-72-1	Hexachloroethane	5.1	U
98-95-3	Nitrobenzene	5.1	U
78-59-1	Isophorone	5.1	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.1	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.1	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.1	U
105-60-2	Caprolactam	5.1	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.1	U
77-47-4	Hexachlorocyclopentadiene	5.1	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.1	U
91-58-7	2-Chloronaphthalene	5.1	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.1	U
606-20-2	2,6-Dinitrotoluene	5.1	U
208-96-8	Acenaphthylene	5.1	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.1	U

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02BCH +10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-06

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003102-06C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.1	U
132-64-9	Dibenzofuran	5.1	U
84-66-2	Diethylphthalate	5.1	U
7005-72-3	4-Chlorophenyl-phenylether	5.1	U
86-73-7	Fluorene	5.1	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.1	U
101-55-3	4-Bromophenyl-phenylether	5.1	U
118-74-1	Hexachlorobenzene	5.1	U
1912-24-9	Atrazine	5.1	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.1	U
120-12-7	Anthracene	5.1	U
86-74-8	Carbazole	5.1	U
84-74-2	Di-n-butylphthalate	5.1	U
206-44-0	Fluoranthene	5.1	U
129-00-0	Pyrene	5.1	U
85-68-7	Butylbenzylphthalate	5.1	U
91-94-1	3,3'-Dichlorobenzidine	5.1	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.1	U
56-55-3	Benzo(a)anthracene	5.1	U
218-01-9	Chrysene	5.1	U
117-84-0	Di-n-octylphthalate	5.1	U
205-99-2	Benzo(b)fluoranthene	5.1	U
207-08-9	Benzo(k)fluoranthene	5.1	U
50-32-8	Benzo(a)pyrene	5.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.1	~~U~~ UJ
53-70-3	Dibenzo(a,h)anthracene	5.1	~~U~~
191-24-2	Benzo(g,h,i)perylene	5.1	~~U~~

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02BCH

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-06

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003102-06C60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.21	U
91-57-6	2-Methylnaphthalene	0.21	U
208-96-8	Acenaphthylene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	U
206-44-0	Fluoranthene	0.21	U
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U
53-70-3	Dibenzo(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03BCH +10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-05C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM I SV 8270C

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03BCH +10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102 LMM 072410

Matrix: (soil/water) WATER Lab Sample ID: 1003102-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-05C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	~~U~~ UJ cu
53-70-3	Dibenzo(a,h)anthracene	5.0	~~U~~
191-24-2	Benzo(g,h,i)perylene	5.0	~~U~~ ↓

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

LMM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03BCH +10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-05C60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	J
85-01-8	Phenanthrene	0.039	J
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.011	J
129-00-0	Pyrene	0.014	J
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-14

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-14C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	~~U~~ UJ CCL
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM I SV 8270C

MM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04 — 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-14 WM 072410

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-14C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	~~U~~ UJ CL
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

WM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-14

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-14A60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/27/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.019	J
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05 -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102 1111 072410

Matrix: (soil/water) WATER Lab Sample ID: 1003102-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-03C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM I SV 8270C

VM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05 -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-03C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	~~U~~ UJ
53-70-3	Dibenzo(a,h)anthracene	5.0	~~U~~
191-24-2	Benzo(g,h,i)perylene	5.0	~~U~~

(1) - Cannot be separated from Diphenylamine

UM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-03C60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

LMM 072410

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

LMM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05D -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-04C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05D -1DA

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-04C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	~~U~~ UJ CCL
53-70-3	Dibenzo(a,h)anthracene	5.0	~~U~~
191-24-2	Benzo(g,h,i)perylene	5.0	~~U~~

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05D -10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102 WM 072410

Matrix: (soil/water) WATER Lab Sample ID: 1003102-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-04C60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

WM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05DW 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-17

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-17C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	~~U~~ UJ CCL
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05DW 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-17

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-17C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	~~U~~ UJ CCL
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05DW 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-17 WM 072410

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-17A60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/27/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

WM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05IW 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-18

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-18JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05IW 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-18

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-18JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	~~U~~ UJ CCH
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05IW 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-18

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-18A60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)____ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/27/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW07 -1DA

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

LM 072410

Matrix: (soil/water) WATER Lab Sample ID: 1003102-09

Sample wt/vol: 900 (g/mL) ML Lab File ID: 1003102-09A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.6	U
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.6	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.6	U
98-86-2	Acetophenone	5.6	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.6	U
67-72-1	Hexachloroethane	5.6	U
98-95-3	Nitrobenzene	5.6	U
78-59-1	Isophorone	5.6	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.6	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.6	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.6	U
105-60-2	Caprolactam	5.6	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.6	U
77-47-4	Hexachlorocyclopentadiene	5.6	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.6	U
91-58-7	2-Chloronaphthalene	5.6	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.6	U
606-20-2	2,6-Dinitrotoluene	5.6	U
208-96-8	Acenaphthylene	5.6	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.6	U

LM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW07 -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-09

Sample wt/vol: 900 (g/mL) ML Lab File ID: 1003102-09A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.6	U
132-64-9	Dibenzofuran	5.6	U
84-66-2	Diethylphthalate	5.6	U
7005-72-3	4-Chlorophenyl-phenylether	5.6	U
86-73-7	Fluorene	5.6	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.6	U
101-55-3	4-Bromophenyl-phenylether	5.6	U
118-74-1	Hexachlorobenzene	5.6	U
1912-24-9	Atrazine	5.6	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.6	U
120-12-7	Anthracene	5.6	U
86-74-8	Carbazole	5.6	U
84-74-2	Di-n-butylphthalate	5.6	U
206-44-0	Fluoranthene	5.6	U
129-00-0	Pyrene	5.6	U
85-68-7	Butylbenzylphthalate	5.6	U
91-94-1	3,3'-Dichlorobenzidine	5.6	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.6	U
56-55-3	Benzo(a)anthracene	5.6	U
218-01-9	Chrysene	5.6	U
117-84-0	Di-n-octylphthalate	5.6	U
205-99-2	Benzo(b)fluoranthene	5.6	U
207-08-9	Benzo(k)fluoranthene	5.6	U
50-32-8	Benzo(a)pyrene	5.6	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.6	U
53-70-3	Dibenzo(a,h)anthracene	5.6	U
191-24-2	Benzo(g,h,i)perylene	5.6	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW07 -1CA

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-09

Sample wt/vol: 900 (g/mL) ML Lab File ID: 1003102-09C60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.22	U
91-57-6	2-Methylnaphthalene	0.22	U
208-96-8	Acenaphthylene	0.22	U
83-32-9	Acenaphthene	0.22	U
86-73-7	Fluorene	0.22	U
85-01-8	Phenanthrene	0.22	U
120-12-7	Anthracene	0.22	U
206-44-0	Fluoranthene	0.012	J
129-00-0	Pyrene	0.016	J
56-55-3	Benzo(a)anthracene	0.22	U
218-01-9	Chrysene	0.22	U
205-99-2	Benzo(b)fluoranthene	0.22	U
207-08-9	Benzo(k)fluoranthene	0.22	U
50-32-8	Benzo(a)pyrene	0.22	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.22	U
53-70-3	Dibenzo(a,h)anthracene	0.22	U
191-24-2	Benzo(g,h,i)perylene	0.22	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW07D 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-07

Sample wt/vol: 900 (g/mL) ML Lab File ID: 1003102-07A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.6	U
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.6	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.6	U
98-86-2	Acetophenone	5.6	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.6	U
67-72-1	Hexachloroethane	5.6	U
98-95-3	Nitrobenzene	5.6	U
78-59-1	Isophorone	5.6	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.6	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.6	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.6	U
105-60-2	Caprolactam	5.6	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.6	U
77-47-4	Hexachlorocyclopentadiene	5.6	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.6	U
91-58-7	2-Chloronaphthalene	5.6	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.6	U
606-20-2	2,6-Dinitrotoluene	5.6	U
208-96-8	Acenaphthylene	5.6	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.6	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW07D 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-07

Sample wt/vol: 900 (g/mL) ML Lab File ID: 1003102-07A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.6	U
132-64-9	Dibenzofuran	5.6	U
84-66-2	Diethylphthalate	5.6	U
7005-72-3	4-Chlorophenyl-phenylether	5.6	U
86-73-7	Fluorene	5.6	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.6	U
101-55-3	4-Bromophenyl-phenylether	5.6	U
118-74-1	Hexachlorobenzene	5.6	U
1912-24-9	Atrazine	5.6	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.6	U
120-12-7	Anthracene	5.6	U
86-74-8	Carbazole	5.6	U
84-74-2	Di-n-butylphthalate	5.6	U
206-44-0	Fluoranthene	5.6	U
129-00-0	Pyrene	5.6	U
85-68-7	Butylbenzylphthalate	5.6	U
91-94-1	3,3'-Dichlorobenzidine	5.6	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.6	U
56-55-3	Benzo(a)anthracene	5.6	U
218-01-9	Chrysene	5.6	U
117-84-0	Di-n-octylphthalate	5.6	U
205-99-2	Benzo(b)fluoranthene	5.6	U
207-08-9	Benzo(k)fluoranthene	5.6	U
50-32-8	Benzo(a)pyrene	5.6	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.6	U
53-70-3	Dibenzo(a,h)anthracene	5.6	U
191-24-2	Benzo(g,h,i)perylene	5.6	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW07D -10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-07

Sample wt/vol: 900 (g/mL) ML Lab File ID: 1003102-07C60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.22	U
91-57-6	2-Methylnaphthalene	0.22	U
208-96-8	Acenaphthylene	0.22	U
83-32-9	Acenaphthene	0.22	U
86-73-7	Fluorene	0.22	U
85-01-8	Phenanthrene	0.22	U
120-12-7	Anthracene	0.22	U
206-44-0	Fluoranthene	0.22	U
129-00-0	Pyrene	0.22	U
56-55-3	Benzo(a)anthracene	0.22	U
218-01-9	Chrysene	0.22	U
205-99-2	Benzo(b)fluoranthene	0.22	U
207-08-9	Benzo(k)fluoranthene	0.22	U
50-32-8	Benzo(a)pyrene	0.22	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.22	U
53-70-3	Dibenzo(a,h)anthracene	0.22	U
191-24-2	Benzo(g,h,i)perylene	0.22	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW10-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-10

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003102-10JC70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.4	U
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.4	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.4	U
98-86-2	Acetophenone	5.4	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.4	U
67-72-1	Hexachloroethane	5.4	U
98-95-3	Nitrobenzene	5.4	U
78-59-1	Isophorone	5.4	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.4	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.4	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.4	U
105-60-2	Caprolactam	5.4	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.4	U
77-47-4	Hexachlorocyclopentadiene	5.4	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.4	U
91-58-7	2-Chloronaphthalene	5.4	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.4	U
606-20-2	2,6-Dinitrotoluene	5.4	U
208-96-8	Acenaphthylene	5.4	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.4	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW10-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102 LM 072410

Matrix: (soil/water) WATER Lab Sample ID: 1003102-10

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003102-10JC70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.4	U
132-64-9	Dibenzofuran	5.4	U
84-66-2	Diethylphthalate	5.4	U
7005-72-3	4-Chlorophenyl-phenylether	5.4	U
86-73-7	Fluorene	5.4	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.4	U
101-55-3	4-Bromophenyl-phenylether	5.4	U
118-74-1	Hexachlorobenzene	5.4	U
1912-24-9	Atrazine	5.4	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.4	U
120-12-7	Anthracene	5.4	U
86-74-8	Carbazole	5.4	U
84-74-2	Di-n-butylphthalate	5.4	U
206-44-0	Fluoranthene	5.4	U
129-00-0	Pyrene	5.4	U
85-68-7	Butylbenzylphthalate	5.4	U
91-94-1	3,3'-Dichlorobenzidine	5.4	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.4	U
56-55-3	Benzo(a)anthracene	5.4	U
218-01-9	Chrysene	5.4	U
117-84-0	Di-n-octylphthalate	5.4	U
205-99-2	Benzo(b)fluoranthene	5.4	U
207-08-9	Benzo(k)fluoranthene	5.4	U
50-32-8	Benzo(a)pyrene	5.4	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.4	~~U~~ UJ CCL
53-70-3	Dibenzo(a,h)anthracene	5.4	U
191-24-2	Benzo(g,h,i)perylene	5.4	~~U~~ UJ CCL

(1) - Cannot be separated from Diphenylamine

LM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW10-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

LMM 072410

Matrix: (soil/water) WATER Lab Sample ID: 1003102-10

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003102-10C60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.22	U
91-57-6	2-Methylnaphthalene	0.22	U
208-96-8	Acenaphthylene	0.22	U
83-32-9	Acenaphthene	0.22	U
86-73-7	Fluorene	0.22	U
85-01-8	Phenanthrene	0.22	U
120-12-7	Anthracene	0.22	U
206-44-0	Fluoranthene	0.011	J
129-00-0	Pyrene	0.015	J
56-55-3	Benzo(a)anthracene	0.22	U
218-01-9	Chrysene	0.22	U
205-99-2	Benzo(b)fluoranthene	0.22	U
207-08-9	Benzo(k)fluoranthene	0.22	U
50-32-8	Benzo(a)pyrene	0.22	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.22	U
53-70-3	Dibenzo(a,h)anthracene	0.22	U
191-24-2	Benzo(g,h,i)perylene	0.22	U

LMM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11DW-1DA

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-16

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-16JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11DW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-16

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-16JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	~~U~~ UJ CCH
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11DW ✓ OA

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

LM 072410

Matrix: (soil/water) WATER Lab Sample ID: 1003102-16

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-16A60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/27/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

LM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11IW-1 DA

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

LM 072410

Matrix: (soil/water) WATER Lab Sample ID: 1003102-15

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-15J2C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

LM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11IW 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-15

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-15J2C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	~~U~~ UJ CCH
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

WM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11IW 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102 VM 072410

Matrix: (soil/water) WATER Lab Sample ID: 1003102-15

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-15A60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/27/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20 ~~0.018~~	~~J~~ U EPL
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

VM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15BCH 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-20

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-20JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

LM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15BCH 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-20

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-20JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	~~U~~ UJ CCH
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

LM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15BCH 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-20

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-20A60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/27/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04MS 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 0031807-MS1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0031807-MS1C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	34	
108-95-2	Phenol	18	
111-44-4	Bis(2-chloroethyl)ether	35	
95-57-8	2-Chlorophenol	37	
95-48-7	2-Methylphenol	37	
108-60-1	2,2'-oxybis(1-Chloropropane)	31	
98-86-2	Acetophenone	38	
106-44-5	4-Methylphenol	34	
621-64-7	N-Nitroso-di-N-propylamine	38	
67-72-1	Hexachloroethane	31	
98-95-3	Nitrobenzene	33	
78-59-1	Isophorone	35	
88-75-5	2-Nitrophenol	37	
105-67-9	2,4-Dimethylphenol	41	
111-91-1	Bis(2-chloroethoxy)methane	37	
120-83-2	2,4-Dichlorophenol	37	
91-20-3	Naphthalene	33	
106-47-8	4-Chloroaniline	44	
87-68-3	Hexachlorobutadiene	35	
105-60-2	Caprolactam	21	
59-50-7	4-Chloro-3-methylphenol	40	
91-57-6	2-Methylnaphthalene	33	
77-47-4	Hexachlorocyclopentadiene	29	
88-06-2	2,4,6-Trichlorophenol	37	
95-95-4	2,4,5-Trichlorophenol	40	
92-52-4	1,1'-Biphenyl	33	
91-58-7	2-Chloronaphthalene	34	
88-74-4	2-Nitroaniline	38	
131-11-3	Dimethylphthalate	36	
606-20-2	2,6-Dinitrotoluene	40	
208-96-8	Acenaphthylene	37	
99-09-2	3-Nitroaniline	39	
83-32-9	Acenaphthene	36	

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04MS 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 0031807-MS1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0031807-MS1C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	43	
100-02-7	4-Nitrophenol	14	
121-14-2	2,4-Dinitrotoluene	40	
132-64-9	Dibenzofuran	38	
84-66-2	Diethylphthalate	38	
7005-72-3	4-Chlorophenyl-phenylether	37	
86-73-7	Fluorene	39	
100-01-6	4-Nitroaniline	40	
534-52-1	4,6-Dinitro-2-methylphenol	43	
86-30-6	N-Nitrosodiphenylamine (1)	47	
101-55-3	4-Bromophenyl-phenylether	37	
118-74-1	Hexachlorobenzene	39	
1912-24-9	Atrazine	37	
87-86-5	Pentachlorophenol	41	
85-01-8	Phenanthrene	38	
120-12-7	Anthracene	38	
86-74-8	Carbazole	39	
84-74-2	Di-n-butylphthalate	39	
206-44-0	Fluoranthene	42	
129-00-0	Pyrene	38	
85-68-7	Butylbenzylphthalate	40	
91-94-1	3,3'-Dichlorobenzidine	51	
117-81-7	bis(2-ethylhexyl)Phthalate	39	
56-55-3	Benzo(a)anthracene	40	
218-01-9	Chrysene	39	
117-84-0	Di-n-octylphthalate	38	
205-99-2	Benzo(b)fluoranthene	38	
207-08-9	Benzo(k)fluoranthene	35	
50-32-8	Benzo(a)pyrene	36	
193-39-5	Indeno(1,2,3-cd)pyrene	38	
53-70-3	Dibenzo(a,h)anthracene	39	
191-24-2	Benzo(g,h,i)perylene	37	

(1) - Cannot be separated from Diphenylamine

VM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04MSD

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 0031807-MSD1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0031807-MSD1C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	29	
108-95-2	Phenol	17	
111-44-4	Bis(2-chloroethyl)ether	35	
95-57-8	2-Chlorophenol	36	
95-48-7	2-Methylphenol	38	
108-60-1	2,2'-oxybis(1-Chloropropane)	31	
98-86-2	Acetophenone	39	
106-44-5	4-Methylphenol	35	
621-64-7	N-Nitroso-di-N-propylamine	41	
67-72-1	Hexachloroethane	29	
98-95-3	Nitrobenzene	33	
78-59-1	Isophorone	40	
88-75-5	2-Nitrophenol	39	
105-67-9	2,4-Dimethylphenol	44	
111-91-1	Bis(2-chloroethoxy)methane	38	
120-83-2	2,4-Dichlorophenol	39	
91-20-3	Naphthalene	31	
106-47-8	4-Chloroaniline	47	
87-68-3	Hexachlorobutadiene	33	
105-60-2	Caprolactam	10	
59-50-7	4-Chloro-3-methylphenol	43	
91-57-6	2-Methylnaphthalene	33	
77-47-4	Hexachlorocyclopentadiene	28	
88-06-2	2,4,6-Trichlorophenol	40	
95-95-4	2,4,5-Trichlorophenol	45	
92-52-4	1,1'-Biphenyl	31	
91-58-7	2-Chloronaphthalene	32	
88-74-4	2-Nitroaniline	43	
131-11-3	Dimethylphthalate	39	
606-20-2	2,6-Dinitrotoluene	43	
208-96-8	Acenaphthylene	37	
99-09-2	3-Nitroaniline	43	
83-32-9	Acenaphthene	36	

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04MSD 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102 UM 072410

Matrix: (soil/water) WATER Lab Sample ID: 0031807-MSD1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0031807-MSD1C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	50	
100-02-7	4-Nitrophenol	16	
121-14-2	2,4-Dinitrotoluene	44	
132-64-9	Dibenzofuran	38	
84-66-2	Diethylphthalate	40	
7005-72-3	4-Chlorophenyl-phenylether	39	
86-73-7	Fluorene	41	
100-01-6	4-Nitroaniline	49	
534-52-1	4,6-Dinitro-2-methylphenol	45	
86-30-6	N-Nitrosodiphenylamine (1)	48	
101-55-3	4-Bromophenyl-phenylether	38	
118-74-1	Hexachlorobenzene	38	
1912-24-9	Atrazine	39	
87-86-5	Pentachlorophenol	46	
85-01-8	Phenanthrene	38	
120-12-7	Anthracene	38	
86-74-8	Carbazole	40	
84-74-2	Di-n-butylphthalate	39	
206-44-0	Fluoranthene	40	
129-00-0	Pyrene	39	
85-68-7	Butylbenzylphthalate	42	
91-94-1	3,3'-Dichlorobenzidine	52	
117-81-7	bis(2-ethylhexyl)Phthalate	39	
56-55-3	Benzo(a)anthracene	41	
218-01-9	Chrysene	37	
117-84-0	Di-n-octylphthalate	35	
205-99-2	Benzo(b)fluoranthene	44	
207-08-9	Benzo(k)fluoranthene	33	
50-32-8	Benzo(a)pyrene	38	
193-39-5	Indeno(1,2,3-cd)pyrene	43	
53-70-3	Dibenzo(a,h)anthracene	39	
191-24-2	Benzo(g,h,i)perylene	41	

(1) - Cannot be separated from Diphenylamine

UM 072410

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1R69 EB01-030910-GW

JAC 72010

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-08

Sample wt/vol: 900.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/15/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/29/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.056	U
319-85-7	beta-BHC	0.056	U
319-84-6	alpha-BHC	0.056	U
319-86-8	delta-BHC	0.056	U
58-89-9	gamma-BHC (Lindane)	0.056	U
72-54-8	4,4'-DDD	0.11	U
72-55-9	4,4'-DDE	0.017	~~JP~~ J 2C
50-29-3	4,4'-DDT	0.11	U
60-57-1	Dieldrin	0.11	U
959-98-8	Endosulfan I	0.056	U
33213-65-9	Endosulfan II	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
72-20-8	Endrin	0.11	U
7421-93-4	Endrin Aldehyde	0.11	U
76-44-8	Heptachlor	0.056	U
1024-57-3	Heptachlor Epoxide	0.056	U
72-43-5	Methoxychlor	0.56	U
8001-35-2	Toxaphene	2.8	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.4	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	0.69	U
12672-29-6	Aroclor-1248	0.69	U
11097-69-1	Aroclor-1254	0.69	U
11096-82-5	Aroclor-1260	1.0	U
53494-70-5	Endrin Ketone	0.11	U
5103-74-2	gamma-Chlordane	0.056	U
5103-71-9	alpha-Chlordane	0.056	U

JAC 72710

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RG9 EB01-031310-GW

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-21

Sample wt/vol: 975.0 (g/mL) ML Lab File ID:

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.051	U
319-85-7	beta-BHC	0.051	U
319-84-6	alpha-BHC	0.051	U
319-86-8	delta-BHC	0.051	U
58-89-9	gamma-BHC (Lindane)	0.051	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.051	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.051	U
1024-57-3	Heptachlor Epoxide	0.051	U
72-43-5	Methoxychlor	0.51	U
8001-35-2	Toxaphene	2.6	U
12674-11-2	Aroclor-1016	0.95	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.95	U
53469-21-9	Aroclor-1242	0.64	U
12672-29-6	Aroclor-1248	0.64	U
11097-69-1	Aroclor-1254	0.64	U
11096-82-5	Aroclor-1260	0.95	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.051	U
5103-71-9	alpha-Chlordane	0.051	U

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IRG- EB01-031310-SS

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

JJC 73010

Matrix: (soil/water) WATER Lab Sample ID: 1003102-22

Sample wt/vol: 975.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/28/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.051	U
319-85-7	beta-BHC	0.010	J
319-84-6	alpha-BHC	0.051	U
319-86-8	delta-BHC	0.051	U
58-89-9	gamma-BHC (Lindane)	0.051	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.051	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.051	U
1024-57-3	Heptachlor Epoxide	0.051	U
72-43-5	Methoxychlor	0.51	U
8001-35-2	Toxaphene	2.6	U
12674-11-2	Aroclor-1016	0.95	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.95	U
53469-21-9	Aroclor-1242	0.64	U
12672-29-6	Aroclor-1248	0.64	U
11097-69-1	Aroclor-1254	0.64	U
11096-82-5	Aroclor-1260	0.95	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.051	U
5103-71-9	alpha-Chlordane	0.051	U

JJC 73110

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1R69 - FB01-031010

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

JAC 73010

Matrix: (soil/water) WATER Lab Sample ID: 1003102-11

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/15/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/29/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

JAC 73710

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW01-10A

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/15/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/24/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW01D-10A

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-02

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/15/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/24/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor 1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW02BCH-10A

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

JBC 72010

Matrix: (soil/water) WATER Lab Sample ID: 1003102-06

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/15/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/24/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

JBC 72710

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW03BCH-10A

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/15/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/24/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4' DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor 1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW04-10A

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-14

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.012	~~JP~~ J 2C
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.32	~~JP~~ J 2C
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.033	~~JP~~ J 2C
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW05 -10A

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/15/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/24/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW05D-10A

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

JAC 73010

Matrix: (soil/water) WATER Lab Sample ID: 1003102-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/15/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/24/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

JAC 72710

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW05DW-10A

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-17

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW05IW-10A

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-18

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4' DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor 1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW07-10A

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

JAC 73010

Matrix: (soil/water) WATER Lab Sample ID: 1003102-09

Sample wt/vol: 900.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/15/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/29/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.056	U
319-85-7	beta-BHC	0.056	U
319-84-6	alpha-BHC	0.056	U
319-86-8	delta-BHC	0.056	U
58-89-9	gamma-BHC (Lindane)	0.056	U
72-54-8	4,4'-DDD	0.11	U
72-55-9	4,4'-DDE	0.11	U
50-29-3	4,4'-DDT	0.11	U
60-57-1	Dieldrin	0.11	U
959-98-8	Endosulfan I	0.056	U
33213-65-9	Endosulfan II	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
72-20-8	Endrin	0.11	U
7421-93-4	Endrin Aldehyde	0.11	U
76-44-8	Heptachlor	0.056	U
1024-57-3	Heptachlor Epoxide	0.056	U
72-43-5	Methoxychlor	0.56	U
8001-35-2	Toxaphene	2.8	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.4	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	0.69	U
12672-29-6	Aroclor-1248	0.69	U
11097-69-1	Aroclor-1254	0.69	U
11096-82-5	Aroclor-1260	1.0	U
53494-70-5	Endrin Ketone	0.11	U
5103-74-2	gamma-Chlordane	0.056	U
5103-71-9	alpha-Chlordane	0.056	U

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FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW07D-10A

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-07

Sample wt/vol: 925.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) _____ Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/15/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/24/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.054	U
319-85-7	beta-BHC	0.054	U
319-84-6	alpha-BHC	0.054	U
319-86-8	delta-BHC	0.054	U
58-89-9	gamma-BHC (Lindane)	0.054	U
72-54-8	4,4'-DDD	0.11	U
72-55-9	4,4'-DDE	0.11	U
50-29-3	4,4'-DDT	0.11	U
60-57-1	Dieldrin	0.11	U
959-98-8	Endosulfan I	0.054	U
33213-65-9	Endosulfan II	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
72-20-8	Endrin	0.11	U
7421-93-4	Endrin Aldehyde	0.11	U
76-44-8	Heptachlor	0.054	U
1024-57-3	Heptachlor Epoxide	0.054	U
72-43-5	Methoxychlor	0.54	U
8001-35-2	Toxaphene	2.7	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.4	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	0.68	U
12672-29-6	Aroclor-1248	0.68	U
11097-69-1	Aroclor-1254	0.68	U
11096-82-5	Aroclor-1260	1.0	U
53494-70-5	Endrin Ketone	0.11	U
5103-74-2	gamma-Chlordane	0.054	U
5103-71-9	alpha-Chlordane	0.054	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW10-10A

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-10

Sample wt/vol: 925.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/15/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/29/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.054	U
319-85-7	beta-BHC	0.054	U
319-84-6	alpha-BHC	0.054	U
319-86-8	delta-BHC	0.054	U
58-89-9	gamma-BHC (Lindane)	0.054	U
72-54-8	4,4'-DDD	0.11	U
72-55-9	4,4'-DDE	0.11	U
50-29-3	4,4'-DDT	0.11	U
60-57-1	Dieldrin	0.11	U
959-98-8	Endosulfan I	0.054	U
33213-65-9	Endosulfan II	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
72-20-8	Endrin	0.11	U
7421-93-4	Endrin Aldehyde	0.11	U
76-44-8	Heptachlor	0.054	U
1024-57-3	Heptachlor Epoxide	0.054	U
72-43-5	Methoxychlor	0.54	U
8001-35-2	Toxaphene	2.7	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.4	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	0.68	U
12672-29-6	Aroclor-1248	0.68	U
11097-69-1	Aroclor-1254	0.68	U
11096-82-5	Aroclor-1260	1.0	U
53494-70-5	Endrin Ketone	0.11	U
5103-74-2	gamma-Chlordane	0.054	U
5103-71-9	alpha-Chlordane	0.054	U

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW11DW-10A

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-16

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: ____ decanted: (Y/N) ___ Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW11IW-10A

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-15

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW15BCH-10A

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-20

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW04MS -10A

JC 73010

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 0031808-MS1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.12	
319-85-7	beta-BHC	0.16	
319-84-6	alpha-BHC	0.15	
319-86-8	delta-BHC	0.17	
58-89-9	gamma-BHC (Lindane)	0.14	
72-54-8	4,4'-DDD	0.38	
72-55-9	4,4'-DDE	0.36	
50-29-3	4,4'-DDT	0.34	
60-57-1	Dieldrin	0.40	
959-98-8	Endosulfan I	0.14	
33213-65-9	Endosulfan II	0.36	
1031-07-8	Endosulfan sulfate	0.34	
72-20-8	Endrin	0.38	
7421-93-4	Endrin Aldehyde	0.22	
76-44-8	Heptachlor	0.16	
1024-57-3	Heptachlor Epoxide	0.16	
72-43-5	Methoxychlor	0.53	
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.39	
5103-74-2	gamma-Chlordane	0.14	
5103-71-9	alpha-Chlordane	0.16	

JC 72710

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW04MSD -10A

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 0031808-MSD1

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.13	
319-85-7	beta-BHC	0.15	
319-84-6	alpha-BHC	0.14	
319-86-8	delta-BHC	0.16	
58-89-9	gamma-BHC (Lindane)	0.13	
72-54-8	4,4'-DDD	0.36	
72-55-9	4,4'-DDE	0.34	
50-29-3	4,4'-DDT	0.32	
60-57-1	Dieldrin	0.37	
959-98-8	Endosulfan I	0.13	
33213-65-9	Endosulfan II	0.34	
1031-07-8	Endosulfan sulfate	0.32	
72-20-8	Endrin	0.35	
7421-93-4	Endrin Aldehyde	0.21	
76-44-8	Heptachlor	0.15	
1024-57-3	Heptachlor Epoxide	0.18	
72-43-5	Methoxychlor	0.49	J
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.36	
5103-74-2	gamma-Chlordane	0.13	
5103-71-9	alpha-Chlordane	0.15	

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW04PCBMS-10A

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 0031808-MS2

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.093	~~P~~
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.34	JP
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	6.3	
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	4.4	
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.061	~~P~~
5103-71-9	alpha-Chlordane	0.050	U

FORM 1 PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW04PCBMSD-10A

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 0031808-MSD2

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 1.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.089	P
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.33	JP
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	5.9	
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor 1254	0.63	U
11096-82-5	Aroclor-1260	4.3	
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.070	P
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

SW846 - METALS
-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW01_10A

Lab Name: COMPUCHEM Contract: _____

Lab Code: LIBRTY Case No.: _____ SAS No.: _____ SDG No.: 1003102

JC 13010

Matrix (soil/water): WATER Lab Sample ID: 1003102-01

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	480		~~J~~	P	MDP
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	82.6	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	13500			P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	711			P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~2900~~	~~B~~	U	P	MBL
7439-96-5	Manganese	23.9			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	715	~~B~~	J	P	
7782-49-2	Selenium	5.0	U	~~J~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	27700			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	4.3 20 ~~4.3~~	~~B~~	~~U~~ J	P	FBL

JC 13010

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW01D - 10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

JAC 13010

Matrix (soil/water): WATER Lab Sample ID: 1003102-02

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	466		~~J~~	P	MDP
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	85.5	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	14100			P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	2.3	~~B~~	J	P	
7439-89-6	Iron	687			P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~3000~~	~~B~~	U	P	MBL
7439-96-5	Manganese	24.2			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	722	~~B~~	J	P	
7782-49-2	Selenium	5.0	U	~~N~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	29800			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	8.5 ~~20~~ ~~8.5~~	~~B~~	~~U~~ J	P	~~FBL~~

JAC 13010

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW02BCH-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix (soil/water): WATER Lab Sample ID: 1003102-06

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	54.9	~~B~~	~~J~~ J	P	MDP
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	15.5	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	51100			P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	2.4	~~B~~	J	P	
7439-89-6	Iron	77.7	~~B~~	J	P	
7439-92-1	Lead	2.1	~~B~~	J	P	
7439-95-4	Magnesium	7080			P	
7439-96-5	Manganese	2.8	~~B~~	J	P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	14800			P	
7782-49-2	Selenium	5.0	U	~~J~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	59800			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	0.84	~~B~~	J	P	
7440-66-6	Zinc	2.9 ~~20~~ ~~2.9~~	~~B~~	~~14~~ J	P	~~TBL~~

13010

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW03BCH - 10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix (soil/water): WATER Lab Sample ID: 1003102-05

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	215		~~J~~	P	MDP
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	7.7	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	67800			P	
7440-47-3	Chromium	1.4	~~B~~	J	P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.4			P	
7439-89-6	Iron	707			P	
7439-92-1	Lead	3.0 ~~2.0~~	~~B~~	U	P	EBL
7439-95-4	Magnesium	8160			P	
7439-96-5	Manganese	10.4			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	9520			P	
7782-49-2	Selenium	5.0	U	~~N~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	56300			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	8.9 ~~20~~ ~~8.0~~	~~B~~	U J	P	~~FBL~~

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW04 - 10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix (soil/water): WATER Lab Sample ID: 1003102-14

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1040		J	P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	62.9	~~B~~	J	P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	1490	~~B~~	J	P
7440-47-3	Chromium	1.6	~~B~~	J	P
7440-48-4	Cobalt	2.8	~~B~~	J	P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	7550			P
7439-92-1	Lead	2.5	~~B~~	J	P
7439-95-4	Magnesium	5000 ~~1060~~	~~B~~	U	P
7439-96-5	Manganese	147			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	4.2	~~B~~	J	P
7440-09-7	Potassium	180	~~B~~	J	P
7782-49-2	Selenium	5.0	U	~~N~~	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	6150			P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	3.4	~~B~~	J	P
7440-66-6	Zinc	6840			P

MDP

MBL

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW05 - 10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

JAC 73010

Matrix (soil/water): WATER Lab Sample ID: 1003102-03

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	153	~~B~~	J	P	MDP
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	22.2	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	1820	~~B~~	J	P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	244		J	P	FD
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~922~~	~~B~~	U	P	MBL
7439-96-5	Manganese	38.4			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	113	~~B~~	J	P	
7782-49-2	Selenium	5.0	U	~~N~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	5020			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	3.6	~~B~~	J	P	

JAC 73010

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW05D -10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix (soil/water): WATER Lab Sample ID: 1003102-04

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	136	~~B~~	~~J~~ J	P	MDP
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	19.7	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	1640	~~B~~	J	P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	120		J	P	FD
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~855~~	~~B~~	U	P	MBL
7439-96-5	Manganese	36.1			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	109	~~B~~	J	P	
7782-49-2	Selenium	5.0	U	~~N~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	5000 ~~4990~~	~~B~~	U	P	FBL
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	2.8	~~B~~	J	P	

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW05DW -10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix (soil/water): WATER Lab Sample ID: 1003102-17

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200 ~~47.5~~	~~B~~ *	UJ	P	EBL
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	8.8	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	63400			P	
7440-47-3	Chromium	1.1	~~B~~	J	P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0 ~~1.8~~	~~B~~	U	P	MBL
7439-89-6	Iron	4060			P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~2350~~	~~B~~	U	P	MBL
7439-96-5	Manganese	101			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	1680	~~B~~	J	P	
7782-49-2	Selenium	5.0	U	~~N~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	26000			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	20 ~~13.6~~	~~B~~	U	P	FBL

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW05IW - 10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix (soil/water): WATER Lab Sample ID: 1003102-18

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200	~~B~~	~~J~~ UJ	P	MDP
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	8.4	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	39600			P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0 ~~3.0~~	~~B~~	U	P	MBL
7439-89-6	Iron	187			P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~1710~~	~~B~~	U	P	MBL
7439-96-5	Manganese	25.8			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	1640	~~B~~	J	P	
7782-49-2	Selenium	5.0	U	~~N~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	35800			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	20 ~~3.2~~	~~B~~	U	P	FBL

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW07 - 10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

JLC 73010

Matrix (soil/water): WATER Lab Sample ID: 1003102-09

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200	~~U~~	~~J~~ UJ	P	MDP
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	27.5	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	3710	~~B~~	J	P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	38.1	~~B~~	J	P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~1680~~	~~B~~	U	P	MBL
7439-96-5	Manganese	3.0	~~B~~	J	P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	1210	~~B~~	J	P	
7782-49-2	Selenium	5.0	U	~~N~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	8220			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	1.7	~~B~~	J	P	

JLC 73010

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW07D -10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix (soil/water): WATER Lab Sample ID: 1003102-07

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200	~~U~~	✓ UJ	P	MDP
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	27.7	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	3740	~~B~~	J	P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0 ~~1.8~~	~~B~~	U	P	MBL
7439-89-6	Iron	49.5	~~B~~	J	P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~1700~~	~~B~~	U	P	MBL
7439-96-5	Manganese	3.1	~~B~~	J	P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	1210	~~B~~	J	P	
7782-49-2	Selenium	5.0	U	~~N~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	8440			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	1.6	~~B~~	J	P	

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS
-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW10 -10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

JAC 73010

Matrix (soil/water): WATER Lab Sample ID: 1003102-10

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	668		~~J~~ J	P	MDP
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	16.8	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	963	~~B~~	J	P	
7440-47-3	Chromium	1.3	~~B~~	J	P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	2180			P	
7439-92-1	Lead	2.2	~~B~~	J	P	
7439-95-4	Magnesium	5000 ~~666~~	~~B~~	U	P	MBL
7439-96-5	Manganese	6.2	~~B~~	J	P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	175	~~B~~	J	P	
7782-49-2	Selenium	5.0	U	~~N~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	6090			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	11.6	~~B~~	J	P	
7440-66-6	Zinc	3.3	~~B~~	J	P	

JAC 73010

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW11DW -10A

JAC 13010

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix (soil/water): WATER Lab Sample ID: 1003102-16

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	686		✓ J	P	MDP
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	7.9	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	115000			P	
7440-47-3	Chromium	21.5			P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0 ~~2.3~~	~~B~~	U	P	MBL
7439-89-6	Iron	4200			P	
7439-92-1	Lead	2.4	~~B~~	J	P	
7439-95-4	Magnesium	5000 ~~3950~~	~~B~~	U	P	MBL
7439-96-5	Manganese	88.1			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	1.9	~~B~~	J	P	
7440-09-7	Potassium	2460	~~B~~	J	P	
7782-49-2	Selenium	5.0	U	~~N~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	64200			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	7.6	~~B~~	J	P	
7440-66-6	Zinc	25.5			P	

JAC 13010

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW11IW ~10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix (soil/water): WATER Lab Sample ID: 1003102-15

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200	~~B~~	~~J~~ UJ	P	MDP
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	39.6	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	83400			P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0 ~~1.9~~	~~B~~	U	P	MBL
7439-89-6	Iron	7260			P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~2340~~	~~B~~	U	P	MBL
7439-96-5	Manganese	124			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	1470	~~B~~	J	P	
7782-49-2	Selenium	5.0	U	~~N~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	14400			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	20 ~~1.3~~	~~B~~	U	P	FBL

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW15BCH -10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

JAC 73010

Matrix (soil/water): WATER Lab Sample ID: 1003102-20

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200 ~~88.1~~	~~B~~	~~*~~ UJ	P
7440-36-0	Antimony	3.7	~~B~~	J	P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	3.4	~~B~~	J	P
7440-41-7	Beryllium	1.9	~~B~~	J	P
7440-43-9	Cadmium	1.7	~~B~~	J	P
7440-70-2	Calcium	70600			P
7440-47-3	Chromium	2.0	~~B~~	J	P
7440-48-4	Cobalt	1.5	~~B~~	J	P
7440-50-8	Copper	35.3			P
7439-89-6	Iron	159			P
7439-92-1	Lead	5.4			P
7439-95-4	Magnesium	9610			P
7439-96-5	Manganese	4.9	~~B~~	J	P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.2			P
7440-09-7	Potassium	9470			P
7782-49-2	Selenium	5.0	U	~~N~~	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	52700			P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	1.9	~~B~~	J	P
7440-66-6	Zinc	54.3			P

EBL

JAC 73010

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1K01-EB01-030910-GW

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix (soil/water): WATER Lab Sample ID: 1003102-08

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	1.9	B	J	P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	1.8	B	J	P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	5.0	U	N	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	5000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	20.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1R69-EB01-031310-GW

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix (soil/water): WATER Lab Sample ID: 1003102-21

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	4.2	B	J	P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	5.0	U		P
7440-22-4	Silver	1.3	B	J	P
7440-23-5	Sodium	339	B	J	P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	20.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1189- EB01-031310-SS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix (soil/water): WATER Lab Sample ID: 1003102-22

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	2.6	B	J	P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	20.9	B	J	P
7782-49-2	Selenium	5.0	U	N	P
7440-22-4	Silver	1.4	B	J	P
7440-23-5	Sodium	347	B	J	P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	20.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

169-EB01-031410-SD

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix (soil/water): WATER Lab Sample ID: 1003102-19

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	2.6	B	J	P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	5.0	U	N	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	5000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	20.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

169 - FB01-031010

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix (soil/water): WATER Lab Sample ID: 1003102-11

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	2.3	B	J	P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	5.0	U	N	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	559	B	J	P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	20.0	U		P

JC 7/2010

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

18664

Page 1 of 2

CHAIN OF CUSTODY

CompuChem
a division of Liberty Analytical Corp.

501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	8260B: VOCs: HCl, HCO																
1003102-12	IR69-TB-031110	3/11/10	1700	TB	3	3						3																
1003089-20	IR69-GW08D-10A	3/8/10	1135	GW	3	3						3																
1003089-19	IR69-GW08-10A	3/8/10	1130	GW	3	3						3																
1003102-01	IR69-GW01-10A	3/8/10	1115	GW	3	3						3																
-03	IR69-GW05-10A	3/8/10	1605	GW	3	3						3																
-05	IR69-GW03BCH-10A	3/9/10	1540	GW	3	3						3																
-04	IR69-GW05D-10A	3/8/10	1605	GW	3	3						3																
-06	IR69-GW02BCH-10A	3/8/10	1510	GW	3	3						3																
1003089-21	IR69-EB-030810-10A	3/8/10	0930	GW	3	3						3	Sample ID on container IR69-EB-030810-GW(TB)															
1003102-07	IR69-GW07D-10A	3/8/10	1605	GW	3	3						3																

3/12/10

Lab Use Only

Sample Unpacked By: Jennifer Doyle
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Sample Custody

Relinquished by: [illegible]	Date/Time: 3/11/10 1800	Received by: Jennifer Doyle	Date/Time: 3/12/10 ~~1345~~ 1145
Relinquished by:	Date/Time:	Received by:	Date/Time: JD 3/12/10

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 0.2 °C

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer

170A

CHAIN OF CUSTODY

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501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Page 2 of 2 — 20525

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M HILL
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID? Batch
Are aqueous samples field filtered for metals? Y or (N)
Are high concentrations expected? Y or (N)? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Laboratory ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	8260B: VOCs: 40mL VOA, HCl
1003102-08	IR69-EB-030910-GW	3/9/10	1600	GW	3	3						3
-09	IR69-GW07-10A	3/9/10	1600	GW	3	3						3
-10	IR69-GW10-10A	3/8/10	1625	GW	3	3						3
1003089-18	IR69-GW06-10A	3/9/10	1115	GW	3	3						3
	IR69-GW06-10A-MS	3/9/10	1115	GW	3	3						3
1003102-02	IR69-GW01D-10A	3/8/10	1120	GW	3	3						3
1003089-18	IR69-GW06-10A-SD	3/9/10	1115	GW	3	3						3

Laboratory Information

Sample Unpacked By: Jennifer Doer
Sample Order Entry By: [illegible]
Samples Received in Good Condition? (Y) or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or (NA)
625 & Phenol samples checked for chlorine? Y or (NA)
608 samples checked for pH between 5.0-9.0? Y or (NA)

Shipping Information

Relinquished by: [illegible]	Date/Time: 3/11/10 1800	Received by: Jennifer Doer	Date/Time: 3/12/10 ~~1245~~
Relinquished by:	Date/Time:	Received by:	Date/Time: JD 3/12/10
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? (Y) or N	On Ice? (Y) or N	Cooler Temp: 0.2 °C

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer SN0015

21004 9 74 171

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CHAIN OF CUSTODY

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Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Page ____ of ____

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6792
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camby Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Requested Analysis

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab Sample ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other VOAS	8260B	8270C/8270C-SIM (2-1L Ambers)	8270C/8270C-SIM (2-40mL)	RSK 175 MEE (VOAs, HCl)	3550B/8081A/8082 (2-1L Ambers)	TOC (2-40mL VOAs, H2SO4)	CNN-AIK (1-250mL poly, cool)	Sulfide, Zn Acetate, NaOH (1-500mL poly)	TAL 6010B/METALS (1-500mL poly, HNO3)	Analyzed (1-500mL poly, HNO3, FIELD FILTERED)	6010B metals							
1003102-01	IRG69GW01-10A	3/8/10	11:15	GW	11	2	1	1	2		5		2	2	2	2	1	1	1				12	9	3				

Lab Use Only

Sample Unpacked By: [illegible]
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Residual Chlorine Present?
Yes ____ No ✓

Chain of Custody

Relinquished by: [illegible]	Date/Time: 3-11-10 1610	Received by: [illegible]	Date/Time: 3-12-10 1845
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 0.9°C

Samples stored 60 days after date report mailed at no extra charge.

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20523

Page ____ of ____

CHAIN OF CUSTODY

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501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Courier:
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2MHill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp LeJ Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

CompuChem Sample ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other None	8260B	2-1L Ambers / 827DC/827DC-SIM	2-40mL VOA HCL / RSK 175 MEE	2-1L Ambers / 8082 / 8081A / 355DB	2-40mL VDAS H2SO4 / TDC	1-250mL poly / CNNS-AIK	1-500mL poly ZnAce 1.N NaOH / Sulfide	1-500mL poly2 HNO3 / TAL Metals / 6010B	1-500mL poly Dissolved HNO3 Field Filtered / 6010 Metals						
1003102-02	IR69-GW01D-10A	3-6-10	1120	GW	11	2	1	1	2		5		2	2	2	2	1	1	1			<2	>9	<2		

collection date actually 3/8/10 per Jessica Gwen 3/12/10

Lab Use Only

Sample Unpacked By: Diane Byrd
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

~~Residual Chlorine Present?~~
Yes ____ No ✓

Relinquished by:	Date/Time: 3-11-10 1645	Received by: Diane Byrd	Date/Time: 3-12-10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 1.6 °C

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer

SN0015

10 75 172

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CHAIN OF CUSTODY

501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Page ____ of ____

Courier
Airbill No.
Sampling Complete? Y or N

Client Reporting Information

Company Name: CH2MHill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lej. Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Analysis Requested

Field ID	Date	Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other None	8260B	8270C/8270C-SIM (2-1L Ambers)	RSK 175 MEE (7-40ml VOAs, HCl)	3550B/8081A/8082 (2-1L Ambers)	TOC (2-40ml VOAs, H2SO4)	CN/S AIK (1-250ml poly, none)	Sulfide (1-500ml poly, ZnAc & NaOH)	TPH 601/8 (1-500ml poly, HNO3)	601/8 METALS (1-500ml poly, HNO3, field filtered)							
1003102-03 IRL69-GW05-10A	3/8/10	1600	GW	11	2	1	1	2		5		2	2	2	2	1	1	1		<2	~~<2~~	>9	<2			
																				NO 3-12-10						

Legend: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

Sample Unpacked By: [signature]
Sample Order Entry By: [signature]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Residual Chlorine Present?
Yes ____ No ✓

Relinquished by: [signature]	Date/Time: 3-11-10 / 15:35	Received by: [signature]	Date/Time: 3-12-10 0145
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 0.7 °C

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer

SN0015

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CHAIN OF CUSTODY

501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2MHill
Address: 1130 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: GTO-081
Sampling Location: MCB Cam LeJ Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Analysis Requested

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Compu Chem Sample ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other None	8260B	2-1L Ambers 8270C/8270C-SIM	2-40ml VOAs HCL RSK 175 MEE	2-1L Ambers 355DB/8081A/8082	2-40ml VOAs TOC / H2SO4	1-250ml poly CNNS-AIK	1-500ml poly ZnAcc 1N NaOH Sulfide	1-500ml poly HNO3 TAL Metals	1-500ml poly HNO3 Dissolved Metals	Field Filter		GW			
1003107-04	IR69GW05D-10A	3/8/10	1605	GW	11	2	1	1	2		5		2	2	2	2	1	1	1				<2	>9	<2	

Laboratory Information

Sample Unpacked By: K. Manning
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or N/A
625 & Phenol samples checked for chlorine? Y or N/A
608 samples checked for pH between 5.0-9.0? Y or N/A

*Temp. blank present - KM 03-12-10
~~Residual Chlorine Present?~~
Yes ____ No ✓

Sample Custody

Relinquished by:	Date/Time:	Received by:	Date/Time:
[illegible]	3-11-10 1700	K. Manning	03-12-10 1145

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 1.6 °C

Samples stored 60 days after date report mailed at no extra charge.

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SN0015

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CHAIN OF CUSTODY

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Requested Analysis (Circled Methods are Other)

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Comp	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other None	8260B	8270C/8270C SIM	BSK 175 MEE	3550B/8081A/8082	TOC	CNNS-AIK	Sulfide	6010B	6010B						
													2-1L Ambers	2-40mL VOAs, HCl	2-1L Ambers	2-40mL VOAs	1-250mL poly, none	1-500mL poly, 2M Zn Ac, 6M NaOH	TAL metals 1-500mL poly, HNO3	Dissolved metals 1-500mL poly, HNO3 filtered in field						
100302-05	TR69-GW03BCH-10	3/9/10	1540	GW	11	2	1	1	2		5		2	2	2	2	1	1	1							

Lab Use Only

Sample Unpacked By: K. Manning
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

*Temp. blank present. KM 03-12-10

Residual Chlorine Present?

Yes ____ No ✓

Signature Section

Relinquished by: [signature]	Date/Time: 3-11-10/1545	Received by: K. Manning	Date/Time: 03-12-10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 2.9 °C

Samples stored 60 days after date report mailed at no extra charge.

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SN0015

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: GWEN BUCKLEY
Phone #: 757-671-6792
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camley Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Analysis Requested

Lab Sample No.	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other NONE	8260B	8270C	8270C-SIM	RSK 175 MEE	3550B/8015B/8082	TOC	CN-AIX	Sulfide	TAL METALS	6010B DISSOLVED METALS	6010B METALS
													2-LP	2-40ml	2-40ml VOAs HCl	2-1L	2-40ml Amber 8015 H2SO4	1-250ml Poly, none	1-500ml Poly Zn Ac 6M NaOH	1-500ml Poly HNO3	1-500ml Poly HNO3 to pH<2	1-500ml Poly HNO3 to pH<2
1003102-06	~~1R69~~-GW02BCH-10A	3/8/10	1510	GW	11	2	1	1	2		5		2	2	2	2	2	1	1	1		

Sample Receipt Information

Sample Unpacked By: K. Manning
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or N
625 & Phenol samples checked for chlorine? Y or N
608 samples checked for pH between 5.0-9.0? Y or N

KM 03-12-10

~~No TOCs or HETs in cooler upon receipt~~

Residual Chlorine Present? Yes ____ No ✓

Relinquished by:	Date/Time: 3-11-10 1845	Received by: K. Manning	Date/Time 03-12-10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 0.7 °C

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Samples stored 60 days after date report mailed at no extra charge.

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Courier
Airbill No.
Sampling Complete? Y or N

Client Reporting Information

Company Name: CH2M Hill
Address: 11301 Carnegie Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Analysis Requested/Indicate Preservative

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab ID (Lab Use Only)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other none	8260B	8270C/8270C-SIM / 2-1L Amber	RSK 175 MEE / VOAs, HCl / 2-40 ml	3550B/8081B/8082 / 2-1L Amber	TOC / 2-40 ml VOAs H2SO4	CWWS-AIR / 1-250 ml poly none	Sulfide / 1-500 ml poly ZnAc 6N NaOH	TAL / 1-500 ml	6010B METALS / 1-500 ml poly HNO3	Dissolved 6010B METALS / 1-500 ml poly HNO3 Filtered						
1003102-07	JR69-GW07D-10A	3/9/10	1605	GW	11	2	1	1	2		5		X	X	X	X	X	X	X				<2	>9	<2		

Sample Receipt

Sample Unpacked By: K. Manning
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA KM 03-12-10
608 samples checked for pH between 5.0-9.0? Y or NA

*Temp. blank present

Residual Chlorine Present?
Yes ____ No ✓

Relinquishing

Relinquished by:	Date/Time:	Received by:	Date/Time:
Jeffrey M Hyr	3/16/10 1300	K. Manning	03-12-10 1145

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 2.4 °C

Samples stored 60 days after date report mailed at no extra charge.

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Courier:
Airbill No.:
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Analyses to include on COC and bottle requirements

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Compuchem Sample ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other NONE	8260B	8270C/8270C-SIM	RSK 175 MEE	3550B/8081A/8082	TOC	CNWS-AIK	Sulfide	TAL METALS	6010B METALS	6010B METAL											
													2-1L Ambers	12-40ml VOAs HCl	2-1L Ambers	2-40ml VOAs H2SO4	1-250ml poly, none	1-500ml poly Zn Ac 6N NaOH	1-500ml poly HNO3	1-500ml poly HNO3											
1003102-08	IR69-EB-0309	3-5-10	1600	W	11	2	1	1	2		5		2	2	2	2	1	1	1						<2	>9	<2					

Sample Receipt Information

Sample Unpacked By: K. Manning
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Temp. blank is present - KM 03-12-10

Residual Chlorine Present?
Yes ____ No ✓

Sample Custody

Relinquished by:	Date/Time: 3-11-10 1630	Received by: K. Manning	Date/Time: 03-12-10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 8.1 °C

Samples stored 60 days after date report mailed at no extra charge.

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818
178

21790

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Courier:
Airbill No.:
Sampling Complete? Y or N

Client Reporting Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd. Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6792
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lej. Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Analysis Requested

Lab Use Only	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other None	8260B	8270C/8270C-SIM (Ambers)	RSK 175 MEE (VOAs HCl)	8330B/8315A (8082 Ambers)	TOC (2-40ml VOAs H2SO4)	CNWS-AIK (1-250ml poly, NaOH)	Sulfide (1-500ml poly, ZnAc, NaOH)	TOTAL 6010B METALS (1-500ml poly, HNO3)	DISSOLVED 6010B METALS (1-500ml poly, HNO3, filtered)					
1003101-09 / 1003101-01	IRM-GW07 10A	3/9/10	1600	GW	11	2	1	1	2		5		2	2	2	2	1	1	1	1	12	29	3		

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab Use Only

Sample Unpacked By: Diane Dyed
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Residual Chlorine Present?
Yes ____ No ✓

Did not received Diss. Metals Container 3-18-10

Relinquished by:	Date/Time: 3-11-10 1820	Received by: Diane Dyed	Date/Time: 3-12-10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 0.4 °C

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer

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Page ____ of ____

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6792
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camby Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other None	8260B	8270C/8270C-SIM	ASK175 MEE	3550B/8081A/8082	TOC	CNWS-AIK	Sulfide	6010B TAL METALS	6010B metals	Analysis Requested	Lab Use Only
													2-1L Ambers	2-40ml VOAs HCl	2-1L Ambers	2-40ml VOAs H2SO4	1-250ml poly	1-500ml poly Zn acetate/NaOH	1-500ml poly HNO3	1-500ml poly HNO3 filtered		
1003102-10	DR69-GW10-10A	3/8/10	1625	GW	11	2	1	1	2		5		2	2	2	2	1	1	1			2 >9 <2

Lab Use Only

Sample Unpacked By: Diane Byrd
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Residual Chlorine Present?
Yes ____ No ✓

Relinquished by:	Date/Time: 3-11-10 1815	Received by: Diane Byrd	Date/Time: 3-12-10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 0.9 °C

Samples stored 60 days after date report mailed at no extra charge.

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2MHill
Address: 1301 Gervais Commons Blvd - Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Sample Number	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other None	8260B	8270C/8270C SIM (2-1L Ambers)	RSK 175 MEE (2-40mL VOAs, HCl)	3550B/8081A/8082 (2-1L Ambers)	TOC (2-40mL vials, H2SO4)	CNWS-AIK (1-250mL poly, NaO)	Sulfide (1-500mL poly, 2mL of 6N NaOH)	TPH (1-500mL poly, HNO3)	6010B/metals (Dissolved) (1-500mL poly, HNO3 filtered)	6010B/metals (Total)							
1003102-11	IR69-FB-031010	3/10/10	1100	RI	11	2	1	1	2		5		X	X	X	X	X	X	X				<2	>9	<2			

Sample Receipt Information — Check On Arrival

Sample Unpacked By: Dan Byrd
Sample Order Entry By: Jeffy May
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Residual Chlorine Present?
Yes ___ No ✓

Chain of Custody Signature Log

Relinquished by: Jeffy May	Date/Time: 3/11/10 1400	Received by: Dan Byrd	Date/Time: 3-12-10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where? | Custody Seal(s) intact? Y or N | On Ice? Y or N | Cooler Temp: 0.9 °C

Samples stored 60 days after date report mailed at no extra charge.

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17 84

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CHAIN OF CUSTODY

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Courier:
Airbill No.:
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M Hill
Address: 3301 Carnal Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camlej Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch.
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	~~H2SO4~~ none	MEOH	Other Na bisulfate	8260B (MeOH 2 Na bisulfate % moisture (3oz) 2-1L)	8270C/8270C-SIM (Amber 2-40ml)	RSK 175 MEE (VOAs, HCl 2-40ml)	3550B/8081A/8082 (Amber 2-4oz)	TOC (2-40ml VOAs H2SO4 1-250ml)	CNWS-AIK (poly, none 1-500ml)	Sulfide (poly, Zn acc. CnNaOH 1-500ml)	6010B/TAL METALS (poly, HNO3 1-500ml)	DISSOLVED (1-500ml poly HNO3 filtered)	6010B/METALS (HNO3 filtered)
1003103-01	MR02-IR69-SS01-10A	3/4/10	1515	Soil	4				X	X	X	X									
-02	~~MR02-IR69-SS01D-10A~~	3/4/10	1520	Soil	4				X	X	X	X									
-03	IR69-SS01-10A	3/4/10	0915	Soil	4				X	X	X	X									
-04	IR69-SS01D-10A	3/4/10	0920	Soil	4				X	X	X	X									
-05	IR69-SS03-10A	3/4/10	1015	Soil	4				X	X	X	X									
-06	IR69-SS04-10A	3/4/10	1040	Soil	4				X	X	X	X									
-07	IR69-SS05-10A	3/4/10	1120	Soil	4				X	X	X	X									
-08	IR69-SS06-10A	3/4/10	1145	Soil	4				X	X	X	X									
1003102-13	IR69-TB-031010	3/10/10	1400	TB	3	X						X									

Laboratory Use Only

Sample Unpacked By: Jennifer Davis
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain: ~~See comments~~ JD 3/12/10

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

~~Rec'd following samples in cooler, Not listed on COC:~~
~~SB01-01-02-10A 3/9/10 1330, SB01D-01-02-10A 3/7/10 1330,~~
~~SB01-06-07-10A 3/7/10 1600, SB05-06-07-10A 3/7/10 1530,~~
~~SB06-06-07-10A 3/7/10 1145~~ JD 3/12/10

Chain of Custody Signatures

Relinquished by: [signature]	Date/Time: 3/10/10 1400	Received by: Jennifer Davis	Date/Time: 3/12/10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 0.1 °C

Samples stored 60 days after date report mailed at no extra charge.

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Page 1 of 2

CHAIN OF CUSTODY

CompuChem
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501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Courier
Airbill No.
Sampling Complete? Y or N

Client/Report Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID? Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

CompuChem Sample ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	8260B / 40ml VOA vials, HCl	8270C / 8270C SIM / 2-1L Amber	RSK 175 MEE / 2-40ml VOAs, HCl	3550B / 8081A / 8082 / 2-1L Amber	TOC / 2-40ml VOAs H2SO4	CNAS-AIK / 1-250ml poly, none	Sulfide / 1-500ml poly, ZnAce & NaOH	TAL 6010B metals / 1-500ml poly, HNO3	Dissolved 6010B metals / 1-500ml poly, HNO3 Field Filtered						
1003136-01	IR69-EB-031410-GW	3/14/10	0900	RI	3	3						3														
1003136-05	IR69-TB-031310	3/13/10	1030	TB	3	3						3														
1003136-02	IR69-GW04DW-10A	3/14/10	1735	GW	3	3						3														
1003102-20	IR69-GW15BCH-10A	3/14/10	1245	GW	3	3						3														
-21	IR69-EB-031310-GW	3/13/10	1000	RI	3	3						3														
1003102-19	IR69-EB-031410-SD	3/14/10	1100	RI	3	3						3														
1003136-03	IR69-SW01-10A	3/14/10	1345	SW	3	3						3														
1003102-16	IR69-GW11DW-10A	3/13/10	1330	GW	3	3						3														
1003102-15	IR69-GW11IW-10A	3/13/10	1235	GW	3	3						3														
1003102-22	IR69-EB-031310-SS	3/13/10	1045	GW	3	3						3														

Sample Unpacked By: Jennifer Doler
Sample Order Entry By:
Samples Received in Good Condition: Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Relinquished by:	Date/Time: 3/12/10 1300	Received by: Jennifer Doler	Date/Time: 3/17/10 1600
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where? Custody Seal(s) intact? Y or N On Ice? Y or N Cooler Temp: 0.6 °C

Samples stored 60 days after date report mailed at no extra charge.

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CHAIN OF CUSTODY

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501 Madison Ave.
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Phone: 919-379-4100 Fax 919-379-4040

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camby Sta. 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Analysis Requested

Lab ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	Sodium Bisulfate	MEOH	Other none	8260B (GW: 40mL VOA vials 2 Rinsate/Trip Blank; Soil: VOA vial over 10g, 2x 5g)	8270C/8270C-SIM (2-1L Amber)	RSK 175 MEE (2-40mL VOAs, HCl)	3550B/8081A/8082 (2-1L Amber)	TOC (2-40mL VOAs H2SO4)	CNAS-ALK (1-250mL poly, none)	Sulfide (1-500mL poly Zn Ac, add NaOH)	TAL 6010B/METALS (1-500mL poly HNO3)	Dissolved 6010B/metals (1-500mL poly HNO3 Field Filtered)					
1003136-04	IR69-SW01D-10A	3/14/10	1350	SW	3	3						3													
1003102-17	IR69-GW05DW-10A	3/14/10	1220	GW	3	3						3													
-18	IR69-GW05IW-10A	3/14/10	1230	GW	3	3						3													
1003102-14	IR69-GW04-10A	3/14/10	1635	GW	3	3						3													
	IR69-GW04-10A-MS	3/14/10	1635	GW	3	3						3													
	IR69-GW04-10A-SD	3/14/10	1635	GW	3	3						3													
1003108-14	IR69-SD01-10A *	3/14/10	1500	SO	4				2	1	1 (2oz)	4	*one 40mL sodium bisulfate bottle												
-15	IR69-SD01D-10A	3/14/10	1505	SO	4				2	1	1 (4oz)	4													

Matrix codes: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

Laboratory Information

Sample Unpacked By: Jennifer Dover
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Relinquishing

Relinquished by: [illegible]	Date/Time: 3/17/10 1500	Received by: Jennifer Dover	Date/Time: 3/17/10 1600
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 0.6 °C

Samples stored 60 days after date report mailed at no extra charge.

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CHAIN OF CUSTODY

Page 1 of 1

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M Hill
Address: 11301 Carnegie Commerce Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune Site 69
Turnaround time: Standard
Batch ~~QC or~~ Project Specific? If Specific, which Sample ID? Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N If yes, which ID(s)?

Required Analyses/Containers

Field ID	Date	Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	8260B	8270C 2-1l	8270C-SIM 2-1l Amber	RSK 175 MEE 2-40ml VOAs HCl	3550B/8081A 2-1l 8082 Amber	TOC 2-40ml VOAs H2SO4	CNNS-AIK 1-250ml poly, none	Sulfide 1-500ml poly NaOH, Zn Ace, 6N NaOH	TRL 1-500ml	6010B metals poly, HNO3	Dissolved 1-500ml poly HNO3	6010B metals Field Filtered					
1003102-14 CR69-GW04-10A	3/14/10	16:35	GW	12								2	2	2	2	1	1	1	D			<2	>9	<2		
-15 CR69-GW11IW-10A	3/13/10	12:35	GW	12								2	2	2	2	1	1	1	D			<2	>9	<2		

Matrix: GW - Ground water, WW - Waste water, SW - Surface water, SO - Soil/Sediment, TB - Trip Blank, RI - Rinsate, WP - Wipe, O - Other

Lab Use Only

Sample Unpacked By: Jennifer Dyer
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Residual Chlorine Present?
Yes ____ No ✓

Sample Custody

Relinquished by:	Date/Time: 3/12/10 1200	Received by: Jennifer Dyer	Date/Time: 3/17/10 1600
Relinquished by:	Date/Time:	Received by:	Date/Time:
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 0.2 °C

Samples stored 60 days after date report mailed at no extra charge.

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CHAIN OF CUSTODY

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Courier
Airbill No.
Sampling Complete? Y or N

Section A: Client Reporting Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Section B: Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Section D: Requested Analysis (Include method and bottle type)

Field ID	Date	Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	8260B	8270C	8270C SIM	RSK 175 MEE	3550B	8081A	TOC	CNNS-AIK	Sulfide	TAL 6010B METALS	Dissolved 6010B metals	Field Filtered	Lab Manager Comments
												2-1L Amber	2-40ml VOAs HCl	2-1L Amber	2-40ml VOAs H2SO4	1-250ml Poly, NaOH	1-500ml poly Surface Water	1-500ml poly HNO3	1-500ml poly HNO3				
1003106-14	3/26/10 Field ID: IR69-GW04-10A-SD MS	3/14/10	16:35	GW	12							2	2	2	2	1	1	1	0			<2 >9 <2	
	IR69-GW04-10A-SD	3/14/10	16:35	GW	12							2	2	2	2	1	1	1	0			<2 >9 <2	

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Section E: Lab Use Only

Sample Unpacked By: Jennifer Doll
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Residual Chlorine Present?
Yes ____ No ✓

Relinquished by:	Date/Time: 3/17/10 1200	Received by: Jennifer Doll	Date/Time: 3/17/10 1600
Relinquished by:	Date/Time:	Received by:	Date/Time:
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 4 °C

Samples stored 60 days after date report mailed at no extra charge.

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CHAIN OF CUSTODY

Page 1 of 1

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Courier
Airbill No.
Sampling Complete? Y or N

Client Reporting Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N If yes, which ID(s)?

Analysis Requested (Include Preservation and Bottle Type)

Field ID	Date	Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	8260B (2-1L)	8270C/SIM (2-1L Amber)	RSK 175 MEE (2-40ml VOAs, HCl)	3550B/8081A/8082 (2-1L Amber)	TOC (2-40ml VOAs H2SO4)	CNNS-AIK (1-250ml poly, none)	Sulfide (1-500ml poly Zn Ace, NaOH)	TAL 6010B metals (1-500ml poly HNO3)	6010B Dissolved metals (1-500ml poly HNO3 Field Filtered)					
1603102-16 IR19-GW11DW-10A	3/13/10	13:30	GW	11							2	2	2	2	2	1	1	1	0		<2	>9	<2	
-17 IR19-GW05DW-10A	3/14/10	12:20	GW	12							2	2	2	2	2	1	1	1	0		<2	>9	4	

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

Lab Use Only

Sample Unpacked By: Jennifer Dires
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Residual Chlorine Present?
Yes ____ No ✓

Signature Log

Relinquished by:	Date/Time: 3/17/10 1700	Received by: Jennifer Dires	Date/Time: 3/17/10 1600
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 0.2 °C

Samples stored 60 days after date report mailed at no extra charge.

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Page 1 of 1

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501 Madison Ave.
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Phone: 919-379-4100 Fax 919-379-4040

Courier:
Airbill No.:
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune Site 69
Turnaround time: Standard
Batch ~~QC or~~ Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Analyses Requested

Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	8260B	8270C (2-L Amber)	8270C-SIM (2-40ml VOAs HCl)	RSK 175 MEE	3550B/8081A (2-L Amber)	8082 (2-40ml VOAs H2SO4)	TOC (1-250ml poly, none)	CNNS-AIK (1-500ml poly ZnAc, 6N NaOH)	Sulfide	TAL METALS 6010B (1-500ml poly HNO3)	Dissolved metals 6010B (1-500ml poly HNO3 Field Filtered)					
1003102-18 TRIA-GW05IW-10A	3/14/10	12:30	GW	11								2	2		2	2	1	1		1	0		<2	>9	<2	
-19 TRIA9-EB-031410-50	3/14/10	11:00	SO	5								2			2					1						

Sample Receipt Information

Sample Unpacked By: Jennifer Dorer
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Residual Chlorine Present?
Yes ____ No ✓

Chain of Custody

Relinquished by:	Date/Time: 3/17/10 1200	Received by: Jennifer Dorer	Date/Time: 3/17/10 1600
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontract? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 17 °C

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer

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CHAIN OF CUSTODY

501 Madison Ave.
Cary, NC 27513
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Page 1 of 1 — 21759

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information | **Project Information** | **Requested Analysis and Methods/Holding Times**

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd-Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: R Fields/KNV/CH2M HILL

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab ID (Lab Use Only)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other none	8260B	8270C/8270C SIM (2-1L Ambers)	RSK 175 MEE (2-40ml VOAs, HCl)	3550B/8081A/8082 (2-1L Ambers)	TOC (2-40ml VOAs H2SO4)	CNWS-AIK (1-250ml poly, none)	Sulfide (1-500ml poly, Zn Ace & NaOH)	TAL 6010B/METALS (1-500ml poly, HNO3)	Dissolved 6010B/metals (1-500ml poly HNO3 Field Filtered)							
1003102-20	IR69-GW5BCH-10A	3/14/10	1245	GW		2	1	1	2		5		X	X	X	X	X	X	X			<2	>9	<2			

Lab Use Only | **Comments**

Sample Unpacked By: Jennifer Dore
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Residual Chlorine Present?
Yes ____ No ✓

Sample Chain of Custody

Relinquished by: Jeffrey Smith	Date/Time: 3/16/10 1700	Received by: Jennifer Dore	Date/Time: 3/17/10 1600
Relinquished by:	Date/Time:	Received by:	Date/Time:
Subcontact? Y or N If yes, where?		Custody Seal(s) intact? Y or N	On Ice? Y or N

Cooler Temp: 1.3 °C

Samples stored 60 days after date report mailed at no extra charge.

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CHAIN OF CUSTODY

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Phone: 919-379-4100 Fax 919-379-4040

Courier:
Airbill No.:
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757 671 6292
Sampler's Name: Jessica High

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune Site 69
Turnaround time: Standard
Batch ~~QC or~~ Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N If yes, which ID(s)?

Requested Analysis (method and port. type)

Sample Control Number	Field ID	Collection Date	Collection Time	Matrix	# of bottles	Number of Preserved Bottles: HCl	NaOH	HNO3	H2SO4	MeOH	Other zero	8260B	8270C (2-L Ambers)	8270C-SIM (2-40ml)	RSK 175 MEE (VOAs HCl)	3550B/8081A/8082 (2-L Ambers)	TOC (2-40ml VOAs H2SO4)	CNWS-AIK (1-250ml poly, none)	Sulfide (1-500ml poly, Zn Ac & NaOH)	TAL 6010B/METALS (1-500ml poly HNO3)	Dissolved 6010B metals (1-500ml poly HNO3 Field Filtered)			Matrix (GW, WW, SW, SO, TB, RI, WP, O)				
1003102-21	IR69-EB-031310-GW	3/13/10	1000	RI	11	2	1	1	2		5		2	2	2	2	2	1	1	1				<2	>9	<2		

Matrix legend: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

Lab Use Only

Sample Unpacked By: Jennifer Doren
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Residual Chlorine Present?
Yes ____ No ✓

Sample Custody

Relinquished by: [signature]	Date/Time: 03/16/10 1700	Received by: Jennifer Doren	Date/Time: 3/17/10 1600
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 0.3 °C

Samples stored 60 days after date report mailed at no extra charge.

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CHAIN OF CUSTODY

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Cary, NC 27513
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Page 1 of 1

Courier
Airbill No.
Sampling Complete? Y or N

Client/Report Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757 671 6292
Sampler's Name: Jessica Hijl

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or (N)
Are high concentrations expected? Y or (N) If yes, which ID(s)?

Analysis Requested (Analytical Method)

Analysis	Containers
8260B	2-1L
8270C/8270C-SIM	2-40ml Amber
RSK 175 MEE	6VOAs, HCl
3550B/8081A/8082	2-1L Amber
TOC	2-40ml VOAs H_2SO_4
CNNS-AIK	1-250ml poly, none
Sulfide	1-500ml poly Zn Ac 6N NaOH
TRI	1-500ml
6010B/METALS	poly, HNO_3
6010B/metals	Unfiltered 1-500ml poly HNO_3 Field Filtered

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab Sample ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other None	8260B	8270C/8270C-SIM	RSK 175 MEE	3550B/8081A/8082	TOC	CNNS-AIK	Sulfide	TRI	6010B/METALS	6010B/metals	Lab Use Only
1003102-22	JR69-EB-031310-SS	3/13/10	1045	RI	5			1			4		2		2				1			<2

Lab Use Only

Sample Unpacked By: Jennifer Dales
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Residual Chlorine Present?
Yes ____ No ✓

Shipping Log

Relinquished by: [signature]	Date/Time: 3/16/10 1700	Received by: Jennifer Dales	Date/Time: 3/17/10 1600
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or (N) If yes, where?
Custody Seal(s) intact? (Y) or N
On Ice? (Y) or N
Cooler Temp: 0.1 °C

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer

Data Completeness

The data package was received complete and intact. Resubmissions were not required. (SW846 Method 8260B)

Laboratory: CompuChem

Holding Times

Sampling Date: 3 8-14 10
Received Date: 3 12-17 10
Analysis Dates: 3 19-24 10

Cooler Temp: 0.1-2.9°C

All prep and analysis holding time requirements were met.

Calibrations

Mass assignments were verified by the injection of BFB.

The initial and continuing calibrations required qualifications due to high %D values and low RRFs; see attached FormVI and VIIs.

Internal Standards

All criteria met.

Blank Summary

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying criteria.
- Qualification Action codes where applied as stated in table below:
-

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Storage, Field, Trip, Instrument	Detects	Not detected	No qualifications
	< CRQL*	≤ CRQL*	Report CRQL value with a U
		> CRQL*	Use professional judgment
	> CRQL*	≤ CRQL*	Report CRQL value with a U
		> CRQL* and ≤ blank concentration	Report the concentration for the sample with a U, or qualify the data as unusable R
		> CRQL* and ≥ blank concentration	Use professional judgment
	< CRQL*	≤ CRQL*	Report CRQL value with a U
		> CRQL*	Use professional judgment
	Gross contamination	Detects	Qualify results as unusable R

*2x the CRQL for methylene chloride, 2-butanone and acetone

Method blank contamination was exhibited- qualifications were required. The associated field QC for this data package was: IR69-TB01-031110 and IR69-TB01-031310- trip blanks; IR69-EB01-030810-GW, IR69-EB01-030910-GW, IR69-EB-031310-GW and IR69-EB01-031410-GW-equipment blanks; IR69-FB01-031010 and IR69-FB01-031910- field blank.

Blank Contamination and Qualification Summaries

Blank ID	Compound	Concentration	Reporting Limit
VBLKRV	methylene chloride	0.061J ug/L	0.5 ug/L
VBLKHP	acetone	1.1	2.5
VBLKHX	acetone	0.47J	2.5
	methylene chloride	0.066J	0.5
VBLKHQ	methylene chloride	0.027J	0.5
	1,2-dichlorobenzene	0.070J	0.5
	1,2,4-trichlorobenzene	0.12J	0.5
IR69-TB01-031110	acetone	1.6J	2.5
	methylene chloride	0.052J	0.5
	cyclohexane	0.25J	0.5
IR69-TB01-031310	acetone	2.1J	2.5
IR69-EB01-030810-GW	carbon disulfide	0.13J	0.5
	acetone	11	2.5
	methylene chloride	8.4	0.5
	2-butanone	1.9J	0.5
	chloroform	0.17J	0.5
	benzene	0.13J	0.5
	toluene	2.4	0.5
	chlorobenzene	0.22J	0.5
	o-xylene	0.065J	0.5
IR69-EB01-030910-GW	carbon disulfide	0.022J	0.5
	acetone	13	2.5
	methylene chloride	7.9	0.5
	MTBE	0.036J	2.5
	2-butanone	2.5	0.5
	chloroform	0.17J	0.5
	benzene	0.18J	0.5
	toluene	2.2	0.5
	chlorobenzene	0.17J	0.5
	ethylbenzene	0.070J	0.5
	o-xylene	0.076J	0.5
IR69-EB-031310-GW	carbon disulfide	0.024J	0.5
	acetone	4.7	2.5
	methylene chloride	6.3	0.5
	2-butanone	2.4J	2.5
	chloroform	1.5	0.5
	bromodichloromethane	0.10J	0.5
	toluene	1.0	0.5
IR69-EB01-031410-GW	acetone	2.8	2.5

	methylene chloride	6.3	0.5
	2-butanone	1.5J	2.5
	chloroform	1.3	0.5
	bromodichloromethane	0092J	0.5
	toluene	1.6	0.5
	m,p-xylene	0.084J	0.5
	o-xylene	0.05J	0.5
	xylene (total)	0.09J	0.5
IR69-FB01-031010	acetone	5.5	2.5
	methylene chloride	10	0.5
	cis-1,2-dichloroethene	0.035	0.5
	2-butanone	1.8J	0.5
	chloroform	0.19J	0.5
	benzene	0.12J	0.5
	toluene	2.6	0.5
	chlorobenzene	0.23J	0.5
	ethylbenzene	0.064J	0.5
	o-xylene	0.062J	0.5
IR69-FB01-031910	acetone	7.8	2.5
	methylene chloride	1.4	0.5
	2-butanone	1.8J	0.5
	chloroform	2.4	0.5
	benzene	0.17J	0.5
	toluene	2.1	0.5
	ethylbenzene	0.076J	0.5
	m,p-xylene	0.16J	0.5
	o-xylene	0.068	0.5
	xylene (total)	0.24	0.5

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Qual Code
IR69-GW01D-10A, IR69-GW02BCH-10A, IR69-GW03BCH-10A, IR69-GW04-10A, IR69-GW05-10A, IR69-GW05DW-10A, IR69-GW05IW-10A, IR69-GW07-10A, IR69-GW07D-10A, , IR69-GW11IW-10A	acetone	U at RL	MBL
IR69-GW01-10A, IR69-GW04-10A, IR69-GW05DW-10A, IR69-GW05IW-10A, IR69-GW10-10A, IR69-GW11DW-10A, IR69-GW11IW-10A	methylene chloride	U at RL	MBL
IR69-GW10-10A	1,2-dichlorobenzene	U at RL	MBL
IR69-GW10-10A	1,2,4-trichlorobenzene	U at RL	MBL
IR69-G11DW-10A, IR69-GW15BCH-10A	acetone	U	MBL
IR69-GW01D-10A, IR69-GW05-10A	cis-1,2-dichloroethene	U at RL	FBL
IR69-GW02BCH-10A, IR69-GW11DW-10A, IR69-GW11IW-10A	carbon disulfide	U at RL	EBL
IR69-GW02BCH-10A, IR69-GW03BCH-10A, IR69-GW05DW-10A, IR69-GW05IW-10A, IR69-GW07-10A, IR69-GW07D-10A, IR69-GW10-10A, IR69-GW11DW-10A, IR69-GW11IW-10A, IR69-GW15BCH-10A	toluene	U at RL	EBL

IR69-GW03BCH-10A, IR69-GW07-10A	methylene chloride	U at RL	TBL
IR69-GW10-10A	acetone	U at RL	TBL
IR69-GW04-10A, IR69-GW05-DW-10A, IR69-GW11DW-10A	ethylbenzene	U at RL	FBL
IR69-GW05-10A, IR69-GW05D-10A, IR69-GW05DW-10A, IR69-GW05IW-10A	chloroform	U at RL	EBL
IR69-GW11DW-10A	2-butanone	U at RL	FBL
IR69-GW11DW-10A, IR69-GW11IW-10A	benzene	U at RL	FBL
IR69-GW11DW-10A	bromodichloromethane	U at RL	EBL

Surrogates

All criteria were met.

Laboratory Control Sample

No qualifications were required.

Matrix Spike/Spike Duplicate Samples

An MS/MSD was submitted for sample IR69-GW04-10A; no qualifications were required.

Field Duplicate Sample

A field duplicate was submitted for samples IR69-GW01-10A, IR69GW05-10A and IR69-GW07-10A; no positive results, no qualifications were required.

Specific Comments:

All sample results were reported within the calibration range of the instruments. Dilutions were required for samples IR69-GW11DW-10A and IR69-GW11IW-10A to obtain results within the calibration range.

Detection limits were acceptable. Raw data and calculations were verified.

We have limited the supporting documentation, found with these worksheets, to those forms that indicate qualifications were required.

Validator Signature: Laura Mascello **Date:** 7/13/10

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Lab File ID: 0C16005-TUN171 BFB Injection Date: 03/16/10

Instrument ID: 5972HP71 BFB Injection Time: 1112

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.0
75	30.0 - 60.0% of mass 95	54.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	84.0
175	5.0 - 9.0% of mass 174	6.6 (7.8)1
176	95.0 - 101.0% of mass 174	84.8 (100.9)1
177	5.0 - 9.0% of mass 176	5.3 (6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD001	0C16005-CAL	0C16005-CAL271	03/16/10	1241
02	VSTD0.5	0C16005-CAL	0C16005-CAL171	03/16/10	1308
03	VSTD005	0C16005-CAL	0C16005-CAL371	03/16/10	1336
04	VSTD010	0C16005-CAL	0C16005-CAL471	03/16/10	1404
05	VSTD020	0C16005-CAL	0C16005-CAL571	03/16/10	1432
06	VSTD040	0C16005-CAL	0C16005-CAL671	03/16/10	1459
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FORM V VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Instrument ID: 5972HP71 Calibration Date(s): 03/16/10 03/16/10

Column: SPB-624 ID: 0.32 (mm) Calibration Time(s): 1241 1459

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2	MAX %RSD OR R^2
Dichlorodifluoromethane	AVRG		0.43727028	9.199	15.000
Chloromethane	AVRG		0.28225356	3.820	15.000
Vinyl Chloride	AVRG		0.27657164	5.502	30.000
Bromomethane	LINR	0.07461460	5.00645219	0.9992858	0.9900000
Chloroethane	AVRG		0.15193990	7.308	15.000
Trichlorofluoromethane	AVRG		0.54653601	5.978	15.000
1,1-Dichloroethene	AVRG		0.24096332	4.852	30.000
Carbon disulfide	AVRG		0.81456429	5.796	15.000
1,1,2-trichloro-1,2,2-triflu	AVRG		0.19916813	10.798	15.000
Acetone	AVRG		0.03377963	4.891	15.000
Methyl acetate	AVRG		0.07835184	12.844	15.000
Methylene Chloride	AVRG		0.22827015	8.598	15.000
trans-1,2-Dichloroethene	AVRG		0.27280676	7.851	15.000
Methyl-tert-butyl ether	AVRG		0.48310055	9.461	15.000
1,1-Dichloroethane	AVRG		0.52266702	8.278	15.000
cis-1,2-Dichloroethene	AVRG		0.27231977	8.106	15.000
butanone	AVRG		0.04190146	7.220	15.000
loroform	AVRG		0.58478325	8.623	30.000
1,1,1-Trichloroethane	AVRG		0.60228959	9.026	15.000
Carbon Tetrachloride	AVRG		0.57641982	6.793	15.000
Benzene	AVRG		0.85459647	7.566	15.000
1,2-Dichloroethane	AVRG		0.43734975	8.537	15.000
Trichloroethene	AVRG		0.32530970	5.887	15.000
1,2-Dichloropropane	AVRG		0.21314121	11.358	30.000
Bromodichloromethane	AVRG		0.40411465	10.284	15.000
cis-1,3-Dichloropropene	AVRG		0.36453291	8.645	15.000
4-Methyl-2-pentanone	AVRG		0.13832511	3.805	15.000
Toluene	AVRG		0.77835865	10.137	30.000
trans-1,3-Dichloropropene	AVRG		0.45286970	4.338	15.000
1,1,2-Trichloroethane	AVRG		0.19409783	5.460	15.000
Tetrachloroethene	LINR	-0.1585526	3.12550551	0.9979473	0.9900000
2-hexanone	AVRG		0.09951239	3.548	15.000
Dibromochloromethane	AVRG		0.35118797	3.863	15.000
1,2-Dibromoethane	AVRG		0.23762859	5.839	15.000
Chlorobenzene	AVRG		0.98896596	13.046	15.000
Ethylbenzene	AVRG		0.53260817	18.092	30.000
m,p-Xylene	LINR	-0.2976084	1.81937053	0.9972324	0.9900000
o-Xylene	AVRG		0.61409623	12.730	15.000
Styrene	AVRG		0.96464603	7.322	15.000
Bromoform	AVRG		0.19760123	6.211	15.000
Isopropyl Benzene	LINR	-0.1264470	0.61918351	0.9978621	0.9900000
1,1,2,2-Tetrachloroethane	AVRG		0.39467620	5.348	15.000
1,3-Dichlorobenzene	AVRG		1.73878542	25.242	15.000 <-
1,4-Dichlorobenzene	LINR	-0.1210993	0.70629454	0.9993515	0.9900000

FORM VI VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Lab File ID: 0C19002-TUN171 BFB Injection Date: 03/19/10

Instrument ID: 5972HP71 BFB Injection Time: 0201

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0% of mass 95	24.1	
75	30.0 - 60.0% of mass 95	53.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0% of mass 95	6.5	
173	Less than 2.0% of mass 174	0.0	(0.0)1
174	Greater than 50.0% of mass 95	85.2	
175	5.0 - 9.0% of mass 174	6.4	(7.6)1
176	95.0 - 101.0% of mass 174	84.6	(99.3)1
177	5.0 - 9.0% of mass 176	5.5	(6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005	0C19002-CCV	0C19002-CCV1R7	03/19/10	0303
02	VBLKRV	0031902-BLK	0031902-BLK171	03/19/10	0330
03	VRVLCS	0031902-BS1	0031902-BS171	03/19/10	0358
04	VRVLCSD	0031902-BSD	0031902-BSD171	03/19/10	0426
05	IR69-GW01	1003102-01	1003102-0171	03/19/10	0454
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FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Instrument ID: 5972HP71 Calibration Date: 03/19/10 Time: 0303

Lab File ID: 0C19002-CCV1R7 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1241 1459

GC Column: SPB-624 ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF5 or AMOUNT	CCAL RRF5	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dichlorodifluoromethane	0.4372700	0.4606246	0.4606246	0.001	5.34	90.00	AVRG
Chloromethane	0.2822500	0.2834560	0.2834560	0.1	0.43	90.00	AVRG
Vinyl Chloride	0.2765700	0.3122637	0.3122637	0.001	12.90	20.00	AVRG
Bromomethane	117.77859	125.00000	0.1732992	0.001	-5.78	90.00	LINR
Chloroethane	0.1519400	0.1778935	0.1778935	0.001	17.08	90.00	AVRG
Trichlorofluoromethane	0.5465400	0.7745778	0.7745778	0.001	41.72	90.00	AVRG
1,1-Dichloroethene	0.2409600	0.2457341	0.2457341	0.001	1.98	20.00	AVRG
Carbon disulfide	0.8145600	0.8236495	0.8236495	0.001	1.12	90.00	AVRG
1,1,2-trichloro-1,2,2-triflu	0.1991700	0.2320392	0.2320392	0.001	16.50	90.00	AVRG
Acetone	0.0337800	0.0339968	0.0339968	0.001	0.64	90.00	AVRG
Methyl acetate	0.0783500	0.0753024	0.0753024	0.001	-3.89	90.00	AVRG
Methylene Chloride	0.2282700	0.2264428	0.2264428	0.001	-0.80	90.00	AVRG
trans-1,2-Dichloroethene	0.2728000	0.2733027	0.2733027	0.001	0.18	90.00	AVRG
thyl-tert-butyl ether	0.4831000	0.4153264	0.4153264	0.001	-14.03	90.00	AVRG
1-Dichloroethane	0.5226700	0.5404227	0.5404227	0.1	3.40	90.00	AVRG
cis-1,2-Dichloroethene	0.2723200	0.2695371	0.2695371	0.001	-1.02	90.00	AVRG
2-butanone	0.0419000	0.0372166	0.0372166	0.001	-11.18	90.00	AVRG
Chloroform	0.5847800	0.6466701	0.6466701	0.001	10.58	20.00	AVRG
1,1,1-Trichloroethane	0.6022900	0.7301244	0.7301244	0.001	21.22	90.00	AVRG
Carbon Tetrachloride	0.5764200	0.6947557	0.6947557	0.001	20.53	90.00	AVRG
Benzene	0.8546000	0.8345330	0.8345330	0.001	-2.35	90.00	AVRG
1,2-Dichloroethane	0.4373500	0.4850485	0.4850485	0.001	10.91	90.00	AVRG
Trichloroethene	0.3253100	0.3096867	0.3096867	0.001	-4.80	90.00	AVRG
1,2-Dichloropropane	0.2131400	0.2174488	0.2174488	0.001	2.02	20.00	AVRG
Bromodichloromethane	0.4041100	0.4407444	0.4407444	0.001	9.06	90.00	AVRG
cis-1,3-Dichloropropene	0.3645300	0.3394111	0.3394111	0.001	-6.89	90.00	AVRG
4-Methyl-2-pentanone	0.1383200	0.1219924	0.1219924	0.001	-11.80	90.00	AVRG
Toluene	0.7783600	0.6773013	0.6773013	0.001	-12.98	20.00	AVRG
trans-1,3-Dichloropropene	0.4528700	0.4122146	0.4122146	0.001	-8.98	90.00	AVRG
1,1,2-Trichloroethane	0.1941000	0.1731449	0.1731449	0.001	-10.80	90.00	AVRG
Tetrachloroethene	118.79921	125.00000	0.3548054	0.001	-4.96	90.00	LINR
2-hexanone	0.0995100	0.0879986	0.0879986	0.001	-11.57	90.00	AVRG
Dibromochloromethane	0.3511900	0.3202729	0.3202729	0.001	-8.80	90.00	AVRG
1,2-Dibromoethane	0.2376300	0.2063102	0.2063102	0.001	-13.18	90.00	AVRG
Chlorobenzene	0.9889600	0.8697679	0.8697679	0.3	-12.05	90.00	AVRG
Ethylbenzene	0.5326100	0.4463502	0.4463502	0.001	-16.20	20.00	AVRG
m,p-Xylene	220.17420	250.00000	0.5658556	0.001	-11.93	90.00	LINR
o-Xylene	0.6141000	0.5323110	0.5323110	0.001	-13.32	90.00	AVRG
Styrene	0.9646400	0.8312981	0.8312981	0.001	-13.82	90.00	AVRG
Bromoform	0.1976000	0.1780290	0.1780290	0.1	-9.90	90.00	AVRG
Isopropyl Benzene	111.88405	125.00000	1.6497846	0.001	-10.49	90.00	LINR
1,1,2,2-Tetrachloroethane	0.3946800	0.3215641	0.3215641	0.3	-18.52	90.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Instrument ID: 5972HP71 Calibration Date: 03/19/10 Time: 0303

Lab File ID: 0C19002-CCV1R7 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1241 1459

GC Column: SPB-624 ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF5 or AMOUNT	CCAL RRF5	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
1,3-Dichlorobenzene	1.7387900	1.2972799	1.2972799	0.001	-25.39	90.00	AVRG
1,4-Dichlorobenzene	98.090077	125.00000	1.2824960	0.001	-21.53	90.00	LINR
1,2-Dichlorobenzene	102.15806	125.00000	1.0703276	0.001	-18.27	90.00	LINR
1,2-Dibromo-3-Chloropropane	0.0869500	0.0644934	0.0644934	0.001	-25.83	90.00	AVRG
1,2,4-Trichlorobenzene	84.528992	125.00000	0.8464610	0.001	-32.38	90.00	LINR
Xylene (total)	0.6141000	0.5323110	0.5323110	0.001	-13.32	90.00	AVRG
Cyclohexane	0.3209400	0.3042609	0.3042609	0.001	-5.20	90.00	AVRG
Methylcyclohexane	0.4090700	0.3452286	0.3452286	0.001	-15.61	90.00	AVRG
Dibromofluoromethane	137.07168	125.00000	0.4040645	0.001	9.66	90.00	LINR
1,2-Dichloroethane-d4	144.49585	125.00000	0.4198515	0.001	15.60	90.00	LINR
Toluene-d8	117.44871	125.00000	1.1281621	0.001	-6.04	90.00	LINR
Bromofluorobenzene	117.62024	125.00000	0.9173641	0.001	-5.90	90.00	LINR

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Lab File ID: 0C19010-TUN171 BFB Injection Date: 03/19/10

Instrument ID: 5972HP71 BFB Injection Time: 2118

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.8
75	30.0 - 60.0% of mass 95	49.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	86.5
175	5.0 - 9.0% of mass 174	6.4 (7.3)1
176	95.0 - 101.0% of mass 174	84.5 (97.6)1
177	5.0 - 9.0% of mass 176	5.5 (6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005	0C19010-CCV	0C19010-CCV171	03/19/10	2134
02	VBLKHP	0031932-BLK	0031932-BLK171	03/19/10	2209
03	VHPLCS	0031932-BS1	0031932-BS171	03/19/10	2237
04	VHPLCSD	0031932-BSD	0031932-BSD171	03/19/10	2305
05	IR69-GW01D	1003102-02	1003102-0271	03/19/10	2333
06	IR69-GW05	1003102-03	1003102-0371	03/20/10	0001
07	IR69-GW05D	1003102-04	1003102-0471	03/20/10	0029
08	IR69-GW03BCH	1003102-05	1003102-0571	03/20/10	0057
09	IR69-GW02BCH	1003102-06	1003102-0671	03/20/10	0124
10	IR69-GW07D	1003102-07	1003102-0771	03/20/10	0152
11	EB01-030910-GW	1003102-08	1003102-0871	03/20/10	0220
12	IR69-GW07	1003102-09	1003102-0971	03/20/10	0248
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FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Instrument ID: 5972HP71 Calibration Date: 03/19/10 Time: 2134

Lab File ID: 0C19010-CCV171 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1241 1459

GC Column: SPB-624 ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF5 or AMOUNT	CCAL RRF5	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dichlorodifluoromethane	0.4372700	0.3314816	0.3314816	0.001	-24.19	90.00	AVRG
Chloromethane	0.2822500	0.2251623	0.2251623	0.1	-20.22	90.00	AVRG
Vinyl Chloride	0.2765700	0.2460665	0.2460665	0.001	-11.03	20.00	AVRG
Bromomethane	96.157179	125.00000	0.1387495	0.001	-23.07	90.00	LINR
Chloroethane	0.1519400	0.1318369	0.1318369	0.001	-13.23	90.00	AVRG
Trichlorofluoromethane	0.5465400	0.6026602	0.6026602	0.001	10.27	90.00	AVRG
1,1-Dichloroethene	0.2409600	0.2513740	0.2513740	0.001	4.32	20.00	AVRG
Carbon disulfide	0.8145600	0.7667543	0.7667543	0.001	-5.87	90.00	AVRG
1,1,2-trichloro-1,2,2-triflu	0.1991700	0.1767944	0.1767944	0.001	-11.23	90.00	AVRG
Acetone	0.0337800	0.0283387	0.0283387	0.001	-16.11	90.00	AVRG
Methyl acetate	0.0783500	0.0746831	0.0746831	0.001	-4.68	90.00	AVRG
Methylene Chloride	0.2282700	0.2222812	0.2222812	0.001	-2.62	90.00	AVRG
trans-1,2-Dichloroethene	0.2728000	0.2805244	0.2805244	0.001	2.83	90.00	AVRG
Methyl-tert-butyl ether	0.4831000	0.4527731	0.4527731	0.001	-6.28	90.00	AVRG
1-Dichloroethane	0.5226700	0.4834065	0.4834065	0.1	-7.51	90.00	AVRG
cis-1,2-Dichloroethene	0.2723200	0.2835039	0.2835039	0.001	4.11	90.00	AVRG
2-butanone	0.0419000	0.0373756	0.0373756	0.001	-10.80	90.00	AVRG
Chloroform	0.5847800	0.5514535	0.5514535	0.001	-5.70	20.00	AVRG
1,1,1-Trichloroethane	0.6022900	0.5890504	0.5890504	0.001	-2.20	90.00	AVRG
Carbon Tetrachloride	0.5764200	0.5409421	0.5409421	0.001	-6.15	90.00	AVRG
Benzene	0.8546000	0.8292257	0.8292257	0.001	-2.97	90.00	AVRG
1,2-Dichloroethane	0.4373500	0.3891512	0.3891512	0.001	-11.02	90.00	AVRG
Trichloroethene	0.3253100	0.3316835	0.3316835	0.001	1.96	90.00	AVRG
1,2-Dichloropropane	0.2131400	0.1976035	0.1976035	0.001	-7.29	20.00	AVRG
Bromodichloromethane	0.4041100	0.3735342	0.3735342	0.001	-7.57	90.00	AVRG
cis-1,3-Dichloropropene	0.3645300	0.3394445	0.3394445	0.001	-6.88	90.00	AVRG
4-Methyl-2-pentanone	0.1383200	0.1188770	0.1188770	0.001	-14.06	90.00	AVRG
Toluene	0.7783600	0.7106520	0.7106520	0.001	-8.70	20.00	AVRG
trans-1,3-Dichloropropene	0.4528700	0.3829201	0.3829201	0.001	-15.44	90.00	AVRG
1,1,2-Trichloroethane	0.1941000	0.1724154	0.1724154	0.001	-11.17	90.00	AVRG
Tetrachloroethene	113.46074	125.00000	0.3411411	0.001	-9.23	90.00	LINR
2-hexanone	0.0995100	0.0814859	0.0814859	0.001	-18.11	90.00	AVRG
Dibromochloromethane	0.3511900	0.3028849	0.3028849	0.001	-13.75	90.00	AVRG
1,2-Dibromoethane	0.2376300	0.2123662	0.2123662	0.001	-10.63	90.00	AVRG
Chlorobenzene	0.9889600	0.8832676	0.8832676	0.3	-10.69	90.00	AVRG
Ethylbenzene	0.5326100	0.4667528	0.4667528	0.001	-12.36	20.00	AVRG
m,p-Xylene	226.40219	250.00000	0.5795482	0.001	-9.44	90.00	LINR
o-Xylene	0.6141000	0.5419360	0.5419360	0.001	-11.75	90.00	AVRG
Styrene	0.9646400	0.8637085	0.8637085	0.001	-10.46	90.00	AVRG
Bromoform	0.1976000	0.1689320	0.1689320	0.1	-14.51	90.00	AVRG
Isopropyl Benzene	108.52557	125.00000	1.6063922	0.001	-13.18	90.00	LINR
1,1,2,2-Tetrachloroethane	0.3946800	0.3247144	0.3247144	0.3	-17.73	90.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Instrument ID: 5972HP71 Calibration Date: 03/19/10 Time: 2134

Lab File ID: 0C19010-CCV171 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1241 1459

GC Column: SPB-624 ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF5 or AMOUNT	CCAL RRF5	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
1,3-Dichlorobenzene	1.7387900	1.3947940	1.3947940	0.001	-19.78	90.00	AVRG
1,4-Dichlorobenzene	102.55899	125.00000	1.3331141	0.001	-17.95	90.00	LINR
1,2-Dichlorobenzene	104.63656	125.00000	1.0945393	0.001	-16.29	90.00	LINR
1,2-Dibromo-3-Chloropropane	0.0869500	0.0661786	0.0661786	0.001	-23.89	90.00	AVRG
1,2,4-Trichlorobenzene	97.980273	125.00000	0.9607215	0.001	-21.62	90.00	LINR
Xylene (total)	0.6141000	0.5419360	0.5419360	0.001	-11.75	90.00	AVRG
Cyclohexane	0.3209400	0.3003358	0.3003358	0.001	-6.42	90.00	AVRG
Methylcyclohexane	0.4090700	0.3607270	0.3607270	0.001	-11.82	90.00	AVRG
Dibromofluoromethane	120.70416	125.00000	0.3589403	0.001	-3.44	90.00	LINR
1,2-Dichloroethane-d4	110.41796	125.00000	0.3246097	0.001	-11.66	90.00	LINR
Toluene-d8	121.10950	125.00000	1.1600920	0.001	-3.11	90.00	LINR
Bromofluorobenzene	115.88529	125.00000	0.9043607	0.001	-7.29	90.00	LINR

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Lab File ID: 0C22006-TUN173 BFB Injection Date: 03/22/10

Instrument ID: 5972HP73 BFB Injection Time: 1256

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.8
75	30.0 - 60.0% of mass 95	42.9
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	81.5
175	5.0 - 9.0% of mass 174	5.8 (7.1)1
176	95.0 - 101.0% of mass 174	79.1 (97.0)1
177	5.0 - 9.0% of mass 176	5.0 (6.4)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD001	0C22006-CAL	0C22006-CAL273	03/22/10	1332
02	VSTD0.5	0C22006-CAL	0C22006-CAL173	03/22/10	1359
03	VSTD005	0C22006-CAL	0C22006-CAL373	03/22/10	1427
04	VSTD010	0C22006-CAL	0C22006-CAL473	03/22/10	1454
05	VSTD020	0C22006-CAL	0C22006-CAL573	03/22/10	1522
06	VSTD040	0C22006-CAL	0C22006-CAL673	03/22/10	1549
07	VBLKHQ	0032252-BLK	0032252-BLK1R7	03/22/10	1655
08	VHQLCS	0032252-BS1	0032252-BS1R73	03/22/10	1809
09	VHQLCSD	0032252-BSD	0032252-BSD173	03/22/10	1836
10	IR69-GW10	1003102-10	1003102-1073	03/22/10	1923
11	IR69-TB01-031110	1003102-12	1003102-1273	03/22/10	1951
12	IR69-TB01-031010	1003102-13	1003102-1373	03/22/10	2018
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FORM V VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Instrument ID: 5972HP73 Calibration Date(s): 03/22/10 03/22/10

Column: SPB-624 ID: 0.32 (mm) Calibration Time(s): 1332 1549

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2	MAX %RSD OR R^2
Dichlorodifluoromethane	LINR	-0.1411799	3.44461353	0.9973594	0.9900000
Chloromethane	AVRG		0.40090915	13.111	15.000
Vinyl Chloride	AVRG		0.21947087	10.112	30.000
Bromomethane	LINR	-0.0664625	11.1469998	0.9997884	0.9900000
Chloroethane	AVRG		0.06631574	7.251	15.000
Trichlorofluoromethane	AVRG		0.64016532	11.687	15.000
1,1-Dichloroethene	AVRG		0.38288849	6.552	30.000
Carbon disulfide	AVRG		1.47941846	6.386	15.000
1,1,2-trichloro-1,2,2-triflu	LINR	-0.0102222	4.44026207	0.9996845	0.9900000
Acetone	LINR	-0.2566018	44.1591368	0.9994551	0.9900000
Methyl acetate	LINR	-0.0487515	12.9713833	0.9998691	0.9900000
Methylene Chloride	AVRG		0.33898135	6.424	15.000
trans-1,2-Dichloroethene	AVRG		0.43387628	4.657	15.000
Methyl-tert-butyl ether	AVRG		0.34044330	9.337	15.000
1,1-Dichloroethane	AVRG		0.64912439	3.931	15.000
cis-1,2-Dichloroethene	AVRG		0.38726241	3.862	15.000
butanone	AVRG		0.03664904	4.514	15.000
loroform	AVRG		0.60163739	4.173	30.000
1,1,1-Trichloroethane	AVRG		0.53556168	3.690	15.000
Carbon Tetrachloride	AVRG		0.47048412	4.783	15.000
Benzene	AVRG		1.31464644	2.691	15.000
1,2-Dichloroethane	AVRG		0.25021043	6.688	15.000
Trichloroethene	AVRG		0.38972701	4.988	15.000
1,2-Dichloropropane	AVRG		0.28671619	5.801	30.000
Bromodichloromethane	AVRG		0.34163689	3.925	15.000
cis-1,3-Dichloropropene	AVRG		0.34882961	8.159	15.000
4-Methyl-2-pentanone	AVRG		0.13908607	6.357	15.000
Toluene	AVRG		1.30950765	4.160	30.000
trans-1,3-Dichloropropene	AVRG		0.47120664	4.103	15.000
1,1,2-Trichloroethane	AVRG		0.24547776	7.743	15.000
Tetrachloroethene	LINR	0.06751700	1.86837684	0.9992372	0.9900000
2-hexanone	AVRG		0.09112061	7.741	15.000
Dibromochloromethane	AVRG		0.29317016	4.949	15.000
1,2-Dibromoethane	AVRG		0.22983427	3.731	15.000
Chlorobenzene	AVRG		1.32702042	7.410	15.000
Ethylbenzene	AVRG		0.75689371	7.549	30.000
m,p-Xylene	AVRG		0.91901707	7.751	15.000
o-Xylene	AVRG		0.83125045	5.355	15.000
Styrene	AVRG		1.18300260	12.007	15.000
Bromoform	AVRG		0.14825550	8.676	15.000
Isopropyl Benzene	AVRG		2.39657664	7.832	15.000
1,1,2,2-Tetrachloroethane	AVRG		0.53139459	5.275	15.000
1,3-Dichlorobenzene	LINR	0.01539330	0.47274403	0.9997115	0.9900000
1,4-Dichlorobenzene	LINR	-0.0351066	0.49622007	0.9998093	0.9900000

FORM VI VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Lab File ID: 0C23006-TUN171 BFB Injection Date: 03/23/10

Instrument ID: 5972HP71 BFB Injection Time: 1354

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.5
75	30.0 - 60.0% of mass 95	41.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	87.1
175	5.0 - 9.0% of mass 174	6.7 (7.7)1
176	95.0 - 101.0% of mass 174	87.8 (100.8)1
177	5.0 - 9.0% of mass 176	5.9 (6.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD001	0C23006-CAL	0C23006-CAL271	03/23/10	1426
02	VSTD0.5	0C23006-CAL	0C23006-CAL171	03/23/10	1454
03	VSTD005	0C23006-CAL	0C23006-CAL371	03/23/10	1529
04	VSTD010	0C23006-CAL	0C23006-CAL471	03/23/10	1558
05	VSTD040	0C23006-CAL	0C23006-CAL671	03/23/10	1653
06	VSTD020	0C23006-CAL	0C23006-CAL5R7	03/23/10	1721
07	VBLKHX	0032320-BLK	0032320-BLK1R7	03/23/10	1832
08	VHXLCS	0032320-BS1	0032320-BS171	03/23/10	2002
09	VHXLCSD	0032320-BSD	0032320-BSD171	03/23/10	2106
10	EB01-031310-SS	1003102-22	1003102-2271	03/23/10	2202
11	IR69-GW04	1003102-14	1003102-1471	03/23/10	2229
12	IR69-GW11IW	1003102-15	1003102-1571	03/23/10	2257
13	IR69-GW11DW	1003102-16	1003102-1671	03/23/10	2325
14	IR69-GW05DW	1003102-17	1003102-1771	03/23/10	2352
15	IR69-GW05IW	1003102-18	1003102-1871	03/24/10	0020
16	EB01-031410-SD	1003102-19	1003102-1971	03/24/10	0048
17	IR69-GW15BCH	1003102-20	1003102-2071	03/24/10	0116
18	EB01-031310-GW	1003102-21	1003102-2171	03/24/10	0144
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FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Instrument ID: 5972HP71 Calibration Date(s): 03/23/10 03/23/10

Column: SPB-624 ID: 0.32 (mm) Calibration Time(s): 1426 1721

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2	MAX %RSD OR R^2	
Dichlorodifluoromethane	AVRG		0.44620239	14.057	15.000	<-
Chloromethane	AVRG		0.36100994	2.746	15.000	
Vinyl Chloride	AVRG		0.27117386	7.702	30.000	
Bromomethane	LINR	0.16722755	5.63092314	0.9978869	0.9900000	
Chloroethane	LINR	-0.0603386	6.54621450	0.9976747	0.9900000	
Trichlorofluoromethane	LINR	0.01969996	1.55131161	0.9975274	0.9900000	<-
1,1-Dichloroethene	AVRG		0.24477705	10.725	30.000	
Carbon disulfide	AVRG		0.78788743	5.941	15.000	
1,1,2-trichloro-1,2,2-triflu	LINR	-0.0934521	7.84789519	0.9991874	0.9900000	
Acetone	AVRG		0.03088940	10.967	15.000	
Methyl acetate	AVRG		0.08808612	14.290	15.000	
Methylene Chloride	AVRG		0.20486308	10.165	15.000	
trans-1,2-Dichloroethene	AVRG		0.27927231	9.612	15.000	
Methyl-tert-butyl ether	AVRG		0.37332211	10.572	15.000	
1,1-Dichloroethane	AVRG		0.51599851	6.390	15.000	
cis-1,2-Dichloroethene	AVRG		0.28384274	9.818	15.000	
butanone	AVRG		0.04382008	9.656	15.000	
loroform	AVRG		0.47216297	6.803	30.000	
1,1,1-Trichloroethane	AVRG		0.56371143	10.946	15.000	
Carbon Tetrachloride	LINR	-0.0416406	2.25851692	0.9999137	0.9900000	
Benzene	AVRG		0.79132627	7.551	15.000	
1,2-Dichloroethane	AVRG		0.32414982	8.542	15.000	
Trichloroethene	AVRG		0.24072169	13.706	15.000	
1,2-Dichloropropane	AVRG		0.21862784	11.311	30.000	
Bromodichloromethane	AVRG		0.32785955	9.594	15.000	
cis-1,3-Dichloropropene	AVRG		0.31123012	8.964	15.000	
4-Methyl-2-pentanone	AVRG		0.14815484	11.373	15.000	
Toluene	AVRG		0.82240060	9.405	30.000	
trans-1,3-Dichloropropene	AVRG		0.37394347	7.835	15.000	
1,1,2-Trichloroethane	AVRG		0.19052002	6.720	15.000	
Tetrachloroethene	LINR	-0.0797114	3.97616834	0.9998282	0.9900000	
2-hexanone	AVRG		0.09994493	11.002	15.000	
Dibromochloromethane	AVRG		0.26627949	7.224	15.000	
1,2-Dibromoethane	AVRG		0.25346719	8.442	15.000	
Chlorobenzene	AVRG		1.04476959	10.092	15.000	
Ethylbenzene	AVRG		0.60451954	12.188	30.000	
m,p-Xylene	AVRG		0.75237608	12.316	15.000	
o-Xylene	AVRG		0.70244343	12.352	15.000	
Styrene	AVRG		1.07301015	8.083	15.000	
Bromoform	AVRG		0.16166090	7.882	15.000	
Isopropyl Benzene	AVRG		1.97002351	12.701	15.000	
1,1,2,2-Tetrachloroethane	AVRG		0.49257840	7.213	15.000	
1,3-Dichlorobenzene	AVRG		1.56833663	11.661	15.000	
1,4-Dichlorobenzene	AVRG		1.51589400	11.078	15.000	

FORM VI VOA

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKHQ

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Lab File ID: 0032252-BLK1R73_D Lab Sample ID: 0032252-BLK1

Date Analyzed: 03/22/10 Time Analyzed: 1655

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

Instrument ID: 5972HP73

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VHQLCS	0032252-BS1	0032252-BS1R	1809
02	VHQLCSD	0032252-BSD1	0032252-BSD1	1836
03	IR69-GW10	1003102-10	1003102-1073	1923
04	IR69-TB01-031110	1003102-12	1003102-1273	1951
05	IR69-TB01-031010	1003102-13	1003102-1373	2018
06				
07				
08				
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COMMENTS: MC 0.0275 ug/L
1,2-dichlorobenzene 0.0705
1,2,4-trichlorobenzene 0.125

FORM IV VOA

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKRV

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Lab File ID: 0031902-BLK171_D Lab Sample ID: 0031902-BLK1

Date Analyzed: 03/19/10 Time Analyzed: 0330

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

Instrument ID: 5972HP71

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VRVLCS	0031902-BS1	0031902-BS17	0358
02	VRVLCSD	0031902-BSD1	0031902-BSD1	0426
fl 03	IR69-GW01	1003102-01	1003102-0171	0454
04				
05				
06				
07				
08				
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COMMENTS: LIC 0.2613 ug/L

FORM IV VOA

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKHX

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Lab File ID: 0032320-BLK1R71_D Lab Sample ID: 0032320-BLK1

Date Analyzed: 03/23/10 Time Analyzed: 1832

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

Instrument ID: 5972HP71

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VHXLCS	0032320-BS1	0032320-BS17	2002
02	VHXLCSD	0032320-BSD1	0032320-BSD1	2106
03	EB01-031310-SS	1003102-22	1003102-2271	2202
04	IR69-GW04	1003102-14	1003102-1471	2229
05	IR69-GW11IW	1003102-15	1003102-1571	2257
06	IR69-GW11DW	1003102-16	1003102-1671	2325
07	IR69-GW05DW	1003102-17	1003102-1771	2352
08	IR69-GW05IW	1003102-18	1003102-1871	0020
09	EB01-031410-SD	1003102-19	1003102-1971	0048
10	IR69-GW15BCH	1003102-20	1003102-2071	0116
11	EB01-031310-GW	1003102-21	1003102-2171	0144
12				
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30				

COMMENTS: Acetone 0.475 ug/L
MC 0.0665

FORM IV VOA

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKHP

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Lab File ID: 0031932-BLK171_T Lab Sample ID: 0031932-BLK1

Date Analyzed: 03/19/10 Time Analyzed: 2209

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

Instrument ID: 5972HP71

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VHPLCS	0031932-BS1	0031932-BS17	2237
02	VHPLCSD	0031932-BSD1	0031932-BSD1	2305
03	IR69-GW01D	1003102-02	1003102-0271	2333
04	IR69-GW05	1003102-03	1003102-0371	0001
05	IR69-GW05D	1003102-04	1003102-0471	0029
06	IR69-GW03BCH	1003102-05	1003102-0571	0057
07	IR69-GW02BCH	1003102-06	1003102-0671	0124
08	IR69-GW07D	1003102-07	1003102-0771	0152
09	EB01-030910-GW	1003102-08	1003102-0871	0220
10	IR69-GW07	1003102-09	1003102-0971	0248
11				
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COMMENTS: acetone 1.1 J ug/L

page 1 of 1

FORM IV VOA

Initial Calibration Date: 3/23/2010

RRF and %RSD Calculations:

Compound Name: vinyl chloride
Lab Value: 0.2321

Area of Compound	1465977
Area of Internal STD	789488
Conc. of Internal STD	125
Conc. of Compound	1000
Calculated RRF	0.232

Compound Name: 2-hexanone
Lab Value: 11.0

RRF of STD 1	0.1155
RRF of STD 2	0.0900
RRF of STD 3	0.0970
RRF of STD 4	0.1110
RRF of STD 5	0.0975
RRF of STD 6	0.0886
Calculated % RSD	11.0

Continuing Calibration File ID: 3/24/2010

RRF and %D Calculations:

Compound Name: methylene chloride
Lab Value: 0.204

Area of Compound	120581
Area of Internal STD	590957
Conc. of Internal STD	125
Conc. of Compound	125
Calculated RRF	0.204

Compound Name: toluene
Lab Value: 4.9

Average RRF	0.822
Calibration Check RRF	0.863
Calculated % D	-4.9

SAMPLE CALCULATION

Sample ID: EB01-030910-GW
Standard ID: 3/16/2010
Compound: acetone
Concnetration: 13 ug/L

	Water (ug/L)	Soil (ug/Kg)	Soil ug/Kg)
Area of Compound	30302		
Area of Internal STD	346215		
Conc. of Internal (ng)	125		
RRF of Compound	0.03377963		
Dilution Factor	1		
Weight of Sample	NA	25	
Volume of Sample	25	NA	
% Moisture	NA	0.79	
Aliquot of sample	NA	NA	
Concentration	12.96	#DIV/0!	#DIV/0!

	RT of Internal STD	RT of Compound	RRT
Sample	11.074	7.695	0.695
Standard	11.078	7.698	0.695

CompuChem

A division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1003102
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS:

IR69-GW05	**IR69-GW05D**	**IR69-GW01**	**IR69-GW01D**
IR69-GW07D	**EB01-030910-GW**	**IR69-GW03BCH**	**IR69-GW02BCH**
IR69-TB01-031110	**IR69-TB01-031010**	**IR69-GW07**	**IR69-GW10**
IR69-GW11DW	**IR69-GW05DW**	**IR69-GW04**	**IR69-GW11IW**
IR69-GW15BCH	**EB01-031310-GW**	**IR69-GW05IW**	**EB01-031410-SD**
		EB01-031310-SS	

The 21 aqueous samples listed above were received intact, properly refrigerated between 0.1°C and 2.9°C, with proper documentation, in sealed shipping containers, on March 12 through 17, 2010. The Trip Blanks were scheduled for the requested analyses of the volatile fraction only and the Equipment Blanks were scheduled for the requested analyses of the volatile, semivolatile and pesticide fractions. All remaining samples were scheduled for the requested analyses of the volatile, semivolatile, RSK and pesticide fractions. SW-846, 3rd Edition, Update 3, Method 8260B was used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices for SDG 1003102 are included in the sample data sections.

Analysis holding time requirements were met for all of these samples. The pH values of the samples were equal to 1. There were volatile Project/Target Compound List (TCL) analytes identified above the Contract Required Quantitation Limit (CRQL) in eight of these twenty one samples. All of the system monitoring compounds met recovery criteria in the analyses of the sample. All of the internal standards met response and retention time criteria in the analyses of the sample.

In the initial analyses of samples IR69-GW11IW and IR69-GW11DW, the on-column amounts of some target compounds exceeded the instrument's analytical range as defined by the highest concentration level of the Initial Calibration. The samples were reanalyzed using smaller aliquots of raw sample to bring the on-column amounts into range. We have reported both analyses of samples IR69-GW111W and IR69-GW11DW.

All Bromofluorobenzene (BFB) abundance criteria were met for tunes associated to this SDG. All QC criteria were met for all initial and continuing calibration standards associated to this SDG. Manual integrations were performed on one or more of the process files associated with this SDG including, 0C16005-CAL171, 0C22006-CAL173 and 0C2206-CAL273. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG. The associated method blanks met all quality control criteria. The associated Laboratory Control Samples (LCS/LCSD) met overall accuracy criteria. However, VRVLCS/VRVLCSD were bias high for Trichlorofluoromethane and VRXLCS/VRXLCSD were bias high for 4-Methyl-2-pentanone and 2-Hexanone. IR69-GW04 was used as the original to prepare the duplicate matrix spikes as requested. The associated duplicate matrix spikes met most of the advisory accuracy and precision criteria.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Quentisha L. Forrester
Analyst II
March 31, 2010

DataQual

From: Cathy Dover [cdover@compuchemlabs.com]
Sent: Thursday, July 29, 2010 1:56 PM
To: dataqual@charter.net
Cc: Anita Dodson; Gwen.Buckley@CH2M.com; Jackie Cleveland
Subject: RE: xylene questions for CTO-81

Hi Laura,

I spoke with a data reviewer that has been here for a while and then the manager by phone. I was able to read off the quant report results, form 1 results and EDD results for the 5 samples. He said that the total xylenes should have been the same J value result as the o-xylene hit on the 5 samples below.

The data reviewer/analyst works a split shift, but I was able to catch him before work today! He was very helpful! He remembered the change that had to be made to the "part of total" line items on the quant report and he thought that it only affected a small amount of data for approximately a week in March. This only affected the 25ml 8260B DOD waters for that short time. They have everything correct now for the reporting for xylenes in that method.

The manager said that the RL for the total is lower than the m,p-xylene RL so that any J values from the o-xylene or m,p-xylene will show up on the form 1.

I apologize for the oversight on the quant reports that was causing the total xylene issue! Let me know if you need anything else.

Cathy

Cathy Dover
Supervisor of Project Management
Compuchem
501 Madison Ave.
Cary, N.C. 27513
(919)379-4089 office
(919)379-4050 fax

From: dataqual@charter.net [mailto:dataqual@charter.net]
Sent: Thursday, July 29, 2010 11:55 AM
To: Cathy Dover
Cc: Anita Dodson; Gwen.Buckley@CH2M.com; Jackie Cleveland
Subject: Re: xylene questions for CTO-81

Cathy,

So to verify the total xylene detection limit should have reported at the m,p xylene detection limit of 1.0 and NOT the limit it was reported at of the o xylene limit at 0.5? If this is confirmed by the lab I will make the corrections to the Form 1s and EDD so we can get this to CH2M HILL.

Thank you,
Laura

Sent via BlackBerry by AT&T

From: "Cathy Dover" <cdover@compuchemlabs.com>

Date: Thu, 29 Jul 2010 10:25:07 -0400
To: DataQual<dataqual@charter.net>
Cc: <Anita.Dodson@CH2M.com>; <Gwen.Buckley@CH2M.com>; <cleve137@charter.net>
Subject: RE: xylene questions for CTO-81

Hi Everyone,

I checked the few sample IDs listed below and for these there was no hit (not even a J value result) for m,p-xylene.

I learned something new with this data inquiry!

Let me know if you need anything else.

Thanks,

Cathy

Cathy Dover
Supervisor of Project Management
Compuchem
501 Madison Ave.
Cary, N.C. 27513
(919)379-4089 office
(919)379-4050 fax

From: DataQual [mailto:dataqual@charter.net]
Sent: Sunday, July 25, 2010 5:24 PM
To: Cathy Dover
Subject: RE: xylene questions for CTO-81

Thanks, Cathy!

From: Cathy Dover [mailto:cdover@compuchemlabs.com]
Sent: Sunday, July 25, 2010 2:13 PM
To: DataQual
Cc: Jacqueline Cleveland; gwen.buckley@ch2m.com
Subject: RE: xylene questions for CTO-81

HI Laura,

I am not exactly how the xylene reporting has changed so I passed your e-mail along to the lab manager to help. He is out on vacation, but has been e-mailing back a few times a day.

I have asked him to let me know what needs to be done with the examples you listed below.

We will get back to you ASAP.

Have a great day!

Cathy

Cathy Dover
Supervisor of Project Management
Compuchem

501 Madison Ave.
Cary, N.C. 27513
(919)379-4089 office
(919)379-4050 fax

From: DataQual [mailto:dataqual@charter.net]
Sent: Saturday, July 24, 2010 3:11 PM
To: Cathy Dover
Cc: 'Jacqueline Cleveland'; gwen.buckley@ch2m.com
Subject: xylene questions for CTO-81

Hi Cathy,

I have looked further into the xylene issue that we discussed earlier and it appears that the only cases that I have found that are in question are the ones listed below:

Sample 1003102-08: o-xylene reported at 0.076 , no total xylene reported

Sample 1003089-08: o-xylene reported at 0.038, no total xylene reported

Sample 1003089-09: o-xylene reported at 0.067, no total xylene reported

Sample 1003089-14: o-xylene reported at 0.062, no total xylene reported

Sample 1003089-21: o-xylene reported at 0.065, no total xylene reported

In all cases the MDL for both o-xylene and total xylene are 0.03. I can make any changes to the EDD that may be required, please submit and hard copy corrections.

Thanks,
Laura

Laura Maschhoff
DataQual Environmental Services, LLC
dataqual@charter.net

Data Completeness

The data package was received complete and intact. Resubmissions were not required. (SW846 Method 8270C)
All field sample and QC blank IDs were missing the first four (IR69) and or the last four (-10A) characters. The characters were added to the Form 1s in the DV reports by the data validator.

Laboratory: CompuChem

Holding Times

Sampling Date: 3/8-14/10
Received Date: 3/12-17/10
Extraction Date: 3/13-19/10
Analysis Dates: 3/23-31/10
Cooler Temp: 0.1-2.9°C

All prep and analysis holding time requirements were met.

Calibrations

Mass assignments were verified by the injection of DFTPP.
The continuing calibrations required qualifications due to high %D values; see attached Form VIIs.

Internal Standards

All criteria met.

Blank Summary

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying criteria.
- Qualification/Action codes where applied as stated in table below:

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Field	Detects	Not detected	No qualifications
	< CRQL*	< CRQL*	Report CRQL value with a U
		≥ CRQL*	Use professional judgment
	> CRQL*	< CRQL*	Report CRQL value with a U
		≥ CRQL* and < blank concentration	Report the concentration for the sample with a U, or qualify the data as unusable R
		≥ CRQL* and ≥ blank concentration	Use professional judgment
	= CRQL*	< CRQL*	Report CRQL value with a U
		≥ CRQL*	Use professional judgment
	Gross contamination	Detects	Qualify results as unusable R

*5x the CRQL for bis(2-ethylhexyl)phthalate

Method blank contamination was not exhibited- qualifications were not required. The associated field QC for this data package was: IR69-EB01-030810-GW (no positive results), IR69-EB01-030910-GW (no positive results), IR69-EB01-031310-GW and IR69-EB01-031410-GW-equipment blanks; IR69-FB01-031010 and IR69-FB01-031910 (no positive results)- field blank.

Blank Contamination and Qualification Summaries

Blank ID	Compound	Concentration	Reporting Limit	Action Level	Qualifier
IR69-EB01-031410-GW-SIM	naphthalene	0.072J ug/L	0.20 ug/L	< RL	U at RL
IR69-EB01-031310-GW-SIM	naphthalene	0.054J	0.21	< RL	U at RL
	2-methylnaphthalene	0.017	0.21	< RL	U at RL
IR69-FB01-031010-SIM	naphthalene	0.063J	0.20	< RL	U at RL

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Qual Code
PAH SIM: IR69-GW11W-10A	2-methylnaphthalene	U at RL	EBL

Surrogates

All criteria were met.

Laboratory Control Sample

No qualifications were required.

Matrix Spike/Spike Duplicate Samples

An MS/MSD was submitted for sample IR69-GW04-10A- several recoveries exhibited high results however there were no positive results therefore no qualifications were required.

Field Duplicate Sample

A field duplicate was submitted for samples IR69-GW01-10A, IR69-GW05-10A and IR69-GW07-10A, no positive results above the CRQL were exhibited in either duplicate pair--no qualifications required.

Specific Comments:

All sample results were reported within the calibration range of the instruments.

Detection limits were acceptable. Raw data and calculations were verified.

We have limited the supporting documentation, found with these worksheets, to those forms that indicate qualifications were required.

Validator Signature: L Mascellino **Date:** 7/23/10

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Lab File ID: 0C24002-TUN1C70 DFTPP Injection Date: 03/24/10

Instrument ID: 5972HP70 DFTPP Injection Time: 0101

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	42.7
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	62.2
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 75.0% of mass 198	47.7
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	23.8
365	Greater than 0.75% of mass 198	4.07
441	Present, but less than mass 443	16.8
442	40.0 - 110.0% of mass 198	99.4
443	15.0 - 24.0% of mass 442	19.4 (19.5)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050NI	0C24002-CCV1	0C24002-CCV1C7	03/24/10	0122
02	IR69-GW01	1003102-01	1003102-01C70	03/24/10	0448
03	IR69-GW01D	1003102-02	1003102-02C70	03/24/10	0538
04	IR69-GW05	1003102-03	1003102-03C70	03/24/10	0628
05	IR69-GW05D	1003102-04	1003102-04C70	03/24/10	0809
06	IR69-GW03BCH	1003102-05	1003102-05C70	03/24/10	1039
07	IR69-GW02BCH	1003102-06	1003102-06C70	03/24/10	1220
08					
09					
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22					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Instrument ID: 5972HP70 Calibration Date: 03/24/10 Time: 0122

Lab File ID: 0C24002-CCV1C7 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1501 1820

GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
N-Nitrosodiphenylamine	0.4960000	0.4533147	0.01	-8.60	20.00	AVRG
4-Bromophenyl-phenylether	0.1950000	0.1841254	0.01	-5.58	50.00	AVRG
Hexachlorobenzene	0.2480000	0.2366269	0.01	-4.58	50.00	AVRG
Atrazine	0.1990000	0.1956320	0.01	-1.69	50.00	AVRG
Pentachlorophenol	0.1610000	0.1371904	0.05	-14.79	20.00	AVRG
Phenanthrene	0.8790000	0.8110487	0.01	-7.73	50.00	AVRG
Anthracene	0.8770000	0.8193842	0.01	-6.57	50.00	AVRG
Carbazole	0.8600000	0.8009169	0.01	-6.87	50.00	AVRG
Di-n-butylphthalate	1.3630000	1.2267071	0.01	-10.0	50.00	AVRG
Fluoranthene	1.0220000	0.9480015	0.01	-7.24	20.00	AVRG
Pyrene	0.9450000	0.8844858	0.01	-6.40	50.00	AVRG
Butylbenzylphthalate	0.5940000	0.5378994	0.01	-9.44	50.00	AVRG
3,3'-Dichlorobenzidine	0.2850000	0.2466862	0.01	-13.44	50.00	AVRG
is(2-ethylhexyl)Phthalate	0.8340000	0.7473621	0.01	-10.39	50.00	AVRG
enzo(a)anthracene	0.9020000	0.8135066	0.01	9.81	50.00	AVRG
Chrysene	0.8450000	0.7655717	0.01	-9.40	50.00	AVRG
Di-n-octylphthalate	1.4240000	1.3134711	0.01	-7.76	20.00	AVRG
Benzo(b)fluoranthene	1.0060000	0.9289416	0.01	-7.66	50.00	AVRG
Benzo(k)fluoranthene	0.9530000	0.9063513	0.01	-4.89	50.00	AVRG
Benzo(a)pyrene	0.8940000	0.7952629	0.01	-11.04	20.00	AVRG
Indeno(1,2,3-cd)pyrene	0.8520000	0.6496541	0.01	-23.75	50.00	AVRG
Dibenzo(a,h)anthracene	0.8340000	0.6533632	0.01	-21.66	50.00	AVRG
Benzo(g,h,i)perylene	0.8520000	0.6288530	0.01	-26.19	50.00	AVRG
2-Fluorophenol	1.0350000	0.8999592	0.01	-13.05	50.00	AVRG
Phenol-d5	1.4070000	1.2829291	0.01	-8.82	50.00	AVRG
Nitrobenzene-d5	0.3840000	0.3411569	0.01	-11.16	50.00	AVRG
2-Fluorobiphenyl	1.1620000	1.0603676	0.01	-8.75	50.00	AVRG
2,4,6-Tribromophenol	0.2870000	0.2696284	0.01	-6.05	50.00	AVRG
Terphenyl-d14	0.5850000	0.5547783	0.01	-5.17	50.00	AVRG

FORM VII SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Lab File ID: 0C25004-TUN1C70 DFTPP Injection Date: 03/25/10

Instrument ID: 5972HP70 DFTPP Injection Time: 0325

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	39.5
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	57.8
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 75.0% of mass 198	47.6
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.2
275	10.0 - 30.0% of mass 198	22.2
365	Greater than 0.75% of mass 198	3.77
441	Present, but less than mass 443	13.8
442	40.0 - 110.0% of mass 198	88.5
443	15.0 - 24.0% of mass 442	16.7 (18.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050NK	0C25004-CCV1	0C25004-CCV1C7	03/25/10	0346
02	IR69-GW10	1003102-10	1003102-10JC70	03/25/10	0442
03					
04					
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FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Instrument ID: 5972HP70 Calibration Date: 03/25/10 Time: 0346

Lab File ID: 0C25004-CCV1C7 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1501 1820

GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
N-Nitrosodiphenylamine	0.4960000	0.4646862	0.01	-6.31	20.00	AVRG
4-Bromophenyl-phenylether	0.1950000	0.1833919	0.01	-5.95	50.00	AVRG
Hexachlorobenzene	0.2480000	0.2369058	0.01	-4.47	50.00	AVRG
Atrazine	0.1990000	0.1962248	0.01	-1.39	50.00	AVRG
Pentachlorophenol	0.1610000	0.1367190	0.05	-15.08	20.00	AVRG
Phenanthrene	0.8790000	0.8075190	0.01	-8.13	50.00	AVRG
Anthracene	0.8770000	0.8154347	0.01	-7.02	50.00	AVRG
Carbazole	0.8600000	0.8030069	0.01	-6.63	50.00	AVRG
Di-n-butylphthalate	1.3630000	1.2833447	0.01	-5.84	50.00	AVRG
Fluoranthene	1.0220000	0.9712850	0.01	-4.96	20.00	AVRG
Pyrene	0.9450000	0.8644737	0.01	-8.52	50.00	AVRG
Butylbenzylphthalate	0.5940000	0.5416991	0.01	-8.80	50.00	AVRG
3,3'-Dichlorobenzidine	0.2850000	0.2623801	0.01	-7.94	50.00	AVRG
is(2-ethylhexyl)Phthalate	0.8340000	0.7513835	0.01	-9.91	50.00	AVRG
enzo(a)anthracene	0.9020000	0.8116709	0.01	-10.01	50.00	AVRG
Chrysene	0.8450000	0.7656247	0.01	-9.39	50.00	AVRG
Di-n-octylphthalate	1.4240000	1.2949886	0.01	-9.06	20.00	AVRG
Benzo(b)fluoranthene	1.0060000	0.8764076	0.01	-12.88	50.00	AVRG
Benzo(k)fluoranthene	0.9530000	0.8578541	0.01	-9.98	50.00	AVRG
Benzo(a)pyrene	0.8940000	0.7928709	0.01	-11.31	20.00	AVRG
Indeno(1,2,3-cd)pyrene	0.8520000	0.6468694	0.01	-24.08	50.00	AVRG
Dibenzo(a,h)anthracene	0.8340000	0.6813724	0.01	-18.30	50.00	AVRG
Benzo(g,h,i)perylene	0.8520000	0.6593502	0.01	-22.61	50.00	AVRG
2-Fluorophenol	1.0350000	0.9410560	0.01	-9.08	50.00	AVRG
Phenol-d5	1.4070000	1.4404568	0.01	2.38	50.00	AVRG
Nitrobenzene-d5	0.3840000	0.3444772	0.01	-10.29	50.00	AVRG
2-Fluorobiphenyl	1.1620000	1.0904737	0.01	-6.16	50.00	AVRG
2,4,6-Tribromophenol	0.2870000	0.2687977	0.01	-6.34	50.00	AVRG
Terphenyl-d14	0.5850000	0.5305981	0.01	-9.30	50.00	AVRG

FORM VII SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Lab File ID: 0C29010-TUN1C70 DFTPP Injection Date: 03/30/10

Instrument ID: 5972HP70 DFTPP Injection Time: 0547

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	37.9
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	51.4
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 75.0% of mass 198	45.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	23.8
365	Greater than 0.75% of mass 198	3.97
441	Present, but less than mass 443	15.9
442	40.0 - 110.0% of mass 198	95.9
443	15.0 - 24.0% of mass 442	17.9 (18.6)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050NR	0C29010-CCV2	0C29010-CCV2C7	03/30/10	0727
02	SODLCS	0031807-BS1	0031807-BS1JC7	03/30/10	0818
03	IR69-GW04	1003102-14	1003102-14C70	03/30/10	1139
04	IR69-GW05DW	1003102-17	1003102-17C70	03/30/10	1411
05	EB01-031410-SD	1003102-19	1003102-19C70	03/30/10	1551
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Instrument ID: 5972HP70 Calibration Date: 03/30/10 Time: 0727

Lab File ID: 0C29010-CCV2C7 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1501 1820

GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzaldehyde	0.8340000	0.5562339	0.01	-33.30	50.00	AVRG
Phenol	1.3110000	1.2762692	0.01	-2.65	20.00	AVRG
Bis(2-chloroethyl)ether	1.0880000	1.0112639	0.01	-7.05	50.00	AVRG
2-Chlorophenol	1.0800000	1.0795003	0.01	-0.05	50.00	AVRG
2-Methylphenol	0.9860000	0.9537733	0.01	-3.27	50.00	AVRG
2,2'-oxybis(1-Chloropropane)	1.7770000	1.4474024	0.01	-18.55	50.00	AVRG
Acetophenone	1.6440000	1.6303845	0.01	-0.83	50.00	AVRG
4-Methylphenol	1.0780000	1.0100401	0.01	-6.30	50.00	AVRG
N-Nitroso-di-N-propylamine	0.9210000	0.8614329	0.05	-6.47	50.00	AVRG
Hexachloroethane	0.6820000	0.7486545	0.01	9.77	50.00	AVRG
Nitrobenzene	0.3740000	0.3735372	0.01	-0.12	50.00	AVRG
Isophorone	0.6830000	0.6596871	0.01	-3.41	50.00	AVRG
2-Nitrophenol	0.1880000	0.1962655	0.01	4.40	20.00	AVRG
,4-Dimethylphenol	0.2260000	0.2135029	0.01	-5.53	50.00	AVRG
is(2-chloroethoxy)methane	0.3960000	0.3827833	0.01	-3.34	50.00	AVRG
2,4-Dichlorophenol	0.2560000	0.2554710	0.01	-0.21	20.00	AVRG
Naphthalene	0.8750000	0.9218591	0.01	5.36	50.00	AVRG
4-Chloroaniline	0.3490000	0.3718693	0.01	6.55	50.00	AVRG
Hexachlorobutadiene	0.1980000	0.2207434	0.01	11.49	20.00	AVRG
Caprolactam	0.0620000	0.0582333	0.01	-6.08	50.00	AVRG
4-Chloro-3-methylphenol	0.2970000	0.2655382	0.01	-10.59	20.00	AVRG
2-Methylnaphthalene	0.5320000	0.5683077	0.01	6.82	50.00	AVRG
Hexachlorocyclopentadiene	0.4430000	0.4517058	0.05	1.96	50.00	AVRG
2,4,6-Trichlorophenol	0.3660000	0.3635157	0.01	-0.68	20.00	AVRG
2,4,5-Trichlorophenol	0.3820000	0.3979730	0.01	4.18	50.00	AVRG
1,1'-Biphenyl	1.2390000	1.2847017	0.01	3.69	50.00	AVRG
2-Chloronaphthalene	1.0350000	1.0844770	0.01	4.78	50.00	AVRG
2-Nitroaniline	0.4070000	0.4115593	0.01	1.12	50.00	AVRG
Dimethylphthalate	1.3010000	1.3664316	0.01	5.03	50.00	AVRG
2,6-Dinitrotoluene	0.3140000	0.3419637	0.01	8.90	50.00	AVRG
Acenaphthylene	1.6650000	1.8132895	0.01	8.91	50.00	AVRG
3-Nitroaniline	0.3570000	0.3802961	0.01	6.52	50.00	AVRG
Acenaphthene	0.9400000	0.9999177	0.01	6.37	20.00	AVRG
2,4-Dinitrophenol	0.2350000	0.2362604	0.05	0.54	50.00	AVRG
4-Nitrophenol	0.2320000	0.1977804	0.05	-14.75	50.00	AVRG
2,4-Dinitrotoluene	0.4310000	0.4687568	0.01	8.76	50.00	AVRG
Dibenzofuran	1.4690000	1.5590655	0.01	6.13	50.00	AVRG
Diethylphthalate	1.4290000	1.4832794	0.01	3.80	50.00	AVRG
4-Chlorophenyl-phenylether	0.5720000	0.5819440	0.01	1.74	50.00	AVRG
Fluorene	1.1560000	1.2548778	0.01	8.55	50.00	AVRG
4-Nitroaniline	0.3390000	0.3599323	0.01	6.17	50.00	AVRG
4,6-Dinitro-2-methylphenol	0.1760000	0.1824267	0.01	3.65	50.00	AVRG

FORM VII SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Instrument ID: 5972HP70 Calibration Date: 03/30/10 Time: 0727

Lab File ID: 0C29010-CCV2C7 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1501 1820

GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
N-Nitrosodiphenylamine	0.4960000	0.5062927	0.01	2.08	20.00	AVRG
4-Bromophenyl-phenylether	0.1950000	0.2234001	0.01	14.56	50.00	AVRG
Hexachlorobenzene	0.2480000	0.2611206	0.01	5.29	50.00	AVRG
Atrazine	0.1990000	0.1816188	0.01	-8.73	50.00	AVRG
Pentachlorophenol	0.1610000	0.1300168	0.05	-19.24	20.00	AVRG
Phenanthrene	0.8790000	0.8915080	0.01	1.42	50.00	AVRG
Anthracene	0.8770000	0.9232547	0.01	5.27	50.00	AVRG
Carbazole	0.8600000	0.9066675	0.01	5.43	50.00	AVRG
Di-n-butylphthalate	1.3630000	1.4132127	0.01	3.68	50.00	AVRG
Fluoranthene	1.0220000	1.1459965	0.01	12.13	20.00	AVRG
Pyrene	0.9450000	0.9605557	0.01	1.65	50.00	AVRG
Butylbenzylphthalate	0.5940000	0.5730102	0.01	-3.53	50.00	AVRG
3,3'-Dichlorobenzidine	0.2850000	0.2055827	0.01	-27.86	50.00	AVRG
is(2-ethylhexyl)Phthalate	0.8340000	0.8252958	0.01	-1.04	50.00	AVRG
enzo(a)anthracene	0.9020000	0.9617389	0.01	6.62	50.00	AVRG
Chrysene	0.8450000	0.9079234	0.01	7.45	50.00	AVRG
Di-n-octylphthalate	1.4240000	1.3533914	0.01	-4.96	20.00	AVRG
Benzo(b)fluoranthene	1.0060000	0.9508525	0.01	-5.48	50.00	AVRG
Benzo(k)fluoranthene	0.9530000	1.0533163	0.01	10.53	50.00	AVRG
Benzo(a)pyrene	0.8940000	0.8987377	0.01	0.53	20.00	AVRG
Indeno(1,2,3-cd)pyrene	0.8520000	0.7855089	0.01	-7.80	50.00	AVRG
Dibenzo(a,h)anthracene	0.8340000	0.8067803	0.01	-3.26	50.00	AVRG
Benzo(g,h,i)perylene	0.8520000	0.8332061	0.01	-2.20	50.00	AVRG
2-Fluorophenol	1.0350000	1.0959349	0.01	5.89	50.00	AVRG
Phenol-d5	1.4070000	1.5205285	0.01	8.07	50.00	AVRG
Nitrobenzene-d5	0.3840000	0.3744503	0.01	-2.49	50.00	AVRG
2-Fluorobiphenyl	1.1620000	1.1734754	0.01	0.99	50.00	AVRG
2,4,6-Tribromophenol	0.2870000	0.2714445	0.01	-5.42	50.00	AVRG
Terphenyl-d14	0.5850000	0.5867018	0.01	0.29	50.00	AVRG

FORM VII SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Lab File ID: 0C29009-TUN1C70 DFTPP Injection Date: 03/31/10

Instrument ID: 5972HP70 DFTPP Injection Time: 0240

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 80.0% of mass 198	42.4	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	57.6	
70	Less than 2.0% of mass 69	0.0	(0.0)1
127	25.0 - 75.0% of mass 198	46.4	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.9	
275	10.0 - 30.0% of mass 198	22.4	
365	Greater than 0.75% of mass 198	3.00	
441	Present, but less than mass 443	14.1	
442	40.0 - 110.0% of mass 198	88.8	
443	15.0 - 24.0% of mass 442	16.8	(18.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050NS	0C29009-CCV1	0C29009-CCV1C7	03/31/10	0306
02	IR69-GW11IW	1003102-15	1003102-15J2C7	03/31/10	0403
03	IR69-GW11DW	1003102-16	1003102-16JC70	03/31/10	0453
04	IR69-GW05IW	1003102-18	1003102-18JC70	03/31/10	0543
05	IR69-GW15BCH	1003102-20	1003102-20JC70	03/31/10	0633
06	EB01-031310-GW	1003102-21	1003102-21JC70	03/31/10	0723
07	EB01-031310-SS	1003102-22	1003102-22JC70	03/31/10	0813
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FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Instrument ID: 5972HP70 Calibration Date: 03/31/10 Time: 0306

Lab File ID: 0C29009-CCV1C7 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1501 1820

GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzaldehyde	0.8340000	0.6908175	0.01	-17.17	50.00	AVRG
Phenol	1.3110000	1.3975813	0.01	6.60	20.00	AVRG
Bis(2-chloroethyl)ether	1.0880000	1.1747328	0.01	7.97	50.00	AVRG
2-Chlorophenol	1.0800000	1.1793842	0.01	9.20	50.00	AVRG
2-Methylphenol	0.9860000	1.0761594	0.01	9.14	50.00	AVRG
2,2'-oxybis(1-Chloropropane)	1.7770000	1.9690340	0.01	10.81	50.00	AVRG
Acetophenone	1.6440000	1.9601241	0.01	19.23	50.00	AVRG
4-Methylphenol	1.0780000	1.1759129	0.01	9.08	50.00	AVRG
N-Nitroso-di-N-propylamine	0.9210000	1.0956810	0.05	18.97	50.00	AVRG
Hexachloroethane	0.6820000	0.8037628	0.01	17.85	50.00	AVRG
Nitrobenzene	0.3740000	0.4061537	0.01	8.60	50.00	AVRG
Isophorone	0.6830000	0.7755631	0.01	13.55	50.00	AVRG
2-Nitrophenol	0.1880000	0.2088777	0.01	11.10	20.00	AVRG
.4-Dimethylphenol	0.2260000	0.2364890	0.01	4.64	50.00	AVRG
is(2-chloroethoxy)methane	0.3960000	0.4404040	0.01	11.21	50.00	AVRG
2,4-Dichlorophenol	0.2560000	0.2807404	0.01	9.66	20.00	AVRG
Naphthalene	0.8750000	0.9818316	0.01	12.21	50.00	AVRG
4-Chloroaniline	0.3490000	0.3911805	0.01	12.09	50.00	AVRG
Hexachlorobutadiene	0.1980000	0.2353894	0.01	18.88	20.00	AVRG
Caprolactam	0.0620000	0.0687243	0.01	10.84	50.00	AVRG
4-Chloro-3-methylphenol	0.2970000	0.3304374	0.01	11.26	20.00	AVRG
2-Methylnaphthalene	0.5320000	0.5984802	0.01	12.50	50.00	AVRG
Hexachlorocyclopentadiene	0.4430000	0.4858411	0.05	9.67	50.00	AVRG
2,4,6-Trichlorophenol	0.3660000	0.3741308	0.01	2.22	20.00	AVRG
2,4,5-Trichlorophenol	0.3820000	0.4317395	0.01	13.02	50.00	AVRG
1,1'-Biphenyl	1.2390000	1.3243617	0.01	6.89	50.00	AVRG
2-Chloronaphthalene	1.0350000	1.1324891	0.01	9.42	50.00	AVRG
2-Nitroaniline	0.4070000	0.4358528	0.01	7.09	50.00	AVRG
Dimethylphthalate	1.3010000	1.4392556	0.01	10.63	50.00	AVRG
2,6-Dinitrotoluene	0.3140000	0.3618645	0.01	15.24	50.00	AVRG
Acenaphthylene	1.6650000	1.8575169	0.01	11.56	50.00	AVRG
3-Nitroaniline	0.3570000	0.3934193	0.01	10.20	50.00	AVRG
Acenaphthene	0.9400000	1.0243717	0.01	8.98	20.00	AVRG
2,4-Dinitrophenol	0.2350000	0.2564995	0.05	9.15	50.00	AVRG
4-Nitrophenol	0.2320000	0.2224507	0.05	-4.12	50.00	AVRG
2,4-Dinitrotoluene	0.4310000	0.4821788	0.01	11.87	50.00	AVRG
Dibenzofuran	1.4690000	1.6271497	0.01	10.76	50.00	AVRG
Diethylphthalate	1.4290000	1.5990030	0.01	11.90	50.00	AVRG
4-Chlorophenyl-phenylether	0.5720000	0.6414000	0.01	12.13	50.00	AVRG
Fluorene	1.1560000	1.2954665	0.01	12.06	50.00	AVRG
4-Nitroaniline	0.3390000	0.3720966	0.01	9.76	50.00	AVRG
4,6-Dinitro-2-methylphenol	0.1760000	0.2167720	0.01	23.16	50.00	AVRG

FORM VII SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Instrument ID: 5972HP70 Calibration Date: 03/31/10 Time: 0306

Lab File ID: 0C29009-CCV1C7 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1501 1820

GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
N-Nitrosodiphenylamine	0.4960000	0.5836776	0.01	17.68	20.00	AVRG
4-Bromophenyl-phenylether	0.1950000	0.2553317	0.01	30.94	50.00	AVRG
Hexachlorobenzene	0.2480000	0.2911320	0.01	17.39	50.00	AVRG
Atrazine	0.1990000	0.1960708	0.01	-1.47	50.00	AVRG
Pentachlorophenol	0.1610000	0.1582017	0.05	-1.74	20.00	AVRG
Phenanthrene	0.8790000	0.9626297	0.01	9.51	50.00	AVRG
Anthracene	0.8770000	0.9688058	0.01	10.47	50.00	AVRG
Carbazole	0.8600000	0.9788078	0.01	13.81	50.00	AVRG
Di-n-butylphthalate	1.3630000	1.6099054	0.01	18.11	50.00	AVRG
Fluoranthene	1.0220000	1.2240933	0.01	19.77	20.00	AVRG
Pyrene	0.9450000	1.0503961	0.01	11.15	50.00	AVRG
Butylbenzylphthalate	0.5940000	0.6564644	0.01	10.52	50.00	AVRG
3,3'-Dichlorobenzidine	0.2850000	0.2927525	0.01	2.72	50.00	AVRG
is(2-ethylhexyl)Phthalate	0.8340000	0.9474267	0.01	13.60	50.00	AVRG
enzo(a)anthracene	0.9020000	1.0574426	0.01	17.23	50.00	AVRG
Chrysene	0.8450000	0.9415288	0.01	11.42	50.00	AVRG
Di-n-octylphthalate	1.4240000	1.5546988	0.01	9.18	20.00	AVRG
Benzo(b)fluoranthene	1.0060000	1.1599245	0.01	15.30	50.00	AVRG
Benzo(k)fluoranthene	0.9530000	1.0612558	0.01	11.36	50.00	AVRG
Benzo(a)pyrene	0.8940000	0.9935772	0.01	11.14	20.00	AVRG
Indeno(1,2,3-cd)pyrene	0.8520000	0.9872842	0.01	15.88	50.00	AVRG
Dibenzo(a,h)anthracene	0.8340000	0.9687184	0.01	16.15	50.00	AVRG
Benzo(g,h,i)perylene	0.8520000	0.9688457	0.01	13.71	50.00	AVRG
2-Fluorophenol	1.0350000	1.1142294	0.01	7.66	50.00	AVRG
Phenol-d5	1.4070000	1.6714846	0.01	18.80	50.00	AVRG
Nitrobenzene-d5	0.3840000	0.4146955	0.01	7.99	50.00	AVRG
2-Fluorobiphenyl	1.1620000	1.2331849	0.01	6.13	50.00	AVRG
2,4,6-Tribromophenol	0.2870000	0.3281984	0.01	14.35	50.00	AVRG
Terphenyl-d14	0.5850000	0.6509260	0.01	11.27	50.00	AVRG

Initial Calibration Date: 3/16/2010

RRF and %RSD Calculations:

Compound Name: phenol
Lab Value: 1.426

Area of Compound	301398
Area of Internal STD	422640
Conc. of Internal STD	40
Conc. of Compound	20
Calculated RRF	1.426

Compound Name: 2-methylphenol
Lab Value: 11.1

RRF of STD 1	1.055
RRF of STD 2	1.049
RRF of STD 3	0.906
RRF of STD 4	1.084
RRF of STD 5	0.834
Calculated % RSD	11.10

Continuing Calibration File ID: 3/29/2010

RRF and %D Calculations:

Compound Name: benzo(k)fluoranthene
Lab Value: 1.128

Area of Compound	1966868
Area of Internal STD	1394517
Conc. of Internal STD	40
Conc. of Compound	50
Calculated RRF	1.128

Compound Name: indeno(1,2,3-cd)pyrene
Lab Value: 0.8

Average RRF	0.852
Calibration Check RRF	0.8455034
Calculated % D	0.76

CompuChem
A division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1003102
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS: IR69-GW01, IR69-GW01D, IR69-GW05, IR69-GW05D, IR69-GW03BCH, IR69-GW02BCH, IR69-GW07D, EB01-030910-GW, IR69-GW07, IR69-GW10, FB01-031010, IR69-GW04, IR69-GW11IW, IR69-GW11DW, IR69-GW05DW, IR69-GW05IW, EB01-031410-SD, IR69-GW15BCH, EB01-031310-GW, EB01-031310-SS.

The 20 water samples listed above were received intact, properly refrigerated between 0.1-2.9°C, with proper documentation, in sealed shipping containers, on March 12-17, 2010. The samples were scheduled for the requested analyses of the semivolatile fraction. SW-846, 3rd Edition, Update 3, Separatory Funnel extraction (Method 3510C), Method 8270C and Selected Ion Monitoring (SIM) were used to prepare and analyze these samples, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance Notices are included in the narrative section and all pertinent Laboratory Notices for SDG # 1003102 are included in the sample data sections. Extraction and analysis holding time requirements were met for all of these samples

There were no semivolatile project analytes identified above the quantitation limit in any of these samples in the full scan and SIM analyses. Manual quantitations were performed on one or more of the process files associated with this SDG. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.

Between 900 mL and 975 mL of raw sample were used to extract IR69-GW02BCH, IR69-GW07D, IR69-GW07, IR69-GW10, EB01-031410-SD, and EB01-031310-GW, rather than the method-specified amount of 1000 mL. The use of this lower volume of raw sample resulted in slightly higher detection limits.

All decafluorotriphenylphosphine (DFTPP) abundance criteria were met for tunes associated with this SDG. Tailing factor criteria were met for pentachlorophenol and benzidine. The breakdown criterion was met for DDT. These three compounds have been added to the DFTPP solution and analyzed together. Mass assignments were verified by the injections of perfluorotributylamine (PFTBA). Overall quality control criteria were met for all initial and continuing calibration standards associated to this SDG. All of the surrogates met recovery criteria in the analyses of these samples. All of the internal standards met response and retention time criteria in the analyses of these samples. The associated method blank met all quality control criteria. IR69-GW4 was used as the original to prepare the duplicate matrix spikes as requested. The associated duplicate matrix spikes met overall advisory accuracy and precision criteria. The associated Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) met overall accuracy and precision criteria, in the full scan and SIM analyses.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Rebecca K Mead

Rebecca K. Mead, Ph.D.
Laboratory Technical Manager
March 31, 2010

Holding Times

Sampling Date: 3/8, 3/9, 3/13, 3/14
Received Date: 3/12, 3/17
Extraction Date: 3/15, 3/183
Analysis Dates: 3/24-3/29

All extraction and analysis holding times were met for the samples in this SDG in the initial extraction. No qualifications were required. Sample receipt data is in order. Cooler temperature was within acceptable range.

Calibrations

Initial calibrations were performed according to the method with a five-point curve for the single component pesticides, toxaphene, chlordane and the PCB target compounds 1016 & 1660. Single points were included for the other Aroclors. Calibration factors were calculated. %RSDs were within QC limits. Continuing calibration standards were analyzed per the SW-846 methods requested. All PEM breakdowns and %D criteria were met. All continuing calibration criteria were within QC limits (average %D rule applied) for target compounds in associated standards. Column resolution was acceptable. The correct analytical sequence was run. All required instrument blanks were analyzed. Raw data was verified. No qualifications were required due to calibration issues.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Any compound detected in the sample, and the associated blank, must be qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than five (5) times the blank concentration.
- Sample weight, volume or dilution factor must be taken into consideration when applying the 5X criteria.
- Apply the same data validation guidelines to any associated rinse and field blanks and all associated samples.
- Qualification Action codes:
-

No Action -	The sample result is greater than the RL and greater than five times (5X) the blank value.
U at RL-	The sample result is less than the RL when the blank contamination level is less than the RL.

No contamination that resulted in qualification of the data was noted in the associated method or instrument blanks or the submitted field QC blanks.

SURROGATE RECOVERIES

The surrogate recoveries were acceptable for all samples and quality control spikes. No qualifications were required.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

The associated MS/MSD pair was from sample IR69-GW04-10A. All results were acceptable or out in only the MSD. No qualifications were required in the samples.

LABORATORY CONTROL SAMPLES

The submitted LCS samples submitted exhibited high recoveries for several compounds. No qualifications were required because there were no positive results reported in the associated samples.

FIELD DUPLICATE SAMPLE SUMMARY

Sample ID: none **Duplicate ID:**

Compound	Sample Conc.	Duplicate Conc.	RPD
			#DIV/0!

Comments:

SAMPLE RESULT VERIFICATION

Calculations were verified. All P flagged results were qualified as estimated J (column quantitation %Ds >40.)

Reviewer JA Cleveland **Date:** 7/27/10

CompuChem

a division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1003102
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS:

EB01-030910-GW	IR69-GW01	IR69-GW05	IR69-07D
EB01-031310-GW	IR69-GW01D	IR69-GW05D	IR69-GW10
EB01-031310-SS	IR69-GW02BCH	IR69-GW05DW	IR69-GW11DW
EB01-031410-SD	IR69-GW03BCH	IR69-GW05IW	IR69GW11IW
FB01-031010	IR69-GW04	IR69-GW07	IRGW15BCH

The 20 water samples listed above were received intact, at temperature ranging from 0.1°C to 2.9°C, with proper documentation, in sealed shipping containers, on March 12 through 17, 2010. The samples were scheduled for the requested analyses of the pesticide/PCB fraction. SW-846, 3rd Edition, Update 3, Separatory Funnel extraction (Method 3510C), and Method 8081A/8082 were used to prepare and analyze these samples, with the exceptions and/or additions requested by the client. This portion of the SDG narrative deals with the pesticide fraction only.

Pesticides

Extraction and analysis holding time requirements were met for these samples.

There were no pesticide/PCB analytes confirmed by dual column analysis above the Quantitation Limit (QL) in any of these samples.

Manual integrations were performed on one or more of the process files associated with this SDG. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.

All QC criteria were met for all initial and continuing calibration standards associated to this SDG.

The surrogate met recovery and retention time criteria in the analyses of these samples

The associated method blanks met all quality control criteria.

Sample IR69-GW04 was used as the original to prepare the pesticide and PCB duplicate matrix spikes. The associated duplicate matrix spike met all accuracy and precision criteria, with the following exceptions. The recovery of methoxychlor was below the control limits.

The associated Laboratory Control Samples (LCS) prepared and analyzed along with these samples met all accuracy criteria, with the following exceptions. The recovery of nine spike analytes in the PNELCS and PNELCSD were above the control limits.

An uncertainty of these test results may be estimated from the recovery of the surrogates added to the sample prior to sample preparation or from the recovery of spiked compound(s) in the associated laboratory control sample. Further information is available upon request.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Elsie S. Byrd

Elsie S. Byrd
Senior Scientist I
March 31, 2010

Initial Calibration Date: 3/23-24/2010

RRF and %RSD Calculations:

Compound Name: endrin in level 3 on C2

Lab Value: 255650.0000

Area of Compound	5113
Conc. of Compound	0.02
Calculated RRF	255650.0000

Compound Name: endrin

Lab Value: 7.6

RRF of STD 1	291400.0000
RRF of STD 2	255650.0000
RRF of STD 3	288600.0000
RRF of STD 4	250412.5000
RRF of STD 5	252838.5000
RRF of STD 6	
Calculated % RSD	7.62

Continuing Calibration File ID:

RRF and %D Calculations:

Compound Name: endosulfan I

Lab Value: 328400.00000

Area of compound	6568
Conc. Of compound	0.02
Calculated CF	328400.000

Compound Name: endosulfan I

Lab Value: 1.4

Avg. CF from ICAL	333097.00000
CF of CCV	328400.00000
Calculated % D	1.4

rounding differences noted - no quals required

Initial Calibration Date: 3/26/2010

RRF and %RSD Calculations:

Compound Name: heptachlor in level 1 on C1

Lab Value: 742200.0000

Area of Compound	3712
Conc. of Compound	0.005
Calculated RRF	742400.0000

Compound Name: heptachlor

Lab Value: 6.7

RRF of STD 1	742200.0000
RRF of STD 2	699900.0000
RRF of STD 3	673500.0000
RRF of STD 4	652700.0000
RRF of STD 5	623462.0000
RRF of STD 6	
Calculated % RSD	6.69

Continuing Calibration File ID: 100ZINDC3ZP

RRF and %D Calculations:

Compound Name: aldrin

Lab Value: 625657.50000

Area of compound	12513
Conc. Of compound	0.02
Calculated CF	625650.000

Compound Name: alrin

Lab Value: 0.2

Avg. CF from ICAL	626935.00000
CF of CCV	625650.00000
Calculated % D	0.2

rounding differences noted - no quals required

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLKNE

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Lab Sample ID: 0031304-BLK1 Lab File ID: 028Y0031304-BLK1

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup (Y/N) N Date Extracted: 03/15/10

Date Analyzed (1): 03/24/10 Date Analyzed (2): 03/24/10

Time Analyzed (1): 0430 Time Analyzed (2): 0430

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column (1): CLPEST ID: 0.32(mm) GC Column (2): CLPEST2 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	PNELCS	0031304-BS1	03/24/10	03/24/10
02	PNFLCS	0031304-BS2	03/24/10	03/24/10
03	PNELCSD	0031304-BSD1	03/24/10	03/24/10
04	PNFLCSD	0031304-BSD2	03/24/10	03/24/10
05	IR69-GW01	1003102-01	03/24/10	03/24/10
06	IR69-GW01D	1003102-02	03/24/10	03/24/10
07	IR69-GW05	1003102-03	03/24/10	03/24/10
08	IR69-GW05D	1003102-04	03/24/10	03/24/10
09	IR69-GW03BCH	1003102-05	03/24/10	03/24/10
10	IR69-GW02BCH	1003102-06	03/24/10	03/24/10
11	IR69-GW07D	1003102-07	03/24/10	03/24/10
12	EB01-030910-	1003102-08	03/29/10	03/29/10
13	IR69-GW07	1003102-09	03/29/10	03/29/10
14	IR69-GW10	1003102-10	03/29/10	03/29/10
15	FB01-031010	1003102-11	03/29/10	03/29/10
16				
17				
18				
19				
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21				
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24				
25				
26				

COMMENTS:

FORM IV PEST

3E
WATER PESTICIDE LAB CONTROL SAMPLE

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

LCS ID: PNELCS Matrix Spike - EPA Sample No.: PNELCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.	
Aldrin	0.15		0.16	107	25-140	
beta-BHC	0.15		0.20	133*	65-125	J+
alpha-BHC	0.15		0.21	140*	60-130	
delta-BHC	0.15		0.23	153*	45-135	↓
gamma-BHC (Lindane)	0.15		0.20	133	25-135	
4,4'-DDD	0.38		0.54	142	25-150	
4,4'-DDE	0.38		0.51	134	35-140	
4,4'-DDT	0.38		0.51	134	45-140	
Dieldrin	0.38		0.55	145*	60-130	J+
Endosulfan I	0.15		0.19	127*	50-110	↓
Endosulfan II	0.38		0.49	129	30-130	
Endosulfan sulfate	0.38		0.50	132	55-135	
Endrin	0.38		0.38	100	55-135	
Endrin Aldehyde	0.38		0.37	97	55-135	
Heptachlor	0.15		0.20	133*	40-130	NQ
Heptachlor Epoxide	0.15		0.22	147*	60-130	J+
Methoxychlor	0.38		0.54	142	55-150	
Endrin Ketone	0.38		0.58	153*	75-125	J+
gamma-Chlordane	0.15		0.20	133*	60-125	
alpha-Chlordane	0.15		0.23	153*	65-125	↓

* see Form IV for assoc samples - No+ results in assoc. No Quals

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

3E
WATER PESTICIDE LAB CONTROL SAMPLE

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

LCS ID: PNELCS Matrix Spike - EPA Sample No.: PNELCS

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.	
Aldrin	0.15	0.15	100	6	40	25-140	
beta-BHC	0.15	0.23	153*	14	40	65-125	J+
alpha-BHC	0.15	0.21	140*	0	40	60-130	
delta-BHC	0.15	0.22	147*	4	40	45-135	
gamma-BHC (Lindane)	0.15	0.18	120	10	40	25-135	
4,4'-DDD	0.38	0.50	132	8	40	25-150	
4,4'-DDE	0.38	0.47	124	8	40	35-140	
4,4'-DDT	0.38	0.47	124	8	40	45-140	
Dieldrin	0.38	0.50	132*	10	40	60-130	J+
Endosulfan I	0.15	0.18	120*	5	40	50-110	
Endosulfan II	0.38	0.46	121	6	40	30-130	
Endosulfan sulfate	0.38	0.46	121	8	40	55-135	
Endrin	0.38	0.46	121	19	40	55-135	
Endrin Aldehyde	0.38	0.31	82	18	40	55-135	
Heptachlor	0.15	0.19	127	5	40	40-130	
Heptachlor Epoxide	0.15	0.20	133*	10	40	60-130	J+
Methoxychlor	0.38	0.52	137	4	40	55-150	
Endrin Ketone	0.38	0.49	129*	17	40	75-125	J+
gamma-Chlordane	0.15	0.19	127*	5	40	60-125	
alpha-Chlordane	0.15	0.21	140*	9	40	65-125	

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 20 outside limits
Spike Recovery: 19 out of 40 outside limits

COMMENTS: _____

3E

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix Spike - EPA Sample No.: IR69-GW04

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Aldrin	0.15	0.0	0.12	80	25-140
beta-BHC	0.15	0.0	0.16	107	65-125
alpha-BHC	0.15	0.0	0.15	100	60-130
delta-BHC	0.15	0.012	0.17	105	45-135
gamma-BHC (Lindane)	0.15	0.0	0.14	93	25-135
4,4'-DDD	0.38	0.0	0.38	100	25-150
4,4'-DDE	0.38	0.0	0.36	95	35-140
4,4'-DDT	0.38	0.0	0.34	89	45-140
Dieldrin	0.38	0.0	0.40	105	60-130
Endosulfan I	0.15	0.0	0.14	93	50-110
Endosulfan II	0.38	0.0	0.36	95	30-130
Endosulfan sulfate	0.38	0.0	0.34	89	55-135
Endrin	0.38	0.0	0.38	100	55-135
Endrin Aldehyde	0.38	0.0	0.22	58	55-135
Heptachlor	0.15	0.0	0.16	107	40-130
Heptachlor Epoxide	0.15	0.0	0.16	107	60-130
Methoxychlor	0.38	0.32	0.53	55	55-150
Endrin Ketone	0.38	0.0	0.39	103	75-125
gamma-Chlordane	0.15	0.033	0.14	71	60-125
alpha-Chlordane	0.15	0.0	0.16	107	65-125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

3E

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix Spike - EPA Sample No.: IR69-GW04

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aldrin	0.15	0.13	87	8	40	25-140
beta-BHC	0.15	0.15	100	6	40	65-125
alpha-BHC	0.15	0.14	93	7	40	60-130
delta-BHC	0.15	0.16	99	6	40	45-135
gamma-BHC (Lindane)	0.15	0.13	87	7	40	25-135
4,4'-DDD	0.38	0.36	95	5	40	25-150
4,4'-DDE	0.38	0.34	89	6	40	35-140
4,4'-DDT	0.38	0.32	84	6	40	45-140
Dieldrin	0.38	0.37	97	8	40	60-130
Endosulfan I	0.15	0.13	87	7	40	50-110
Endosulfan II	0.38	0.34	89	6	40	30-130
Endosulfan sulfate	0.38	0.32	84	6	40	55-135
Endrin	0.38	0.35	92	8	40	55-135
Endrin Aldehyde	0.38	0.21	55	5	40	55-135
Heptachlor	0.15	0.15	100	6	40	40-130
Heptachlor Epoxide	0.15	0.18	120	12	40	60-130
Methoxychlor	0.38	0.49	45*	8	40	55-150
Endrin Ketone	0.38	0.36	95	8	40	75-125
gamma-Chlordane	0.15	0.13	65	7	40	60-125
alpha-Chlordane	0.15	0.15	100	6	40	65-125

NQ

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 20 outside limits
Spike Recovery: 1 out of 40 outside limits

COMMENTS:

SAMPLE CALCULATION

Sample ID: IR69-GW04-10AMSD
Standard ID: ICAL curve 3/26/10
Compound: ALDRIN
Concnetration: 0.13 ug/L

	Water (ug/L)	Soil (ug/Kg)
Area of Compound	15839	
Calibration Factor of Compound	626935	
Dilution Factor	1	
Weight/Volume of Sample	1000	
Final Volume extract	5000	
% Moisture	NA	
conversion factor	1	
Concentration	0.12632	#DIV/0!

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

EB01-030910-GW

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Lab Sample ID: 1003102-08 Date(s) Analyzed: 03/29/10 03/29/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
4,4'-DDE	1	14.18	14.14	14.28	0.017	
	2	14.10	14.10	14.24	0.0057	99.6 J
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

page 1 of 1

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

EB01-031310-SS

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Lab Sample ID: 1003102-22 Date(s) Analyzed: 03/28/10 03/28/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
beta-BHC	1	10.37	10.31	10.46	0.0067	
	2	10.15	10.09	10.23	0.010	39.5
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-GW04

Lab Name: COMPUCHEM Contract: 8081A/8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Lab Sample ID: 1003102-14 Date(s) Analyzed: 03/27/10 03/27/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
delta-BHC	1	10.82	10.74	10.88	0.0061	
	2	10.85	10.78	10.92	0.012	65.2 J
Methoxychlor	1	17.11	17.07	17.21	0.12	
	2	17.52	17.45	17.59	0.32	90.9 J
gamma-Chlordane	1	13.76	13.66	13.80	0.020	
	2	13.39	13.37	13.51	0.033	49.0 J
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

This SDG contains select metals analysis using SW-846 6010B/7470A/7471A.

HOLDING TIMES

Sampling Date: 3/8, 3/9, 3/13, 3/14
Received Date: 3/12, 3/17 Cooler temps: OK
Prep. Dates: 3/23 ICP, 3/23 Hg
Analysis Dates: 3/28 ICP, 3/25 Hg
All holding time requirements were met.

CALIBRATIONS

All initial calibration criteria were met. Single point calibration was analyzed for ICP. Calibration verification criteria were met for all ICV and CCV standards. The RL standards were analyzed and met method criteria for all analytes. Interference check standards were analyzed and met criteria in all standards. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if an analyte is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying the criteria.
- Apply the same data validation guidelines to any associated calibration, preparation, and field QC blanks and all associated samples.
- Qualification/Action codes:
  - No Action - The sample result is greater than the CRDL and greater than ten times (10X) the blank value.
  - U - The sample result is greater than or equal to the MDL but less than or equal to the RL, result is reported as non-detect at the RL.
  - R or J. The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator.

Blank Contamination and Qualification Summaries

Blank ID	Analyte	Concentration	Action Level	Q Flag	Q Code
CCB	magnesium	26.5B ug/L	RL	U	MBL
	copper	1.6B ug/L	RL	U	MBL
FB01-031910	zinc	0.97B ug/L	RL	U	FBL
FB01-031010	sodium	559B ug/L	RL	U	FBL
EB01-030910-GW	lead	1.8B ug/L	RL	U	EBL
EB01-031410-GW	aluminum	72.9B ug/L	RL	U	EBL

The concentration noted for the CCBs is the highest concentration in all the CCBs. However, when qualifying samples for CCB contamination, associated samples are those just prior to or just following a CCB. Therefore, not all analytes in all samples are flagged for noted CCB contamination. See worksheets for associations. Samples are qualified for field QC blank contamination based on QC tracking provided by CH2M HILL. Negative contamination in a prep blank or CCB, if less than the analyte CRDL, is qualified based on professional judgment.

Please note that based on the National Functional Guidelines, for contamination above the CRDL, results in the field samples that are greater than the RL up to 10X the blank contamination level should be qualified as estimated and considered biased high or they should be rejected. Associated samples and required qualifications are noted in the following table.

Sample ID	Analyte	Q Flag	Q Code
all field samples >MDL ≤ RL	magnesium	U at RL	MBL
IR69-GW07D-10A, IR69-GW11DW-10A, IR69-GW05DW-10A, IR69-GW05IW-10A	copper	U at RL	MBL
IR69-GW05IW-10A, IR69-GW05DW-10A, IR69-GW11IW-10A	zinc	U at RL	FBL
IR69-GW05D-10A	sodium	U at RL	FBL
IR69-GW03BCH-10A	lead	U at RL	EBL
IR69-GW05DW-10A, IR69-GW15BCH-10A	aluminum	U at RL	EBL

MATRIX SPIKE/DUPLICATE SUMMARY

Spike recoveries were acceptable in the MS or the MSD except selenium. All PDS recoveries were acceptable. Selenium exhibited a 39.3% R in the MSD. No qualifications were required. The matrix duplicate RPD for Al was high (21.5%) and all results for Al in the field samples were qualified as estimated J/UJ. All LCS recoveries and RPDs were acceptable.

SERIAL DILUTIONS

The serial dilution results were OK.

SAMPLE CALCULATION

EPA SAMPLE ID: IR69-GW04-10A
ANALYTE: aluminum
CONCENTRATION: 1040 ug/L
%Solids NA

Raw Data result: 1040.387 ug/L. Water results are direct read from the instrument.

FIELD DUPLICATE SAMPLE RESULTS

Note: Field duplicate results are assessed only if both results are above the CRDL.

Sample ID: IR69-GW01-10A **Duplicate Sample ID:** IR69-GW01D-10A

Analyte	Sample Conc.	Duplicate Conc.	RPD
aluminum	480	466	3%
barium			#DIV/0!
calcium	13500	14100	4%
chromium			#DIV/0!
iron	711	687	3%
lead			#DIV/0!
magnesium			#DIV/0!
manganese	23.9	24.2	1%
sodium	27700	29800	7%
zinc			#DIV/0!

Comments: No qualifications were required

Sample ID: IR69-GW05-10A **Duplicate Sample ID:** IR69-GW05D-10A

Analyte	Sample Conc.	Duplicate Conc.	RPD
aluminum			#DIV/0!
barium			#DIV/0!
calcium			#DIV/0!
chromium			#DIV/0!
iron	244	120	68%
lead			#DIV/0!
magnesium			#DIV/0!
manganese	38.4	36.1	6%
sodium	5020	4990	1%
zinc			#DIV/0!

Comments: Flag iron J in both samples.

Sample ID: IR69-GW07-10A **Duplicate Sample ID:** IR69-GW07D-10A

Analyte	Sample Conc.	Duplicate Conc.	RPD
aluminum			#DIV/0!
barium			#DIV/0!
calcium			#DIV/0!
chromium			#DIV/0!
iron			#DIV/0!
lead			#DIV/0!
magnesium			#DIV/0!
manganese			#DIV/0!
sodium	8220	8440	3%
zinc			#DIV/0!

Comments: No qualifications were required

SAMPLE RESULT VERIFICATION

Specific Comments:

All sample results were reported within the calibration/linear range of the instruments. Detection limits were acceptable. Raw data was verified. All positive results reported at concentrations between the IDL and the RL were qualified as estimated J by the laboratory. All field sample and QC blank IDs were missing either the first 4 or the last four characters. The characters (-10A) were added for the field samples and the characters IR69 were added for the field QC blanks to the Form 1s in the DV reports by the data validator.

Reviewer JACleveland **Date:** 72710

CompuChem
a Division of Liberty Analytical Corp.
501 Madison Avenue
Cary, NC 27513

SDG NARRATIVE
SDG # 1003102

The indicated Sample Delivery Group (SDG) consisting of twenty (20) water samples was received into the laboratory information management system (LIMS) on March 12 and 17, 2010 intact and in good condition with Chain of Custody (COC) Records in order, unless otherwise noted in any attachments or Quality Assurance Notices. The temperature of the samples upon receipt was 0.1 to 2.9°C. Sample ID's reported in this data package are noted by the receiving department on the COC if they differ from those listed by the samplers on the COC.

The samples were prepared and analyzed in accordance with SW846 methodology for the requested TAL metals and mercury.

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (ICV & CCV) and blanks (ICB & CCB) associated with this data were confirmed to be within allowable limits.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verification (PBW & LCSW) was found to be within acceptable ranges and the field samples were analyzed within the specified holding times.

MATRIX RELATED QUALITY CONTROL:

The sample matrix spikes, CCN = 1003102-14 ID IR69-GW04S and IR69-GW04SD were inside control limits for the requested analytes except selenium.

Control limits for matrix spikes recoveries are set at 75% to 125% of the analyte quantity added unless original sample concentrations exceed the true values of these "spikes" by a factor of four or more. In this case, affected analytes are not flagged even if recoveries are outside percentage recovery control limits.

The sample matrix duplicate, CCN = 1003102-14 ID IR69-GW04D was inside control limits for the requested analytes except aluminum

CLP control limits for duplicate determinations are +/- 20% Relative Percent Difference (RPD) for concentrations greater than or equal to five times the CRDL in both the original and duplicate samples, and +/- the CRDL for concentrations less than five times the CRDL. The RPD is not calculated if both the original and duplicate values fall below the IDL.

A five-fold serial dilution of sample, CCN = 1003102-14 ID IR69-GW04L was performed in accordance with requirements for ICP analysis.

The adjusted sample concentration was inside control limits for the requested analytes.

The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice.

Susan W. Bass
Senior Chemist
March 29, 2010

SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M	
Aluminum	200.0	U	200.0	U	200.0	U	200.0	U	-42.362	B	P	NQ
Antimony	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P	
Arsenic	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P	
Barium	-0.4	B NQ	-0.5	B NQ	200.0	U	-0.3	B NQ	-0.448	B	P	NQ
Beryllium	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P	
Cadmium	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P	
Calcium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	5000.000	U	P	
Chromium	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P	
Cobalt	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P	
Copper	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P	
Iron	100.0	U	100.0	U	100.0	U	100.0	U	100.000	U	P	
Lead	3.0	U	3.0	U	3.0	U	3.0	U	3.000	U	P	
Magnesium	5000.0	U	5000.0	U	17.9	B	17.9	B	5000.000	U	P	
Manganese	10.0	U	-0.4	B NQ	10.0	U	10.0	U	-0.353	B	P	NQ
Mercury	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	CV	
Nickel	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P	
Potassium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	5000.000	U	P	
Selenium	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P	
Silver	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P	
Sodium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	5000.000	U	P	
Thallium	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P	
Vanadium	20.0	U	20.0	U	20.0	U	20.0	U	20.000	U	P	
Zinc	-0.6	B NQ	-0.7	B NQ	-0.6	B NQ	-0.6	B NQ	-0.729	B	P	NQ

GW04

GW01
GW01D
GW05
GW05D
GW03BCH
GW02BCH

GW07D
GW07
GW10
GW11IW
GW11DW
GW05DW
GW05IW

SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 4	C	5	C	3	C	Preparation Blank	C	M
Aluminum			200.0	U	-125.9	B NQ					P
Antimony			3.1	B NQ	10.0	U					P
Arsenic			10.0	U	10.0	U					P
Barium			200.0	U	200.0	U					P
Beryllium			5.0	U	5.0	U					P
Cadmium			5.0	U	5.0	U					P
Calcium			5000.0	U	5000.0	U					P
Chromium			10.0	U	10.0	U					P
Cobalt			5.0	U	5.0	U					P
Copper			1.6	B	5.0	U					P
Iron			100.0	U	100.0	U					P
Lead			3.0	U	3.0	U					P
Magnesium			26.5	B	5000.0	U					P
Manganese			10.0	U	10.0	U					P
Mercury			0.200	U							CV
Nickel			5.0	U	5.0	U					P
Potassium			5000.0	U	5000.0	U					P
Selenium			5.0	U	5.0	U					P
Silver			5.0	U	1.0	B NQ					P
Sodium			5000.0	U	5000.0	U					P
Thallium			10.0	U	10.0	U					P
Vanadium			20.0	U	20.0	U					P
Zinc			-0.6	B NQ	-0.8	B NQ					P

GW07D ✓ GW15BCH

07

10

11W.

11DW ✓

05DW ✓

05W ✓

✓ flag as noted in report

SW846 - METALS

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

IR69-GW04S

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	3240.9780		1040.3870		2000.00	110.0		P
Antimony	75 - 125	496.9617		10.0000	U	500.00	99.4		P
Arsenic	75 - 125	38.3537		10.0000	U	40.00	95.9		P
Barium	75 - 125	2078.7550		62.8601	B	2000.00	100.8		P
Beryllium	75 - 125	48.7118		5.0000	U	50.00	97.4		P
Cadmium	75 - 125	49.6813		5.0000	U	50.00	99.4		P
Chromium	75 - 125	204.4049		1.5987	B	200.00	101.4		P
Cobalt	75 - 125	499.5297		2.7648	B	500.00	99.4		P
Copper	75 - 125	254.3298		5.0000	U	250.00	101.7		P
Iron		8643.8550		7547.5950		1000.00	109.6		P
Lead	75 - 125	22.3181		2.4530	B	20.00	99.3		P
Manganese	75 - 125	641.9347		146.5615		500.00	99.1		P
Mercury	75 - 125	1.0400		0.2000	U	1.00	104.0		CV
Nickel	75 - 125	508.3979		4.2408	B	500.00	100.8		P
Selenium	75 - 125	8.7185		5.0000	U	10.00	87.2		P
Silver	75 - 125	49.4340		5.0000	U	50.00	98.9		P
Thallium	75 - 125	58.2638		10.0000	U	50.00	116.5		P
Vanadium	75 - 125	513.1321		3.3982	B	500.00	101.9		P
Zinc		7385.9300		6844.1413		500.00	108.4		P

Comments:

SW846 - METALS

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

IR69-GW04SD

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	3223.6440		1040.3870		2000.00	109.2		P
Antimony	75 - 125	500.7670		10.0000	U	500.00	100.2		P
Arsenic	75 - 125	38.9566		10.0000	U	40.00	97.4		P
Barium	75 - 125	2100.8170		62.8601	B	2000.00	101.9		P
Beryllium	75 - 125	49.3542		5.0000	U	50.00	98.7		P
Cadmium	75 - 125	50.0921		5.0000	U	50.00	100.2		P
Chromium	75 - 125	206.5263		1.5987	B	200.00	102.5		P
Cobalt	75 - 125	505.6107		2.7648	B	500.00	100.6		P
Copper	75 - 125	256.6717		5.0000	U	250.00	102.7		P
Iron		8496.4340		7547.5950		1000.00	94.9		P
Lead	75 - 125	22.4518		2.4530	B	20.00	100.0		P
Manganese	75 - 125	647.6792		146.5615		500.00	100.2		P
Mercury	75 - 125	1.0400		0.2000	U	1.00	104.0		CV
Nickel	75 - 125	512.3312		4.2408	B	500.00	101.6		P
Selenium	75 - 125	3.9263	B	5.0000	U	10.00	39.3	N	P
Silver	75 - 125	50.0901		5.0000	U	50.00	100.2		P
Thallium	75 - 125	55.6502		10.0000	U	50.00	111.3		P
Vanadium	75 - 125	518.6630		3.3982	B	500.00	103.1		P
Zinc		7380.9300		6844.1413		500.00	107.4		P

NQ

MB OK

Comments:

SW846 - METALS

5B

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

IR69-GW04A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Selenium		8.45		5.00	U	10.0	84.5		P

Comments:

SW846 - METALS

6

DUPLICATES

SAMPLE NO.

IR69-GW04D

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		1040.3870		1290.9260		21.5	*	P
Antimony		10.0000	U	10.0000	U			P
Arsenic		10.0000	U	10.0000	U			P
Barium		62.8601	B	63.1408	B	0.4		P
Beryllium		5.0000	U	5.0000	U			P
Cadmium		5.0000	U	5.0000	U			P
Calcium		1485.4330	B	1558.3080	B	4.8		P
Chromium		1.5987	B	1.4036	B	13.0		P
Cobalt		2.7648	B	2.8494	B	3.0		P
Copper		5.0000	U	5.0000	U			P
Iron		7547.5950		7620.1500		1.0		P
Lead	3.0	2.4530	B	3.1058		23.5		P
Magnesium		1057.4251	B	1070.4620	B	1.2		P
Manganese		146.5615		147.0859		0.4		P
Mercury		0.2000	U	0.2000	U			CV
Nickel		4.2408	B	3.9828	B	6.3		P
Potassium		179.7191	B	198.2374	B	9.8		P
Selenium		5.0000	U	5.0000	U			P
Silver		5.0000	U	5.0000	U			P
Sodium	5000.0	6149.2269		6333.8800		3.0		P
Thallium		10.0000	U	10.0000	U			P
Vanadium		3.3982	B	3.6787	B	7.9		P
Zinc		6844.1413		6886.4694		0.6		P

J/W

DataQual

Environmental Services, LLC

CH2M HILL
5700 Cleveland Street
Suite 101
Virginia Beach, VA 23462

July 30, 2010
CompuChem, SDG# 1003089
MCB Camp Lejeune, CTO-81

Dear Ms. Buckley,

The following Data Validation report is provided as requested for the parameters noted in the table below for SDG # 1003089. The data validation was performed in accordance with the SW846 Method 8260B for volatiles, 8270C and 8270C-SIM for semivolatiles and PAH, 8081A for pesticides, 8082 for PCBs and 6010B/7470A/7471A for metals and mercury and good professional judgment. Also used in the validation of these samples were The National Functional Guidelines for Organic Data Review (June, 2008) and the National Functional Guidelines for Inorganic Data Review (October, 2004), as applicable. All areas of concern are discussed in the body of the report and a summary of data qualifications is provided.

Sample ID	Lab ID	Matrix	VOA	SVOA	LL PAH	Pest	PCBs	Metals
IR69-EB01-030410-SS	1003089-01	water	X	X	X	X	X	
IR69-EB01-030610-GW	1003089-08	water	X	X	X	X	X	X
IR69-EB01-030710-GW	1003089-09	water	X	X	X	X	X	X
~~IR69-EB01-030710-SSB~~	~~1003089-15~~	~~water~~	~~X~~	~~X~~	~~X~~			~~X~~
IR69-EB01-030810-GW	1003089-21	water	X	X	X	X	X	X
IR69-EB01-030710-SB	1003089-17	water	X	X	X	X	X	X
IR69-FB01-031010	1003089-14	water	X	X	X			
IR69-GW02DD-10A	1003089-06	water	X	X	X	X	X	X
IR69-GW03-10A	1003089-11	water	X	X	X	X	X	X
IR69-GW03D-10A	1003089-10	water	X	X	X	X	X	X
IR69-GW03DW-10A	1003089-12	water	X	X	X	X	X	X
IR69-GW06-10A	1003089-18	water	X	X	X	X	X	X
IR69-GW08-10A	1003089-19	water	X	X	X	X	X	X
IR69-GW08D-10A	1003089-20	water	X	X	X	X	X	X
IR69-GW09DW-10A	1003089-05	water	X	X	X	X	X	X
IR69-GW09IW-10A	1003089-04	water	X	X	X	X	X	X
IR69-GW15-10A	1003089-13	water	X	X	X	X	X	X
IR69-GW15IW-10A	1003089-07	water	X	X	X	X	X	X
IR69-GW27DW-10A	1003089-03	water	X	X	X	X	X	X
IR69-GW27IW-10A	1003089-02	water	X	X	X	X	X	X
IR69-TB01-030810	1003089-16	water	X					
IR69-GW06-10A MS	1003089-18MS	water	X	X	X	X	X	X
IR69-GW06-10A MSD	1003089-18MSD	water	X	X	X	X	X	X

cdar 8/12/10

The following quality control samples were provided with this SDG: sample IR69-GW03D-10A-field duplicate of sample IR69-GW03-10A; sample IR69-GW08D-10A-field duplicate of sample IR69-GW08-10A; samples IR69-EB01-030410-SS, IR69-EB01-030610-GW, IR69-EB01-030710-GW, IR69-EB01-030710-SS, IR69-EB01-

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW15-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003089

Matrix: (soil/water) WATER Lab Sample ID: 1003089-13

Sample wt/vol: 925.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/11/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/12/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/27/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.054	U
319-85-7	beta-BHC	0.054	U
319-84-6	alpha-BHC	0.054	U
319-86-8	delta-BHC	0.054	U
58-89-9	gamma-BHC (Lindane)	0.054	U
72-54-8	4,4'-DDD	0.11	U
72-55-9	4,4'-DDE	0.11	U
50-29-3	4,4'-DDT	0.11	U
60-57-1	Dieldrin	0.11	U
959-98-8	Endosulfan I	0.054	U
33213-65-9	Endosulfan II	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
72-20-8	Endrin	0.029	~~JP~~ J 2C
7421-93-4	Endrin Aldehyde	0.11	U
76-44-8	Heptachlor	0.054	U
1024-57-3	Heptachlor Epoxide	0.079	~~P~~ J
72-43-5	Methoxychlor	0.54	U
8001-35-2	Toxaphene	2.7	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.4	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	0.68	U
12672-29-6	Aroclor-1248	0.68	U
11097-69-1	Aroclor-1254	0.68	U
11096-82-5	Aroclor-1260	1.2	
53494-70-5	Endrin Ketone	0.11	U
5103-74-2	gamma-Chlordane	0.060	~~P~~ J 2C
5103-71-9	alpha-Chlordane	0.054	U

FORM I PEST

SVOA

All SVOA compounds that were also analyzed by SVOA-SIM were excluded due to redundant analysis, qualifier code: RE.

Pesticides/PCBs

All positive results reported with a P flag to indicate column quantitation %Ds greater than 40% are qualified as estimated J with a qualifier code of 2C.

Metals

All mercury results reported between the IDL and the RL (B flagged by laboratory) were qualified as estimated J. No qualification code was required.

A summary of qualifications required is provided on the following page. Please do not hesitate to contact DataQual ES with any questions regarding this validation report.

Sincerely,

Laura Maschhoff
President

Jacqueline Cleveland
Vice-President

Summary of Data Qualifications

VOA, continued

Sample ID	Compound	Results	Q-Flag	Q Code
IR69-GW05-10A, IR69-GW05D-10A, IR69-GW05DW-10A, IR69-GW05IW-10A	chloroform	+	U at RL	EBL
IR69-GW11DW-10A	2-butanone	+	U at RL	EBL
IR69-GW11DW-10A, IR69-GW11IW-10A	benzene	+	U at RL	FBL
IR69-GW11DW-10A	bromodichloromethane	+	U at RL	EBL
IR69-GW11DW-10A, IR69-GW11IW-10A	all E-flagged compounds	+/-	exclude	DL
IR69-GW11DW-10ADL, IR69-GW11IW-10ADL	all except corresponding D-flagged compounds	+/-	exclude	DL

SVOA

Sample ID	Compound	Results	Q-Flag	Q Code
IR69-GW01-10A, IR69-GW01D-10A, IR69-GW05-10A, IR69-GW05D-10A, IR69-GW03BCH-10A, IR69-GW02BCH-10A	indeno(1,2,3-cd)pyrene dibenzo(a,h)anthracene benzo(g,h,i)perylene	+/-	J/UJ	CCL
IR69-GW10-10A	indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene	+/-	J/UJ	CCL
IR69-GW04-10A, IR69-GW05DW-10A, IR69-EB01-031410-SD	benzaldehyde 3,3'-dichlorobenzidine	+/-	J/UJ	CCL
IR69-GW11IW-10A, IR69-GW11DW-10A, IR69-GW05IW-10A, IR69-GW15BCH-10A, IR69-EB01-031310-GW, IR69-EB01-031310-SS	4,6-dinitro-2-methylphenol 4-bromophenyl-phenylether	+/-	J/UJ	CCH
PAH SIM: IR69-GW11IW-10A	2-methylnaphthalene	+	U at RL	EBL
all SVOA compounds also ran as SIM-SVOA	all results	+/-	exclude	RE

Pesticides/PCBs

Sample ID	Compound	Results	Q-Flag	Q Code
all samples	all compounds	+P	J	2C

Metals

Sample ID	Analyte	Results	Q-Flag	Q Code
all field samples >MDL ≤ RL	magnesium	+B	U at RL	MBL
IR69-GW07D-10A, IR69-GW11DW-10A, IR69-GW05DW-10A, IR69-GW05IW-10A	copper	+B	U at RL	MBL
IR69-GW05IW-10A, IR69-GW05DW-10A, IR69-GW11IW-10A	zinc	+B	U at RL	FBL
IR69-GW05D-10A	sodium	+B	U at RL	FBL
IR69-GW03BCH-10A	lead	+B	U at RL	EBL
IR69-GW05DW-10A, IR69-GW15BCH-10A	aluminum	+B	U at RL	EBL
all field samples	aluminum	+/-	J/UJ	MDP
IR69-GW05-10A, IR69-GW05D-10A	iron	+	J	FD
all samples	all analytes	+B	J	

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRM EB01-030910-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-08A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRM EB01-030910-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-08A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U exclude RE
120-12-7	Anthracene	5.0	U exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U exclude RE
129-00-0	Pyrene	5.0	U exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U exclude RE
218-01-9	Chrysene	5.0	U exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69 EB01-031310-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-21

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1003102-21JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.3	U
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.3	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.3	U
98-86-2	Acetophenone	5.3	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.3	U
67-72-1	Hexachloroethane	5.3	U
98-95-3	Nitrobenzene	5.3	U
78-59-1	Isophorone	5.3	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.3	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.3	~~U~~ exclude RE
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.3	U
105-60-2	Caprolactam	5.3	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.3	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.3	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.3	U
91-58-7	2-Chloronaphthalene	5.3	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.3	U
606-20-2	2,6-Dinitrotoluene	5.3	U
208-96-8	Acenaphthylene	5.3	~~U~~ exclude RE
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.3	~~U~~ exclude RE

LM 072410

LM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69 EB01-031310-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102 UM 072410

Matrix: (soil/water) WATER Lab Sample ID: 1003102-21

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1003102-21JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.3	U
132-64-9	Dibenzofuran	5.3	U
84-66-2	Diethylphthalate	5.3	U
7005-72-3	4-Chlorophenyl-phenylether	5.3	U
86-73-7	Fluorene	5.3	~~U~~ exclude RE
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	~~U~~ UJ CCH
86-30-6	N-Nitrosodiphenylamine (1)	5.3	U
101-55-3	4-Bromophenyl-phenylether	5.3	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.3	U
1912-24-9	Atrazine	5.3	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.3	~~U~~ exclude RE
120-12-7	Anthracene	5.3	~~U~~ exclude RE
86-74-8	Carbazole	5.3	U
84-74-2	Di-n-butylphthalate	5.3	U
206-44-0	Fluoranthene	5.3	~~U~~ exclude RE
129-00-0	Pyrene	5.3	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.3	U
91-94-1	3,3'-Dichlorobenzidine	5.3	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.3	U
56-55-3	Benzo(a)anthracene	5.3	~~U~~ exclude RE
218-01-9	Chrysene	5.3	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.3	U
205-99-2	Benzo(b)fluoranthene	5.3	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.3	U
50-32-8	Benzo(a)pyrene	5.3	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.3	U
53-70-3	Dibenzo(a,h)anthracene	5.3	U
191-24-2	Benzo(g,h,i)perylene	5.3	U

(1) - Cannot be separated from Diphenylamine

UM 072410

UM 08310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69 EB01-031310-SS

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-22 WM 032410

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-22JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

WM 032410

WM 032310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IH69 | EB01-031310-SS

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-22

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-22JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	~~U~~ UJ CCH
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

LM 072410

LM 031310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69 EB01-031410-SD

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-19 WM 072410

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003102-19C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.1	~~U~~ UJ CCL
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.1	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.1	U
98-86-2	Acetophenone	5.1	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.1	U
67-72-1	Hexachloroethane	5.1	U
98-95-3	Nitrobenzene	5.1	U
78-59-1	Isophorone	5.1	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.1	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.1	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.1	U
105-60-2	Caprolactam	5.1	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.1	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.1	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.1	U
91-58-7	2-Chloronaphthalene	5.1	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.1	U
606-20-2	2,6-Dinitrotoluene	5.1	U
208-96-8	Acenaphthylene	5.1	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.1	~~U~~ exclude RE

WM 081310

WM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69 | EB01-031410-SD

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-19 WM 072410

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003102-19C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.1	U
132-64-9	Dibenzofuran	5.1	U
84-66-2	Diethylphthalate	5.1	U
7005-72-3	4-Chlorophenyl-phenylether	5.1	U
86-73-7	Fluorene	5.1	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.1	U
101-55-3	4-Bromophenyl-phenylether	5.1	U
118-74-1	Hexachlorobenzene	5.1	U
1912-24-9	Atrazine	5.1	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.1	~~U~~ exclude RE
120-12-7	Anthracene	5.1	~~U~~ exclude RE
86-74-8	Carbazole	5.1	U
84-74-2	Di-n-butylphthalate	5.1	U
206-44-0	Fluoranthene	5.1	~~U~~ exclude RE
129-00-0	Pyrene	5.1	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.1	U
91-94-1	3,3'-Dichlorobenzidine	5.1	~~U~~ UJ CCL
117-81-7	bis(2-ethylhexyl)Phthalate	5.1	U
56-55-3	Benzo(a)anthracene	5.1	~~U~~ exclude RE
218-01-9	Chrysene	5.1	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.1	U
205-99-2	Benzo(b)fluoranthene	5.1	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.1	U
50-32-8	Benzo(a)pyrene	5.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.1	U
53-70-3	Dibenzo(a,h)anthracene	5.1	U
191-24-2	Benzo(g,h,i)perylene	5.1	U

(1) - Cannot be separated from Diphenylamine

WM 058310

WM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IH69 FB01-031010

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-11 UM 072410

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-11A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

UM 031310

UM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRL09 FB01-031010

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-11 VM 072410

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-11A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

VM 032310

VM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW01 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-01C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

WM 072410

WM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW01 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-01 WM 072410

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-01C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	~~U~~ UJ CCL
53-70-3	Dibenzo(a,h)anthracene	5.0	~~U~~
191-24-2	Benzo(g,h,i)perylene	5.0	~~U~~

(1) - Cannot be separated from Diphenylamine

WM 082310

WM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW01D 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-02 LM 072410

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-02C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ Include RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

LM 08310

LM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW01D 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-02 WM 072410

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-02C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	~~U~~ UJ CCL
53-70-3	Dibenzo(a,h)anthracene	5.0	~~U~~
191-24-2	Benzo(g,h,i)perylene	5.0	~~U~~

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

WM 072410

WM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02BCH → 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-06 WM 072410

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003102-06C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.1	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.1	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.1	U
98-86-2	Acetophenone	5.1	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.1	U
67-72-1	Hexachloroethane	5.1	U
98-95-3	Nitrobenzene	5.1	U
78-59-1	Isophorone	5.1	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.1	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.1	U exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.1	U
105-60-2	Caprolactam	5.1	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.1	U exclude RE
77-47-4	Hexachlorocyclopentadiene	5.1	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.1	U
91-58-7	2-Chloronaphthalene	5.1	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.1	U
606-20-2	2,6-Dinitrotoluene	5.1	U
208-96-8	Acenaphthylene	5.1	U exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.1	U exclude RE

FORM I SV 8270C

WM 081310

WM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW02BCH +10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-06 WM 072410

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003102-06C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.1	U
132-64-9	Dibenzofuran	5.1	U
84-66-2	Diethylphthalate	5.1	U
7005-72-3	4-Chlorophenyl-phenylether	5.1	U
86-73-7	Fluorene	5.1	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.1	U
101-55-3	4-Bromophenyl-phenylether	5.1	U
118-74-1	Hexachlorobenzene	5.1	U
1912-24-9	Atrazine	5.1	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.1	~~U~~ exclude RE
120-12-7	Anthracene	5.1	~~U~~ exclude RE
86-74-8	Carbazole	5.1	U
84-74-2	Di-n-butylphthalate	5.1	U
206-44-0	Fluoranthene	5.1	~~U~~ exclude RE
129-00-0	Pyrene	5.1	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.1	U
91-94-1	3,3'-Dichlorobenzidine	5.1	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.1	U
56-55-3	Benzo(a)anthracene	5.1	~~U~~ exclude RE
218-01-9	Chrysene	5.1	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.1	U
205-99-2	Benzo(b)fluoranthene	5.1	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.1	U
50-32-8	Benzo(a)pyrene	5.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.1	~~U~~ UJ CCL
53-70-3	Dibenzo(a,h)anthracene	5.1	~~U~~
191-24-2	Benzo(g,h,i)perylene	5.1	~~U~~

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

WM 072410

WM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03BCH +10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-05C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U include RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U exclude RE

FORM I SV 8270C

LM 081310

LM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW03BCH +10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102 WM 072410

Matrix: (soil/water) WATER Lab Sample ID: 1003102-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-05C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	~~U~~ UJ CCL
53-70-3	Dibenzo(a,h)anthracene	5.0	~~U~~
191-24-2	Benzo(g,h,i)perylene	5.0	~~U~~

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

WM 081310

WM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102 WM 072410

Matrix: (soil/water) WATER Lab Sample ID: 1003102-14

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-14C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	~~U~~ UJ CCL
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

WM 072410

WM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04 — 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102 VM 072410

Matrix: (soil/water) WATER Lab Sample ID: 1003102-14

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-14C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	~~U~~ UJ CCL
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

VM 051310

VM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05 -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102 LM 072410

Matrix: (soil/water) WATER Lab Sample ID: 1003102-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-03C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

LM 072410

LM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05 -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-03C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	~~U~~ UJ CCL
53-70-3	Dibenzo(a,h)anthracene	5.0	~~U~~
191-24-2	Benzo(g,h,i)perylene	5.0	~~U~~

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

LM 081310

LM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05D -1 DA

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-04C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

LM 072410

LM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05D ~10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-04C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	~~U~~ UJ CCL
53-70-3	Dibenzo(a,h)anthracene	5.0	~~U~~
191-24-2	Benzo(g,h,i)perylene	5.0	~~U~~

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

VM 072410

VM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05DW 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-17 WM 072410

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-17C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	~~U~~ UJ CCL
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

WM 081310

WM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05DW 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-17

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-17C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	~~U~~ UJ CCL
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05IW 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-18

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-18JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

WM 072410

WM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW05IW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-18

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-18JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	~~U~~ UJ CCH
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW07 -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-09

Sample wt/vol: 900 (g/mL) ML Lab File ID: 1003102-09A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.6	U
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.6	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.6	U
98-86-2	Acetophenone	5.6	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.6	U
67-72-1	Hexachloroethane	5.6	U
98-95-3	Nitrobenzene	5.6	U
78-59-1	Isophorone	5.6	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.6	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.6	U exclude RE
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.6	U
105-60-2	Caprolactam	5.6	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.6	U exclude RE
77-47-4	Hexachlorocyclopentadiene	5.6	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.6	U
91-58-7	2-Chloronaphthalene	5.6	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.6	U
606-20-2	2,6-Dinitrotoluene	5.6	U
208-96-8	Acenaphthylene	5.6	U exclude RE
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.6	U exclude RE

FORM I SV 8270C

LM 072410

LM D81310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW07 -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-09

Sample wt/vol: 900 (g/mL) ML Lab File ID: 1003102-09A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.6	U
132-64-9	Dibenzofuran	5.6	U
84-66-2	Diethylphthalate	5.6	U
7005-72-3	4-Chlorophenyl-phenylether	5.6	U
86-73-7	Fluorene	5.6	~~U~~ exclude RE
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.6	U
101-55-3	4-Bromophenyl-phenylether	5.6	U
118-74-1	Hexachlorobenzene	5.6	U
1912-24-9	Atrazine	5.6	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.6	~~U~~ exclude RE
120-12-7	Anthracene	5.6	~~U~~ exclude RE
86-74-8	Carbazole	5.6	U
84-74-2	Di-n-butylphthalate	5.6	U
206-44-0	Fluoranthene	5.6	~~U~~ exclude RE
129-00-0	Pyrene	5.6	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.6	U
91-94-1	3,3'-Dichlorobenzidine	5.6	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.6	U
56-55-3	Benzo(a)anthracene	5.6	~~U~~ exclude RE
218-01-9	Chrysene	5.6	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.6	U
205-99-2	Benzo(b)fluoranthene	5.6	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.6	U
50-32-8	Benzo(a)pyrene	5.6	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.6	U
53-70-3	Dibenzo(a,h)anthracene	5.6	U
191-24-2	Benzo(g,h,i)perylene	5.6	U

(1) - Cannot be separated from Diphenylamine

WM 061310

WM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW07D 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-07

Sample wt/vol: 900 (g/mL) ML Lab File ID: 1003102-07A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.6	U
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.6	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.6	U
98-86-2	Acetophenone	5.6	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.6	U
67-72-1	Hexachloroethane	5.6	U
98-95-3	Nitrobenzene	5.6	U
78-59-1	Isophorone	5.6	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.6	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.6	~~U~~ exclude RE
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.6	U
105-60-2	Caprolactam	5.6	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.6	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.6	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.6	U
91-58-7	2-Chloronaphthalene	5.6	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.6	U
606-20-2	2,6-Dinitrotoluene	5.6	U
208-96-8	Acenaphthylene	5.6	~~U~~ exclude RE
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.6	~~U~~ exclude RE

FORM I SV 8270C

WM 081310

WM 07240

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW07D 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-07

Sample wt/vol: 900 (g/mL) ML Lab File ID: 1003102-07A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/24/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.6	U
132-64-9	Dibenzofuran	5.6	U
84-66-2	Diethylphthalate	5.6	U
7005-72-3	4-Chlorophenyl-phenylether	5.6	U
86-73-7	Fluorene	5.6	~~U~~ exclude RE
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.6	U
101-55-3	4-Bromophenyl-phenylether	5.6	U
118-74-1	Hexachlorobenzene	5.6	U
1912-24-9	Atrazine	5.6	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.6	~~U~~ exclude RE
120-12-7	Anthracene	5.6	~~U~~ exclude RE
86-74-8	Carbazole	5.6	U
84-74-2	Di-n-butylphthalate	5.6	U
206-44-0	Fluoranthene	5.6	~~U~~ exclude RE
129-00-0	Pyrene	5.6	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.6	U
91-94-1	3,3'-Dichlorobenzidine	5.6	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.6	U
56-55-3	Benzo(a)anthracene	5.6	~~U~~ exclude RE
218-01-9	Chrysene	5.6	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.6	U
205-99-2	Benzo(b)fluoranthene	5.6	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.6	U
50-32-8	Benzo(a)pyrene	5.6	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.6	U
53-70-3	Dibenzo(a,h)anthracene	5.6	U
191-24-2	Benzo(g,h,i)perylene	5.6	U

(1) - Cannot be separated from Diphenylamine

WM 058310

WM 072410

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW10-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-10

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003102-10JC70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.4	U
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.4	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.4	U
98-86-2	Acetophenone	5.4	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.4	U
67-72-1	Hexachloroethane	5.4	U
98-95-3	Nitrobenzene	5.4	U
78-59-1	Isophorone	5.4	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.4	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.4	~~U~~ exclude RE
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.4	U
105-60-2	Caprolactam	5.4	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.4	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.4	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.4	U
91-58-7	2-Chloronaphthalene	5.4	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.4	U
606-20-2	2,6-Dinitrotoluene	5.4	U
208-96-8	Acenaphthylene	5.4	~~U~~ exclude RE
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.4	~~U~~ exclude RE

FORM I SV 8270C

WM 072410

WM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW10-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-10

Sample wt/vol: 925 (g/mL) ML Lab File ID: 1003102-10JC70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/15/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.4	U
132-64-9	Dibenzofuran	5.4	U
84-66-2	Diethylphthalate	5.4	U
7005-72-3	4-Chlorophenyl-phenylether	5.4	U
86-73-7	Fluorene	5.4	~~U~~ exclude RE
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.4	U
101-55-3	4-Bromophenyl-phenylether	5.4	U
118-74-1	Hexachlorobenzene	5.4	U
1912-24-9	Atrazine	5.4	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.4	~~U~~ exclude RE
120-12-7	Anthracene	5.4	~~U~~ exclude RE
86-74-8	Carbazole	5.4	U
84-74-2	Di-n-butylphthalate	5.4	U
206-44-0	Fluoranthene	5.4	~~U~~ exclude RE
129-00-0	Pyrene	5.4	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.4	U
91-94-1	3,3'-Dichlorobenzidine	5.4	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.4	U
56-55-3	Benzo(a)anthracene	5.4	~~U~~ exclude RE
218-01-9	Chrysene	5.4	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.4	U
205-99-2	Benzo(b)fluoranthene	5.4	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.4	U
50-32-8	Benzo(a)pyrene	5.4	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.4	~~U~~ UJ CCL
53-70-3	Dibenzo(a,h)anthracene	5.4	U
191-24-2	Benzo(g,h,i)perylene	5.4	~~U~~ UJ CCL

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

LM 072410

LM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11DW-1DA

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-16

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-16JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

LM 072410

LM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11DW DA

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102 LM 072410

Matrix: (soil/water) WATER Lab Sample ID: 1003102-16

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-16JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	~~U~~ VJ CCH
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ VJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

LM 072410

LM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11IW-1DA

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-15

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-15J2C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

UM 072410

UM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11IW 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-15

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-15J2C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	~~U~~ UJ CCH
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

WM 072410

WM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15BCH 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102 LM 072410

Matrix: (soil/water) WATER Lab Sample ID: 1003102-20

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-20JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

LM 072410

LM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15BCH 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-20

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003102-20JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	~~U~~ UJ CCH
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

WM 072410

WM 081310

SVOA

Calibration standards exhibited %Ds that were non-compliant. A summary of these non-compliances and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	RRF, %RSD, %D	Samples	Q Flag	Q Code
CC 3/24/10	indeno(1,2,3-cd)pyrene dibenzo(a,h)anthracene benzo(g,h,i)perylene	-23.75 -21.66 -26.19	IR69-GW01-10A, IR69-GW01D-10A, IR69-GW05-10A, IR69-GW05D-10A, IR69-GW03BCH-10A, IR69-GW02BCH-10A	J/UJ	CCL
CC 3/25/10	indeno(1,2,3-cd)pyrene benzo(g,h,i)perylene	-24.08 -22.61	IR69-GW10-10A	J/UJ	CCL
CC 3/30/10	benzaldehyde 3,3'-dichlorobenzidine	-33.30 -27.86	IR69-GW04-10A, IR69-GW05DW-10A, IR69-EB01-031410-SD	J/UJ	CCL
CC 3/31/10	4,6-dinitro-2-methylphenol 4-bromophenyl-phenylether	23.16 30.94	IR69-GW11IW-10A, IR69-GW11DW-10A, IR69-GW05IW-10A, IR69-GW15BCH-10A, IR69-EB01-031310-GW, IR69-EB01-031310-SS	J/UJ	CCH

Blanks

VOA

The associated method and/or QC blanks exhibited contamination as noted in the following table. Compounds for which there was no action required, are not included in the following table.

Blank ID	Compound	Concentration	Reporting Limit
VBLKRV	methylene chloride	0.061J ug/L	0.5 ug/L
VBLKHP	acetone	1.1	2.5
VBLKHX	acetone	0.47J	2.5
	methylene chloride	0.066J	0.5
VBLKHQ	methylene chloride	0.027J	0.5
	1,2-dichlorobenzene	0.070J	0.5
	1,2,4-trichlorobenzene	0.12J	0.5
IR69-TB01-031110	acetone	1.6J	2.5
	methylene chloride	0.052J	0.5
	cyclohexane	0.25J	0.5
IR69-TB01-031310	acetone	2.1J	2.5

Summary of Data Qualifications

VOA, continued

Sample ID	Compound	Results	Q-Flag	Q Code
IR69-GW05-10A, IR69-GW05D-10A, IR69-GW05DW-10A, IR69-GW05IW-10A	chloroform	+	U at RL	EBL
IR69-GW11DW-10A	2-butanone	+	U at RL	EBL
IR69-GW11DW-10A, IR69-GW11IW-10A	benzene	+	U at RL	FBL
IR69-GW11DW-10A	bromodichloromethane	+	U at RL	EBL
IR69-GW11DW-10A, IR69-GW11IW-10A	all E-flagged compounds	+/-	exclude	DL
IR69-GW11DW-10ADL, IR69-GW11IW-10ADL	all except corresponding D-flagged compounds	+/-	exclude	DL

SVOA

Sample ID	Compound	Results	Q-Flag	Q Code
IR69-GW01-10A, IR69-GW01D-10A, IR69-GW05-10A, IR69-GW05D-10A, IR69-GW03BCH-10A, IR69-GW02BCH-10A	indeno(1,2,3-cd)pyrene dibenzo(a,h)anthracene benzo(g,h,i)perylene	+/-	J/UJ	CCL
IR69-GW10-10A	indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene	+/-	J/UJ	CCL
IR69-GW04-10A, IR69-GW05DW-10A, IR69-EB01-031410-SD	benzaldehyde 3,3'-dichlorobenzidine	+/-	J/UJ	CCL
IR69-GW11IW-10A, IR69-GW11DW-10A, IR69-GW05IW-10A, IR69-GW15BCH-10A, IR69-EB01-031310-GW, IR69-EB01-031310-SS	4,6-dinitro-2-methylphenol 4-bromophenyl-phenylether	+/-	J/UJ	CCH
PAH SIM: IR69-GW11IW-10A	2-methylnaphthalene	+	U at RL	EBL

Pesticides/PCBs

Sample ID	Compound	Results	Q-Flag	Q Code
all samples	all compounds	+P	J	2C

Metals

Sample ID	Analyte	Results	Q-Flag	Q Code
all field samples >MDL≤RL	magnesium	+B	U at RL	MBL
IR69-GW07D-10A, IR69-GW11DW-10A, IR69-GW05DW-10A, IR69-GW05IW-10A	copper	+B	U at RL	MBL
IR69-GW05IW-10A, IR69-GW05DW-10A, IR69-GW11IW-10A	zinc	+B	U at RL	FBL
IR69-GW05D-10A	sodium	+B	U at RL	FBL
IR69-GW03BCH-10A	lead	+B	U at RL	EBL
IR69-GW05DW-10A, IR69-GW15BCH-10A	aluminum	+B	U at RL	EBL
all field samples	aluminum	+/-	J/UJ	MDP
IR69-GW05-10A, IR69-GW05D-10A	iron	+	J	FD
all samples	all analytes	+B	J	

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW11DW - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix: (soil/water) WATER Lab Sample ID: 1003102-16

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003102-1671

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/23/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	1.4	
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.5 ~~0.043~~	~~J~~ U EBL
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.9	~~B~~ ~~U MBL~~ RICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.5 ~~0.22~~	~~JB~~ UMBL
156-60-5	trans-1,2-Dichloroethene	0.45	J
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	52	~~E~~ exclude, DL
78-93-3	2-butanone	2.5 ~~0.5~~ ~~0.61~~	~~J~~ ~~U EBL~~ RICL
67-66-3	Chloroform	1.4	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.5 ~~0.069~~	~~J~~ U FBL
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.31	J
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.5 ~~0.23~~	~~J~~ U EBL
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.5 ~~0.48~~	~~J~~ U EBL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

2 Corrections
LM 072410

LM
072410

SW846 - METALS
-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW11IW - 10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003102

Matrix (soil/water): WATER Lab Sample ID: 1003102-15

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200	~~B~~	~~J~~ UJ	P	MDP
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	39.6	~~B~~	J	P	
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	83400			P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	1.9 ~~5.0~~ ~~1.9~~	~~B~~	U ~~J~~	P	~~MBC~~
7439-89-6	Iron	7260			P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5000 ~~2340~~	~~B~~	U	P	MBL
7439-96-5	Manganese	124			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	1470	~~B~~	J	P	
7782-49-2	Selenium	5.0	U	~~N~~	P	
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	14400			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	20 ~~1.3~~	~~B~~	U	P	FBL

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

DataQual
Environmental Services, LLC

CH2M HILL
5700 Cleveland Street
Suite 101
Virginia Beach, VA 23462

July 30, 2010
SDG# 1003103, CompuChem
MCB Camp Lejeune, CTO-81

Dear Ms. Buckley,

The following Data Validation report is provided as requested for the parameters noted in the table below for SDG # 1003103. The data validation was performed in accordance with the SW846 Method 8260B for volatiles, 8270C and 8270C-SIM for semivolatiles and PAH, 8081A for pesticides, 8082 for PCBs and 6010B/7470A/7471A for metals and mercury and good professional judgment. Also used in the validation of these samples were The National Functional Guidelines for Organic Data Review (June, 2008) and the National Functional Guidelines for Inorganic Data Review (October, 2004), as applicable. All areas of concern are discussed in the body of the report and a summary of data qualifications is provided.

Sample ID	Lab ID	Matrix	VOA	SVOA	LL PAH	Pest	PCBs	Metals
IR69-SD01-10A	1003103-14	soil	X	X	X	X	X	X
IR69-SD01D-10A	1003103-15	soil	X	X	X	X	X	X
IR69-SS01-10A	1003103-03	soil	X	X	X	X	X	X
IR69-SS01D-10A	1003103-04	soil	X	X	X	X	X	X
IR69-SS03-10A	1003103-05	soil	X	X	X	X	X	X
IR69-SS04-10A	1003103-06	soil	X	X	X	X	X	X
IR69-SS05-10A	1003103-07	soil	X	X	X	X	X	X
IR69-SS06-10A	1003103-08	soil	X	X	X	X	X	X
MR02-IR69-SS01-10A	1003103-01	soil	X	X	X	X	X	X
MR02-IR69-SS01D-10A	1003103-02	soil	X	X	X	X	X	X
MR02-IR69-SS02-10A	1003103-16	soil	X	X	X	X	X	X
MR02-IR69-SS04-10A	1003103-17	soil	X	X	X	X	X	X
MR02-IR69-SS05-10A	1003103-18	soil	X	X	X	X	X	X
MR02-IR69-SS06-10A	1003103-19	soil	X	X	X	X	X	X
IR69-SB01-01-02-10A	1003103-12	soil	X	X	X	X	X	X
IR69-SB01D-01-02-10A	1003103-13	soil	X	X	X	X	X	X
IR69-SB04-06-07-10A	1003103-09	soil	X	X	X	X	X	X
IR69-SB05-06-07-10A	1003103-10	soil	X	X	X	X	X	X
IR69-SB06-06-07-10A	1003103-11	soil	X	X	X	X	X	X

The following quality control samples were provided with this SDG: sample IR69-SD01D-10A-field duplicate of sample IR69-SD01-10A; sample IR69-SS01D-10A-field duplicate of sample IR69-SS01-10A; sample MR02-IR69-SS01D-10A-field duplicate of sample MR02-IR69-SS01-10A; and sample IR69-SB01D-01-02-10A-field duplicate of sample IR69-SB01-01-02-10A.

The samples were evaluated based on the following criteria:

- Data Completeness *
- Technical Holding Times *
- GC/MS Tunes *
- GC Performance
- Initial/Continuing Calibrations
- CRI Standards *
- Interference Check Sample *
- Blanks
- Internal Standards
- Surrogates
- Laboratory Control Samples *
- Matrix Spike Recoveries NA
- Matrix Duplicate RPDs NA
- Post Digestion Spike Recoveries *
- Serial Dilutions
- Field Duplicates
- Identification/Quantitation
- Reporting Limits *
- Tentatively Identified Compounds NA

* - indicates that no qualifications were required based on this criteria

Overall Evaluation of Data/Potential Usability Issues

A summary of qualifications applied to the sample results are noted below for the fractions validated. Specific details regarding qualification of the data are addressed in the Specific Evaluation section of this narrative. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte the validator has chosen the qualifier that best indicates possible bias in the results and flagged the data accordingly. However, information regarding all quality control issues is provided in the body of the report and on the qualification summary page. Please note that when a compound or analyte is flagged due to blank contamination the BL qualifier code takes precedence over all other qualifier codes except a code that explains rejected data. ***Please note that for the sake of consistency and to avoid error the validator refers to all re-analyzed samples as RE whether the lab refer to them as RE or as DL.***

VOA

Several sample compounds were qualified as estimated based on high %RSD and %Ds which were exhibited in the initial and continuing calibrations.

Blank contamination was exhibited in the method and/or QC blanks that resulted in qualifications to the data.

Due to non-compliant internal standards exhibited in four samples, qualifications were add to the associated compound results.

Several samples exhibited non-compliant surrogate recoveries which required qualifications to the data.

Dilutions were required to obtain results within the calibration range.

Several samples were re-analyzed due to non-compliant surrogate and internal standards recoveries; these samples were excluded in favor of the initial analysis.

SVOA

Several sample compounds were qualified as estimated based on high %Ds which were exhibited in the continuing calibrations.

Blank contamination was exhibited in the method an/or QC blanks that resulted in qualifications to the data.

Due to non-compliant internal standards exhibited in four samples, qualifications were add to the associated compound results.

One sample exhibited non-compliant surrogate recoveries which required qualifications to the data.

Pesticides/PCBs

The continuing calibration standards exhibited non-compliant %Ds and one standard with a high 4, 4'-DDT breakdown. Qualifications were required in the samples.

Qualifications were required due to non-compliant surrogate recoveries.

Reported positive results exhibited column quantitation %Ds greater than 40%. These P flagged results were qualified as estimated J.

All samples except one were reanalyzed after further clean-up due to calibration issues. These issues were improved in the RE analysis although there were still similar problems. All original analyses were excluded in favor of the results reported from the RE analyses.

Metals

Qualifications were required in the samples due to laboratory and field QC blank contamination.

One analyte required qualification in the samples due to a non-compliant serial dilution %D.

Some analytes in the field duplicate pairs exhibited high RPDs. Qualifications were required.

All results reported between the MDL and the RL (B flagged by the laboratory) were qualified as estimated J.

Specific Evaluation of Data

Data Completeness

The SDG was received complete and intact. Resubmissions were not required. Please note: All field sample and QC blank IDs were missing the first four (IR69) and/or the last four (-10A) characters. The characters were added to the Form 1s in the DV reports by the data validator.

Technical Holding Times

According to chain of custody records, sampling was performed on 3/04-14/10 and samples were received at the laboratory 3/12-17/10. All sample preparation and analysis was performed within method holding time requirements.

GC Performance

Pesticides/PCBs

One of the breakdown standards was non-compliant (>15%) for 4,4'-DDT. Reported positive results for 4, 4'-DDD and/or 4, 4'-DDE were qualified as NJ, presumptively present at an estimated concentration in the associated field samples. The reported positive results for 4, 4'-DDT were qualified as estimated J and non-detect results for 4, 4'-DDT were rejected R in the associated field samples. Associated fields samples are as follows: IR69-SD01D-10A RE, MR02-IR69-SS02-10A RE, MR02-IR69-SS04-10A RE, MR02-IR69-SS05-10A RE, MR02-IR69-SS06-10A RE, MR02-IR69-SS01-10A RE, MR02-IR69-SS01D-10A RE, IR69-SS01-10A RE, IR69-SS01D-10A RE, IR69-SS03-10A RE, IR69-SS04-10A RE, IR69-SS06-10A RE, IR69-SS05-10A RE, IR69-SB04-06-07-10A RE, IR69-SB05-06-07-10A RE. The qualifier code is OT.

Initial/Continuing Calibration

VOA

Calibration standards exhibited %RSD and %Ds that were non-compliant. A summary of these non-compliances and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	RRF, %RSD, %D	Samples	Q Flag	Q Code
IC 2/09/10	1,2-dichloropropane	18.140	MR02-IR69-SS01-10A, MR02-IR69-SS01D-10A, IR69-SS01-10A, IR69-SS01D-10A, IR69-SS03-10A, IR69-SS04-10A, IR69-SS05-10A, IR69-SS06-10A, IR69-SB06-06-07-10A, IR69-SB05-06-07-10A	J/UJ	ICH
CC 3/15/10	acetone 2-butanone 4-methyl-2-pentanone 2-hexanone 1,2-dibromo-3-chloropropane methyl acetate	22.51 20.79 26.64 29.68 35.60 51.69	MR02-IR69-SS01-10A, MR02-IR69-SS01D-10A, IR69-SS01-10A, IR69-SS01D-10A, IR69-SS03-10A, IR69-SS04-10A, IR69-SS05-10A, IR69-SS06-10A, IR69-SB06-06-07-10A, IR69-SB05-06-07-10A	J/UJ	CCH
CC 3/26/10	dichlorodifluoromethane chloromethane	49.16 23.41	IR69-SD01-10A, IR69-SD01D-10A, MR02-IR69-SS04-10A, MR02-IR69-SS05-10A	J/UJ	CCH
IC 3/26/10	1,2-dichloropropane	17.162	MR02-IR69-SS02-10A, MR02-IR69-SS06-10A	J/UJ	ICH

SVOA

Calibration standards exhibited %Ds that were non-compliant. A summary of these non-compliances and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	RRF, %RSD, %D	Samples	Q Flag	Q Code
CC 3/31/10	4,6-dinitro-2-methylphenol	23.16	MR02-IR69-SS01-10A, MR02-IR69-SS01D-10A, IR69-SS01-10A, IR69-SS01D-10A, IR69-SS03-10A, IR69-SS04-10A, IR69-SS05-10A	J/UJ	CCH
CC 4/01/10	4-bromophenyl-phenylether	25.58	IR69-SB06-06-07-10A, IR69-SD01-10A, MR02-IR69-SS02-10A, MR02-IR69-SS04-10A, MR02-IR69-SS05-10A, MR02-IR69-SS06-10A	J/UJ	CCH

Standard ID	Compound(s)	RRF, %RSD, %D	Samples	Q Flag	Q Code
CC 4/02/10	4-bromophenyl-phenylether	32.81	IR69-SD01D-10A	J/UJ	CCH
	atrazine	-23.77		J/UJ	CCL

Pesticides/PCBs

Calibration standards exhibited %Ds that were non-compliant based on the method continuing calibration requirement of +/-20% difference from the initial calibration factors. A summary of these non-compliances and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	%D	Samples	Q Flag	Q Code
054AINDC3AH	delta-BHC 4,4'-DDT methoxychlor	-28.87 -28.71/-34.06 -93.35/-27.98	IR69-SD01D-10A RE, MR02-IR69-SS02-10A RE, MR02-IR69-SS04-10A RE, MR02-IR69-SS05-10A RE, MR02-IR69-SS06-10A RE, MR02-IR69-SS01-10A RE, MR02-IR69-SS01D-10A RE, IR69-SS01-10A RE, IR69-SS01D-10A RE, IR69-SS03-10A RE, IR69-SS04-10ARE, IR69-SS06-10A RE, IR69-SS05-10A RE, IR69-SB04-06-07-10A RE, IR69-SB05-06-07-10A RE	J/UJ	CCL
	endosulfan I	25.89		J	CCH
068AINDC3AJ	alpha-BHC beta-BHC delta-BHC 4,4'-DDD 4,4'-DDE 4,4'-DDT methoxychlor	-28.38 -33.75 -51.27/-47.92 -100 -84.57 -31.30/-45.16 -100/-39.47	MR02-IR69-SS01-10A RE, MR02-IR69-SS01D-10A RE, IR69-SS01-10A RE, IR69-SS01D-10A RE, IR69-SS03-10A RE, IR69-SS04-10ARE, IR69-SS06-10A RE, IR69-SS05-10A RE, IR69-SB04-06-07-10A RE, IR69-SB05-06-07-10A RE, IR69-SB06-06-07-10A RE, IR69-SB01-01-02-10A RE, IR69-SB01D-01-02-10A RE	J/UJ	CCL
	endosulfan I heptachlor	158.02 22.68		J	CCH
082AINDC3AL	alpha-BHC beta-BHC delta-BHC 4,4'-DDE 4,4'-DDT	-36.90 -33.16 -53.10/-53.30 -88.85/-100 -35.91/-49.33	IR69-SB06-06-07-10A RE, IR69-SB01-01-02-10A RE, IR69-SB01D-01-02-10A RE	J/UJ	CCL
	4,4'-DDD endosulfan I endosulfan II	38.62 167.34 20.81		J	CCH
	methoxychlor	-100/-99.35		J/R	CCL

Blanks

VOA

The associated method and/or QC blanks exhibited contamination as noted in the following table. Compounds for which there was no action required, are not included in the following table.

Blank ID	Compound	Concentration	Reporting Limit
VBLKHM	chloromethane	0.54J ug/Kg	5.0 ug/Kg
	cyclohexane	1.0J	5.0
VBLKHD	methylene chloride	0.81J	5.0
IR69-EB01-030410-SS	acetone	6.2	2.5
	2-butanone	1.8J	2.5
	toluene	0.93	0.5
IR69-EB01-030710-SB	acetone	5.2	2.5
	toluene	2.6	0.5
IR69-EB01-031310-SS	acetone	3.0	2.5
	2-butanone	1.7J	2.5
	toluene	1.1	0.5
IR69-EB01-031410-SD	acetone	6.2	2.5
	2-butanone	2J	2.5
	toluene	1.2	0.5
IR69-FB01-030310	toluene	4.1	0.5
IR69-FB01-031010	toluene	2.6	0.5
	o-xylene	0.062J	0.5
IR69-FB01-031910	toluene	2.1	0.5
	o-xylene	0.068	0.5

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Q Code
IR69-SB06-06-07-10A, IR69-SB01D-01-02-10A	chloromethane	U at RL	MBL
IR69-SB06-06-07-10A, IR69-SB01-01-02-10A, IR69-SB01D-01-02-10A	cyclohexane	U at RL	MBL
IR69-SS01-10A	methylene chloride	U at RL	MBL
IR69-SD01-10A, IR69-SD01D-10A, IR69-SS03-10A, MR02-IR69-SS01-10A, MR02-IR69-SS01D-10A, MR02-IR69-SS04-10A, MR02-IR69-SS05-10A, IR69-SB01D-01-02-10A	2-butanone	U at RL	EBL
IR69-SD01-10A, IR69-SD01D-10A, IR69-SS01-10A, IR69-SS01D-10A, IR69-SS03-10A, IR69-SS05-10A, IR69-SS06-10A, MR02-IR69-SS01D-10A, MR02-IR69-SS04-10A, MR02-IR69-SS05-10A, MR02-IR69-SS06-10A, IR69-SB01-01-02-10A, IR69-SB01D-01-02-10A, IR69-SB05-06-07-10A	toluene	U at RL	EBL
IR69-SS04-10A	o-xylene	U at RL	FBL
MR02-IR69-SS01-10A	toluene	U	FBL
IR69-SB01-01-02-10A, IR69-SB01D-01-02-10A	acetone	U	EBL
IR69-SB04-06-07-10A	acetone	U at RL	EBL

SVOA

The associated method and/or QC blanks exhibited contamination as noted in the following table. Compounds for which there was no action required, are not included in the following table.

Blank ID	Compound	Concentration	Reporting Limit
VBLKPB-SIM	naphthalene	0.92J ug/Kg	8.3 ug/Kg
IR69-FB01-030310	bis(2-ethylhexyl)phthalate	6.5	5.0
	di-n-octylphthalate	1.8J	5.0

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Q Code
PAH SIM: IR69-SD01-10A, MR02-IR69-SS02-0A, MR02-IR69-SS04-10A, MR02-IR69-SS05-10A, MR02-IR69-SS06-10ARE, IR69-SD01D-10ARE	naphthalene	U at RL	MBL
IR69-SS01D-10A, IR69-SS03-10A,IR69-SS04-10A, IR69-SS06-10A, MR02-IR69-SS01D-10A	bis(2-ethylhexyl)phthalate	U at RL	FBL
IR69-SS01D-10A	di-n-octylphthalate	U at RL	FBL

Metals

Contamination was noted in associated blanks and qualification was required in the associated samples. Required action is noted in the following tables.

Blank ID	Analyte	Concentration	Action Level	Q Flag	Q Code
CCB8	magnesium	11.1B ug/L	RL	U	MBL
	potassium	20.8B ug/L	RL	U	MBL
	sodium	513.8B ug/L	RL	U	MBL
IR69-FB01-031010	sodium	559B ug/L	RL	U	FBL
IR69-EB01-030710-SB	magnesium	10.7B ug/L	RL	U	EBL

Associated samples and required qualifications are noted in the following table.

Sample ID	Analyte	Q Flag	Q Code
IR69-SD01-10A, IR69-SD01D-10A, MR02-IR69-SS02-10A, MR02-IR69-SS04-10A, MR02-IR69-SS05-10A, MR02-IR69-SS06-10A	magnesium potassium sodium	U at RL	MBL
IR69-SB01-01-02-10A, IR69-SB01D-01-02-10A, IR69-SB04-06-07-10A, IR69-SB05-06-07-10A, IR69-SB06-06-07-10A,	sodium	U at RL	FBL
IR69-SB04-06-07-10A, IR69-SB06-06-07-10A	magnesium	U at RL	EBL

Internal Standards

VOA

The samples listed in the table below exhibited non-compliant internal standard area recoveries; qualifications were applied as stated to the associated compounds.

Sample ID	Non-compliant ISTD	Qualifier	Q-code
IR69-SS05-10A, IR69-SD01-10A, IR69-SD01D-10A	1,4-dichlorobenzene-d4	J/UJ	ISL
MR02-IR69-SS05-10A	chlorobenzene-d5	J/UJ	ISL
	1,4-dichlorobenzene-d4	J/R	ISL

SVOA

The SIM samples listed in the table below exhibited non-compliant internal standard area recoveries; qualifications were applied as stated to the associated compounds.

Sample ID	Non-compliant ISTD	Qualifier	Q Code
PAH SIM: IR69-SS06-10A, IR69-SS03-10A, MR02-IR69-SS01-10ARE, MR02-IR69-SS06-10ARE	crysene-d12	J	ISH
PAH SIM: IR69-SD01-10A, IR69-SD01D-10ARE	phenanthrene-d10	J	ISH
PAH SIM: MR02-IR69-SS04-10A	acenaphthene-d10 phenanthrene-d10	J	ISH

Surrogates

VOA

The samples listed in the table below exhibited non-compliant surrogate recoveries; qualifications were applied as stated to the associated compounds.

Sample ID	Non-compliant Surrogate	% Rec	QC Limit	Qualifier	Q-Code
MR02-IR69-SS01-10A, MR02-IR69-SS01D-10A IR69-SS01D-10A IR69-SS03-10A IR69-SS04-10A IR69-SS05-10A IR69-SS06-10A IR69-SB05-06-07-10A	toluene-d8	123 117 118 116 123 125 127 117	85-115	J	SSH
IR69-SD01-10A	toluene-d8 bromofluorobenzene	128 151	85-115 85-120	J	SSH
IR69-SD01D-10A	toluene-d8 bromofluorobenzene	126 151	85-115 85-120	J	SSH
MR02-IR69-SS04-10A MR02-IR69-SS05-10A	toluene-d8	77 76	85-115	J/UJ	SSL
MR02-IR69-SS06-10A	dibromofluoromethane 1,2-dichloroethane-d4 toluene-d8 bromofluorobenzene	57 66 35 23	71-141 70-139 85-115 85-120	J/UJ	SSL

SVOA

Sample IR69-SS06-10A exhibited low recoveries for 2-fluorophenol at 25% (QC limit 33-110%) and phenol-d5 at 32% (QC limit 38-110%); therefore all acid fraction compounds were qualified as estimated (J/UJ), qualifier code: SSL. The sample was re-analyzed however non-compliant surrogate recoveries were also exhibited, with one result below 10% recovery; therefore the re-analyzed sample was excluded.

Pesticides/PCBs

The samples listed in the table below exhibited non-compliant surrogate recoveries that resulted in the qualification of the reported results.

Sample ID	Non-compliant Surrogate	% Rec	Qualifier	Q-Code
IR69-SD01-10A	DCB	270/219	J	SSH
MR02-IR69-SS06-10A RE		250/160		
IR69-SS05-10A RE		320/269		

Serial Dilution

Metals

The serial dilution analysis exhibited a non-compliant %D for one analyte. Specific action is noted in the following table.

SD	Analyte	Samples Affected	%D	Q Flag	Q Code
MR02-IR69-SS01-10A	potassium	all field samples	10.3	J/UJ	SD

Field Duplicates

Metals

The field duplicate pair of samples IR69-SD01-10A and IR69-SD01D-10A exhibited a non-compliant RPD for zinc (40%). The reported positive results for zinc in the field duplicate pair were qualified as estimated J with a FD qualifier code.

The field duplicate pair of samples IR69-SS01-10A and IR69-SS01D-10A exhibited non-compliant RPDs for calcium (37%), manganese (49%), and mercury (88%). The reported positive results for calcium, manganese and mercury were qualified in the field duplicate pair as estimated J with a FD qualifier code.

The field duplicate pair of samples MR02-IR69- SS01-10A and MR02-IR69-SS01D-10A exhibited a non-compliant RPD for mercury (40%). The reported positive results for zinc in the field duplicate pair were qualified as estimated J with a FD qualifier code.

Identification/Quantitation

VOA

Samples IR69-SS05-10A and MR02-IR69-SS06-10A required a dilution to obtain results within the calibration range. All E-flagged results are excluded in favor of the corresponding D-flagged results from the dilution analysis. All results except corresponding D-flagged results in the dilution analysis are excluded in favor of the results reported from the undiluted analysis.

Several samples were re-analyzed due to non-compliant surrogate and/or internal standard area recoveries. The initial analysis was used and the re-analysis was excluded for the following samples: MR02-IR69-SS01-10A, MR02-IR69-SS01D-10A, IR69-SS01D-10A, IR69-SS03-10A, IR69-SS04-10A, IR69-SS06-10A, IR69-SB05-06-07-10A, IR69-SS05-10A, IR69-SD01D-10A, MR02-IR69-SS04-10A and MR02-IR69-SS05-10A.

SVOA

The following SIM samples were re-analyzed due to non-compliant internal standard area recoveries and were excluded in favor of the initial analysis or re-analysis: IR69-SS06-10ARE, MR02-IR69-SS01-10A, IR69-SS03-10ARE, MR02-IR69-SS06-10A, IR69-SD01-10ARE, IR69-SD01D-10A and MR02-IR69-SS04-10ARE.

Pesticides/PCBs

All positive results reported with a P flag to indicate column quantitation %Ds greater than 40% are qualified as estimated J with a qualifier code of 2C.

The calibration standards associated with the original analyses exhibited extreme response decreases as the sequence progressed. The samples were taken through a GPC clean-up procedure in an attempt to minimize the matrix effects. The calibrations surrounding the RE analyses were improved although significant issues were still present and qualifications were required. It is the professional judgment of the validator that the results reported from the RE analyses provide a more accurate assessment of the identity and concentration of compounds present. Therefore, all original analyses results are excluded in favor of the results reported from the RE analyses with a qualifier code of RE with the exception of sample IR69-SD01-10A. It would be prudent to confirm the results presented due to the extent of the potential matrix effects as evidenced by the calibration issues noted. Please note that several of the RE samples were analyzed at a dilution to accurately quantitate target compounds. The RLs were adjusted appropriately.

Metals

All results reported between the IDL and the RL (B flagged by laboratory) were qualified as estimated J. No qualification code was required.

A summary of qualifications required is provided on the following page. Please do not hesitate to contact DataQual ES with any questions regarding this validation report.

Sincerely,

Laura Maschhoff
President

Jacqueline Cleveland
Vice-President

Summary of Data Qualifications

VOA

Sample ID	Compound	Results	Q-Flag	Q Code
MR02-IR69-SS01-10A, MR02-IR69-SS01D-10A, IR69-SS01-10A, IR69-SS01D-10A, IR69-SS03-10A, IR69-SS04-10A, IR69-SS05-10A, IR69-SS06-10A, IR69-SB06-06-07-10A, IR69-SB05-06-07-10A	1,2-dichloropropane	+/-	J/UJ	ICH
MR02-IR69-SS01-10A, MR02-IR69-SS01D-10A, IR69-SS01-10A, IR69-SS01D-10A, IR69-SS03-10A, IR69-SS04-10A, IR69-SS05-10A, IR69-SS06-10A, IR69-SB06-06-07-10A, IR69-SB05-06-07-10A	acetone 2-butanone 4-methyl-2-pentanone 2-hexanone 1,2-dibromo-3-chloropropane methyl acetate	+/-	J/UJ	CCH
IR69-SD01-10A, IR69-SD01D-10A, MR02-IR69-SS04-10A, MR02-IR69-SS05-10A	dichlorodifluoromethane chloromethane	+/-	J/UJ	CCH
MR02-IR69-SS02-10A, MR02-IR69-SS06-10A	1,2-dichloropropane	+/-	J/UJ	ICH
IR69-SB06-06-07-10A, IR69-SB01D-01-02-10A	chloromethane	+	U at RL	MBL
IR69-SB06-06-07-10A, IR69-SB01-01-02-10A, IR69-SB01D-01-02-10A	cyclohexane	+	U at RL	MBL
IR69-SS01-10A	methylene chloride	+	U at RL	MBL
IR69-SD01-10A, IR69-SD01D-10A, IR69-SS03-10A, MR02-IR69-SS01-10A, MR02-IR69-SS01D-10A, MR02-IR69-SS04-10A, MR02-IR69-SS05-10A, IR69-SB01D-01-02-10A	2-butanone	+	U at RL	EBL
IR69-SD01-10A, IR69-SD01D-10A, IR69-SS01-10A, IR69-SS01D-10A, IR69-SS03-10A, IR69-SS05-10A, IR69-SS06-10A, MR02-IR69-SS01D-10A, MR02-IR69-SS04-10A, MR02-IR69-SS05-10A, MR02-IR69-SS06-10A, IR69-SB01-01-02-10A, IR69-SB01D-01-02-10A, IR69-SB05-06-07-10A	toluene	+	U at RL	EBL
IR69-SS04-10A	o-xylene	+	U at RL	FBL
MR02-IR69-SS01-10A	toluene	+	U	FBL
IR69-SB01-01-02-10A, IR69-SB01D-01-02-10A	acetone	+	U	EBL
IR69-SB04-06-07-10A	acetone	+	U at RL	EBL
IR69-SS05-10A, IR69-SD01-10A, IR69-SD01D-10A	all compounds associated with: 1,4-dichlorobenzene-d4	+/-	J/UJ	ISL
MR02-IR69-SS05-10A	all compounds associated with: chlorobenzene-d5	+/-	J/UJ	ISL
MR02-IR69-SS05-10A	all compounds associated with: 1,4-dichlorobenzene-d4	+/-	J/R	ISL
MR02-IR69-SS01-10A, MR02-IR69-SS01D-10A IR69-SS01D-10A, IR69-SS03-10A, IR69-SS04-10A IR69-SS05-10A, IR69-SS06-10A, IR69-SB05-06-07-10A, IR69-SD01-10A, IR69-SD01D-10A	all results	+	J	SSH
MR02-IR69-SS04-10A, MR02-IR69-SS05-10A, MR02-IR69-SS06-10A	all results	+/-	J/UJ	SSL
IR69-SS05-10A, MR02-IR69-SS06-10A	all E-flagged compounds	+/-	exclude	DL
IR69-SS05-10ADL, MR02-IR69-SS06-10ADL	all except corresponding D-flagged compounds	+/-	exclude	DL

Summary of Data Qualifications

VOA

Sample ID	Compound	Results	Q-Flag	Q Code
MR02-IR69-SS01-10ARE, MR02-IR69-SS01D-10ARE, IR69-SS01D-10ARE, IR69-SS03-10ARE, IR69-SS04-10ARE, IR69-SS06-10ARE, IR69-SB05-06-07-10ARE, IR69-SD01D-10ARE, MR02-IR69-SS04-10ARE, MR02-IR69-SS05-10ARE	all results	+/-	exclude	RE

SVOA

Sample ID	Compound	Results	Q-Flag	Q Code
MR02-IR69-SS01-10A,MR02-IR69-SS01D-10A, IR69-SS01-10A,IR69-SS01D-10A,IR69-SS03-10A, IR69-SS04-10A, IR69-SS05-10A	4,6-dinitro-2-methylphenol	+/-	J/UJ	CCH
IR69-SB06-06-07-10A,IR69-SD01-10A, MR02-IR69-SS02-10A, MR02-IR69-SS04-10A, MR02-IR69-SS05-10A, MR02-IR69-SS06-10A	4-bromophenyl-phenylether	+/-	J/UJ	CCH
IR69-SD01D-10A	4-bromophenyl-phenylether	+/-	J/UJ	CCH
IR69-SD01D-10A	atrazine	+/-	J/UJ	CCL
PAH SIM: IR69-SD01-10A, MR02-IR69-SS02-0A, MR02-IR69-SS04-10A, MR02-IR69-SS05-10A, MR02-IR69-SS06-10ARE, IR69-SD01D-10ARE	naphthalene	+	U at RL	MBL
IR69-SS01D-10A, IR69-SS03-10A,IR69-SS04-10A, IR69-SS06-10A, MR02-IR69-SS01D-10A	bis(2-ethylhexyl)phthalate	+	U at RL	FBL
IR69-SS01D-10A	di-n-octylphthalate	+	U at RL	FBL
PAH SIM: IR69-SS06-10A, IR69-SS03-10A, MR02-IR69-SS01-10ARE, MR02-IR69-SS06-10ARE	all compounds associated with: crysene-d12	+	J	ISH
PAH SIM: IR69-SD01-10A, IR69-SD01D-10ARE	all compounds associated with: phenanthrene-d10	+	J	ISH
PAH SIM: MR02-IR69-SS04-10A	all compounds associated with: acenaphthene-d10 phenanthrene-d10	+	J	ISH
IR69-SS06-10A	acid fraction compounds	+/-	J/UJ	SSL
PAH SIM: IR69-SS06-10ARE, MR02-IR69-SS01-10A, IR69-SS03-10ARE, MR02-IR69-SS06-10A, IR69-SD01-10ARE, IR69-SD01D-10A, MR02-IR69-SS04-10ARE	all results	+/-	exclude	RE

Summary of Data Qualifications

Pesticides/PCBs

Sample ID	Compound	Results	Q-Flag	Q Code
IR69-SD01D-10A RE, MR02-IR69-SS02-10A RE, MR02-IR69-SS04-10A RE, MR02-IR69-SS05-10A RE, MR02-IR69-SS06-10A RE, MR02-IR69-SS01-10A RE, MR02-IR69-SS01D-10A RE, IR69-SS01-10A RE, IR69-SS01D-10A RE, IR69-SS03-10A RE, IR69-SS04-10A RE, IR69-SS06-10A RE, IR69-SS05-10A RE, IR69-SB04-06-07-10A RE, IR69-SB05-06-07-10A RE.	4,4'-DDE 4,4'-DDD'	+	NJ	OT
IR69-SD01D-10A RE, MR02-IR69-SS02-10A RE, MR02-IR69-SS04-10A RE, MR02-IR69-SS05-10A RE, MR02-IR69-SS06-10A RE, MR02-IR69-SS01-10A RE, MR02-IR69-SS01D-10A RE, IR69-SS01-10A RE, IR69-SS01D-10A RE, IR69-SS03-10A RE, IR69-SS04-10A RE, IR69-SS06-10A RE, IR69-SS05-10A RE, IR69-SB04-06-07-10A RE, IR69-SB05-06-07-10A RE.	4,4'-DDT	+/-	J/R	OT
IR69-SD01D-10A RE, MR02-IR69-SS02-10A RE, MR02-IR69-SS04-10A RE, MR02-IR69-SS05-10A RE, MR02-IR69-SS06-10A RE, MR02-IR69-SS01-10A RE, MR02-IR69-SS01D-10A RE, IR69-SS01-10A RE, IR69-SS01D-10A RE, IR69-SS03-10A RE, IR69-SS04-10ARE, IR69-SS06-10A RE, IR69-SS05-10A RE, IR69-SB04-06-07-10A RE, IR69-SB05-06-07-10A RE	delta-BHC 4,4'-DDT methoxychlor	+/-	J/UJ	CCL
	endosulfan I	+	J	CCH
MR02-IR69-SS01-10A RE, MR02-IR69-SS01D-10A RE, IR69-SS01-10A RE, IR69-SS01D-10A RE, IR69-SS03-10A RE, IR69-SS04-10ARE, IR69-SS06-10A RE, IR69-SS05-10A RE, IR69-SB04-06-07-10A RE, IR69-SB05-06-07-10A RE, IR69-SB06-06-07-10A RE, IR69-SB01-01-02-10A RE, IR69-SB01D-01-02-10A RE	alpha-BHC beta-BHC delta-BHC 4,4'-DDD 4,4'-DDE 4,4'-DDT methoxychlor	+/-	J/UJ	CCL
	endosulfan I heptachlor	+	J	CCH
IR69-SB06-06-07-10A RE, IR69-SB01-01-02-10A RE, IR69-SB01D-01-02-10A RE	alpha-BHC beta-BHC delta-BHC 4,4'-DDE 4,4'-DDT	+/-	J/UJ	CCL
	4,4'-DDD endosulfan I endosulfan II	+	J	CCH
	methoxychlor	+/-	J/R	CCL
IR69-SD01-10A, MR02-IR69-SS06-10A RE IR69-SS05-10A RE	all compounds	+	J	SSH
all original analysis results except IR69-SD01-10A	all compounds	+/-	exclude	RE
all samples	all compounds	+P	J	2C

*Note – the qualifier codes were applied in the following order: OT, CCL, CCH, SSH and then 2C.

Summary of Data Qualifications

Metals

Sample ID	Analyte	Results	Q-Flag	Q Code
IR69-SD01-10A, IR69-SD01D-10A, MR02-IR69-SS02-10A, MR02-IR69-SS04-10A, MR02-IR69-SS05-10A, MR02-IR69-SS06-10A	magnesium potassium sodium	+B	U at RL	MBL
IR69-SB01-01-02-10A, IR69-SB01D-01-02-10A, IR69-SB04-06-07-10A, IR69-SB05-06-07-10A, IR69-SB06-06-07-10A,	sodium	+B	U at RL	FBL
IR69-SB04-06-07-10A, IR69-SB06-06-07-10A	magnesium	+B	U at RL	EBL
all samples	potassium	+/-	J/UJ	SD
IR69-SD01-10A, IR69-SD01D-10A	zinc	+	J	FD
IR69-SS01-10A, IR69-SS01D-10A	calcium manganese mercury	+	J	FD
MR02-IR69-SS01-10A, MR02-IR69-SS01D-10A	mercury	+	J	FD
all samples	all analytes	+B	J	

Glossary of Qualification Flags and Abbreviations

Qualification Flags (Q-Flags)

U	not detected above the reported sample quantitation limit
J	estimated value
UJ	reported quantitation limit is qualified as estimated
R	result is rejected; the presence or absence of the analyte cannot be verified
D	result value is based on dilution analysis result
NJ	analyte has been tentatively identified, estimated value
L	analyte present, biased low
UL	not detected, quantitation limit is probably higher
K	analyte present, biased high

Inorganic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 10X the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL and the result is raised to the RL and flagged U.
R or J_+	The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator. (see NFG, Rev. date 10/04, p. 17 for extracted blanks (PB))

Organic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 5X (10X for common laboratory contaminants) the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is raised to the RL and flagged U.
U	The sample result for the blank contaminant is greater than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is flagged U at the reported value.

General Abbreviations

RL / MDL	reporting limit/method detection limit
CRQL	contract required quantitation limit
Q Code	qualifier code
+	positive result
-	non-detect result

QUALIFIER CODE REFERENCE

Qualifier	Description
TN	Tune
BSL	Blank Spike/LCS - High Recovery
BSH	Blank Spike/LCS - Low Recovery
BD	Blank Spike/Blank Spike Duplicate (LCS/LCSD) Precision
BRL	Below Reporting Limit
ISL	Internal Standard - Low Recovery
ISH	Internal Standard - High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate - Low Recovery
MSH	Matrix Spike and/or Matrix Spike Duplicate - High Recovery
MI	Matrix interference obscuring the raw data
MDP	Matrix Spike/Matrix Spike Duplicate Precision
2S	Second Source - Bad reproducibility between tandem detectors
SSL	Spiked Surrogate - Low Recovery
SSH	Spiked Surrogate - High Recovery
SD	Serial Dilution Reproducibility
ICL	Initial Calibration - Low Relative Response Factors (RRF)
ICH	Initial Calibration - High Relative Response Factors (RRF)
ICB	Initial Calibration - Bad Linearity or Curve Function
CCL	Continuing Calibration - Low Recovery or %Difference
CCH	Continuing Calibration - High Recovery or %Difference
LD	Lab Duplicate Reproducibility
HT	Holding Time
PD	Pesticide Degradation
2C	Second Column - Poor Dual Column Reproducibility
LR	Concentration Exceeds Linear Range
BL	Blank Contamination (MBL, EBL, FBL)
RE	Redundant Result - due to Re-analysis or Re-extraction
DL	Redundant Result - due to Dilution
FD	Field Duplicate
OT	Other – explained in data validation report
%SOL	High moisture content

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD01-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 WM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-14

Sample wt/vol: 4.70(g/mL) G Lab File ID: 1003103-14R73

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. 77 Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	23	U UJ ISL
74-87-3	Chloromethane	2.5	J J
75-01-4	Vinyl Chloride	6.0	J J
74-83-9	Bromomethane	23	U UJ
75-00-3	Chloroethane	23	U
75-69-4	Trichlorofluoromethane	23	U
75-35-4	1,1-Dichloroethene	23	U
75-15-0	Carbon disulfide	17	J J
76-13-1	1,1,2-trichloro-1,2,2-triflu	23	U UJ
67-64-1	Acetone	540	J
75-09-2	Methylene Chloride	23	U UJ
156-60-5	trans-1,2-Dichloroethene	23	U
1634-04-4	Methyl-tert-butyl ether	23	U
75-34-3	1,1-Dichloroethane	23	U
156-59-2	cis-1,2-Dichloroethene	51	J
78-93-3	2-butanone	~~43~~ 58	J UEBL
67-66-3	Chloroform	23	U UJ ISL
71-55-6	1,1,1-Trichloroethane	23	U
56-23-5	Carbon Tetrachloride	23	U
71-43-2	Benzene	23	U
107-06-2	1,2-Dichloroethane	23	U
79-01-6	Trichloroethene	2.8	J J
78-87-5	1,2-Dichloropropane	23	U UJ
75-27-4	Bromodichloromethane	23	U UJ
10061-01-5	cis-1,3-Dichloropropene	23	U UJ
108-10-1	4-Methyl-2-pentanone	58	U
108-88-3	Toluene	~~12~~ 23	J UEBL
10061-02-6	trans-1,3-Dichloropropene	23	U
79-00-5	1,1,2-Trichloroethane	23	U
127-18-4	Tetrachloroethene	23	U
591-78-6	2-hexanone	58	U
124-48-1	Dibromochloromethane	23	U
106-93-4	1,2-Dibromoethane	23	U

AMENDED DATA

WM 072110

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD01-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 LM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-14

Sample wt/vol: 4.70(g/mL) G Lab File ID: 1003103-14R73

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. 77 Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	23	U
100-41-4	Ethylbenzene	23	U
100-42-5	Styrene	23	U
75-25-2	Bromoform	23	U
98-82-8	Isopropyl Benzene	23	U
79-34-5	1,1,2,2-Tetrachloroethane	23	U
541-73-1	1,3-Dichlorobenzene	23	U
106-46-7	1,4-Dichlorobenzene	23	U
95-50-1	1,2-Dichlorobenzene	23	U
96-12-8	1,2-Dibromo-3-Chloropropane	23	U
120-82-1	1,2,4-Trichlorobenzene	23	U
1330-20-7	Xylene (total)	23	U
79-20-9	Methyl acetate	95	J SJH
110-82-7	Cyclohexane	1.8	J J SJH
108-87-2	Methylcyclohexane	23	U
108-38-3	m,p-Xylene (part of total)	0.77	J J SJH
95-47-6	o-Xylene (part of total)	23	U

AMENDED DATA

LM 072110

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD01D-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 LM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-15

Sample wt/vol: 4.79(g/mL) G Lab File ID: 1003103-15R73

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. 76 Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	22	U UJ ISL
74-87-3	Chloromethane	1.7	J J
75-01-4	Vinyl Chloride	22	U UJ
74-83-9	Bromomethane	22	U
75-00-3	Chloroethane	22	U
75-69-4	Trichlorofluoromethane	22	U
75-35-4	1,1-Dichloroethene	22	U
75-15-0	Carbon disulfide	13	J
76-13-1	1,1,2-trichloro-1,2,2-triflu	22	U UJ
67-64-1	Acetone	290	J
75-09-2	Methylene Chloride	22	U UJ
156-60-5	trans-1,2-Dichloroethene	22	U
1634-04-4	Methyl-tert-butyl ether	22	U
75-34-3	1,1-Dichloroethane	22	U
156-59-2	cis-1,2-Dichloroethene	27	J
78-93-3	2-butanone	54 ~~23~~	J UEBL
67-66-3	Chloroform	22	U UJ ISL
71-55-6	1,1,1-Trichloroethane	22	U
56-23-5	Carbon Tetrachloride	22	U
71-43-2	Benzene	22	U
107-06-2	1,2-Dichloroethane	22	U
79-01-6	Trichloroethene	1.9	J
78-87-5	1,2-Dichloropropane	22	U UJ
75-27-4	Bromodichloromethane	22	U
10061-01-5	cis-1,3-Dichloropropene	22	U
108-10-1	4-Methyl-2-pentanone	54	U
108-88-3	Toluene	22 ~~13~~	J UEBL
10061-02-6	trans-1,3-Dichloropropene	22	U
79-00-5	1,1,2-Trichloroethane	22	U
127-18-4	Tetrachloroethene	22	U
591-78-6	2-hexanone	54	U
124-48-1	Dibromochloromethane	22	U
106-93-4	1,2-Dibromoethane	22	U

FORM I VOA

LM 072110

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD01D-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 WM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-15

Sample wt/vol: 4.79(g/mL) G Lab File ID: 1003103-15R73

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. 76 Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	22	U
100-41-4	Ethylbenzene	22	U
100-42-5	Styrene	22	U
75-25-2	Bromoform	22	U
98-82-8	Isopropyl Benzene	22	U
79-34-5	1,1,2,2-Tetrachloroethane	22	U
541-73-1	1,3-Dichlorobenzene	22	U
106-46-7	1,4-Dichlorobenzene	22	U
95-50-1	1,2-Dichlorobenzene	22	U
96-12-8	1,2-Dibromo-3-Chloropropane	22	U
120-82-1	1,2,4-Trichlorobenzene	22	U
1330-20-7	Xylene (total)	22	U
79-20-9	Methyl acetate	57	J 5/H
110-82-7	Cyclohexane	1.7	J J 5/H
108-87-2	Methylcyclohexane	22	U
108-38-3	m,p-Xylene (part of total)	43	U
95-47-6	o-Xylene (part of total)	22	U

FORM I VOA

WM 072110

022

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD01DRE-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 WM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-15RE1

Sample wt/vol: 4.31(g/mL) G Lab File ID: 1003103-15R273

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. 76 Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	24	U
74-87-3	Chloromethane	24	U
75-01-4	Vinyl Chloride	24	U
74-83-9	Bromomethane	24	U
75-00-3	Chloroethane	24	U
75-69-4	Trichlorofluoromethane	24	U
75-35-4	1,1-Dichloroethene	24	U
75-15-0	Carbon disulfide	15	J
76-13-1	1,1,2-trichloro-1,2,2-triflu	24	U
67-64-1	Acetone	500	
75-09-2	Methylene Chloride	24	U
156-60-5	trans-1,2-Dichloroethene	24	U
1634-04-4	Methyl-tert-butyl ether	24	U
75-34-3	1,1-Dichloroethane	24	U
156-59-2	cis-1,2-Dichloroethene	34	
78-93-3	2-butanone	32	J
67-66-3	Chloroform	24	U
71-55-6	1,1,1-Trichloroethane	24	U
56-23-5	Carbon Tetrachloride	24	U
71-43-2	Benzene	24	U
107-06-2	1,2-Dichloroethane	24	U
79-01-6	Trichloroethene	2.0	J
78-87-5	1,2-Dichloropropane	24	U
75-27-4	Bromodichloromethane	24	U
10061-01-5	cis-1,3-Dichloropropene	24	U
108-10-1	4-Methyl-2-pentanone	60	U
108-88-3	Toluene	10	J
10061-02-6	trans-1,3-Dichloropropene	24	U
79-00-5	1,1,2-Trichloroethane	24	U
127-18-4	Tetrachloroethene	24	U
591-78-6	2-hexanone	60	U
124-48-1	Dibromochloromethane	24	U
106-93-4	1,2-Dibromoethane	24	U

exclude, RE

FORM I VOA

WM 072110

023

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD01DRE-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 UM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-15RE1

Sample wt/vol: 4.31(g/mL) G Lab File ID: 1003103-15R273

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. 76 Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	24	U
100-41-4	Ethylbenzene	24	U
100-42-5	Styrene	24	U
75-25-2	Bromoform	24	U
98-82-8	Isopropyl Benzene	24	U
79-34-5	1,1,2,2-Tetrachloroethane	24	U
541-73-1	1,3-Dichlorobenzene	24	U
106-46-7	1,4-Dichlorobenzene	24	U
95-50-1	1,2-Dichlorobenzene	24	U
96-12-8	1,2-Dibromo-3-Chloropropane	24	U
120-82-1	1,2,4-Trichlorobenzene	24	U
1330-20-7	Xylene (total)	24	U
79-20-9	Methyl acetate	160	
110-82-7	Cyclohexane	24	U
108-87-2	Methylcyclohexane	24	U
108-38-3	m,p-Xylene (part of total)	48	U
95-47-6	o-Xylene (part of total)	24	U

exclude, RE

FORM I VOA

UM 072110

024

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS01-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-03

Sample wt/vol: 6.2 (g/mL) G Lab File ID: 1003103-0359

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 34 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	6.2	U
74-87-3	Chloromethane	6.2	U
75-01-4	Vinyl Chloride	6.2	U
74-83-9	Bromomethane	6.2	U
75-00-3	Chloroethane	6.2	U
75-69-4	Trichlorofluoromethane	6.2	U
75-35-4	1,1-Dichloroethene	6.2	U
75-15-0	Carbon disulfide	6.2	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	6.2	U
67-64-1	Acetone	410	J ICH
75-09-2	Methylene Chloride	~~0.62~~ 6.2	~~JB~~ U MBL
156-60-5	trans-1,2-Dichloroethene	6.2	U
1634-04-4	Methyl-tert-butyl ether	6.2	U
75-34-3	1,1-Dichloroethane	6.2	U
156-59-2	cis-1,2-Dichloroethene	6.2	U
78-93-3	2-butanone	25	J ICH
67-66-3	Chloroform	6.2	U
71-55-6	1,1,1-Trichloroethane	6.2	U
56-23-5	Carbon Tetrachloride	6.2	U
71-43-2	Benzene	6.2	U
107-06-2	1,2-Dichloroethane	6.2	U
79-01-6	Trichloroethene	6.2	U
78-87-5	1,2-Dichloropropane	6.2	~~U~~ UJ ICH
75-27-4	Bromodichloromethane	6.2	U
10061-01-5	cis-1,3-Dichloropropene	6.2	U
108-10-1	4-Methyl-2-pentanone	15	~~U~~ UJ ICH
108-88-3	Toluene	~~4.7~~ 6.2	~~J~~ U MBL
10061-02-6	trans-1,3-Dichloropropene	6.2	U
79-00-5	1,1,2-Trichloroethane	6.2	U
127-18-4	Tetrachloroethene	6.2	U
591-78-6	2-hexanone	15	U
124-48-1	Dibromochloromethane	6.2	U
106-93-4	1,2-Dibromoethane	6.2	U

FORM I VOA

UM 07210

025

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS01-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-03

Sample wt/vol: 6.2 (g/mL) G Lab File ID: 1003103-0359

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 34 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	6.2	U
100-41-4	Ethylbenzene	6.2	U
100-42-5	Styrene	6.2	U
75-25-2	Bromoform	6.2	U
98-82-8	Isopropyl Benzene	6.2	U
79-34-5	1,1,2,2-Tetrachloroethane	6.2	U
541-73-1	1,3-Dichlorobenzene	6.2	U
106-46-7	1,4-Dichlorobenzene	6.2	U
95-50-1	1,2-Dichlorobenzene	6.2	U
96-12-8	1,2-Dibromo-3-Chloropropane	6.2	~~U~~ UJ BCH
120-82-1	1,2,4-Trichlorobenzene	6.2	U
1330-20-7	Xylene (total)	6.2	U
79-20-9	Methyl acetate	110	J BCH
110-82-7	Cyclohexane	6.2	U
108-87-2	Methylcyclohexane	6.2	U
108-38-3	m,p-Xylene (part of total)	12	U
95-47-6	o-Xylene (part of total)	6.2	U

FORM I VOA

LM 6/12/10

026

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS01D-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-04

Sample wt/vol: 6.0 (g/mL) G Lab File ID: 1003103-0459

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 34 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	6.3	U
74-87-3	Chloromethane	6.3	U
75-01-4	Vinyl Chloride	6.3	U
74-83-9	Bromomethane	6.3	U
75-00-3	Chloroethane	6.3	U
75-69-4	Trichlorofluoromethane	6.3	U
75-35-4	1,1-Dichloroethene	6.3	U
75-15-0	Carbon disulfide	6.3	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	6.3	U
67-64-1	Acetone	560	J ICH
75-09-2	Methylene Chloride	6.3	U
156-60-5	trans-1,2-Dichloroethene	6.3	U
1634-04-4	Methyl-tert-butyl ether	6.3	U
75-34-3	1,1-Dichloroethane	6.3	U
156-59-2	cis-1,2-Dichloroethene	6.3	U
78-93-3	2-butanone	23	J ICH
67-66-3	Chloroform	6.3	U
71-55-6	1,1,1-Trichloroethane	6.3	U
56-23-5	Carbon Tetrachloride	6.3	U
71-43-2	Benzene	6.3	U
107-06-2	1,2-Dichloroethane	6.3	U
79-01-6	Trichloroethene	6.3	U
78-87-5	1,2-Dichloropropane	6.3	U UJ ICH
75-27-4	Bromodichloromethane	6.3	U
10061-01-5	cis-1,3-Dichloropropene	6.3	U
108-10-1	4-Methyl-2-pentanone	16	U UJ ICH
108-88-3	Toluene	~~2.3~~ 6.3	~~J~~ U EBL
10061-02-6	trans-1,3-Dichloropropene	6.3	U
79-00-5	1,1,2-Trichloroethane	6.3	U
127-18-4	Tetrachloroethene	6.3	U
591-78-6	2-hexanone	16	U UJ ICH
124-48-1	Dibromochloromethane	6.3	U
106-93-4	1,2-Dibromoethane	6.3	U

FORM I VOA

UM 07/2/10

027

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS01D-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-04

Sample wt/vol: 6.0 (g/mL) G Lab File ID: 1003103-0459

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 34 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	6.3	U
100-41-4	Ethylbenzene	6.3	U
100-42-5	Styrene	6.3	U
75-25-2	Bromoform	6.3	U
98-82-8	Isopropyl Benzene	6.3	U
79-34-5	1,1,2,2-Tetrachloroethane	6.3	U
541-73-1	1,3-Dichlorobenzene	6.3	U
106-46-7	1,4-Dichlorobenzene	6.3	U
95-50-1	1,2-Dichlorobenzene	6.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	6.3	~~U~~ UJ DCH
120-82-1	1,2,4-Trichlorobenzene	6.3	U
1330-20-7	Xylene (total)	6.3	U
79-20-9	Methyl acetate	230	J DCH
110-82-7	Cyclohexane	6.3	U
108-87-2	Methylcyclohexane	6.3	U
108-38-3	m,p-Xylene (part of total)	13	U
95-47-6	o-Xylene (part of total)	6.3	U

FORM I VOA

WM 6/21/10

028

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS0
1D-10ARE

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-04RE1

Sample wt/vol: 6.08(g/mL) G Lab File ID: 1003103-04R59

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 34 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	6.2	U
74-87-3	Chloromethane	6.2	U
75-01-4	Vinyl Chloride	6.2	U
74-83-9	Bromomethane	6.2	U
75-00-3	Chloroethane	6.2	U
75-69-4	Trichlorofluoromethane	6.2	U
75-35-4	1,1-Dichloroethene	6.2	U
75-15-0	Carbon disulfide	6.2	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	6.2	U
67-64-1	Acetone	490	
75-09-2	Methylene Chloride	6.2	U
156-60-5	trans-1,2-Dichloroethene	6.2	U
1634-04-4	Methyl-tert-butyl ether	6.2	U
75-34-3	1,1-Dichloroethane	6.2	U
156-59-2	cis-1,2-Dichloroethene	6.2	U
78-93-3	2-butanone	14	J
67-66-3	Chloroform	6.2	U
71-55-6	1,1,1-Trichloroethane	6.2	U
56-23-5	Carbon Tetrachloride	6.2	U
71-43-2	Benzene	6.2	U
107-06-2	1,2-Dichloroethane	6.2	U
79-01-6	Trichloroethene	6.2	U
78-87-5	1,2-Dichloropropane	6.2	U
75-27-4	Bromodichloromethane	6.2	U
10061-01-5	cis-1,3-Dichloropropene	6.2	U
108-10-1	4-Methyl-2-pentanone	16	U
108-88-3	Toluene	1.9	J
10061-02-6	trans-1,3-Dichloropropene	6.2	U
79-00-5	1,1,2-Trichloroethane	6.2	U
127-18-4	Tetrachloroethene	6.2	U
591-78-6	2-hexanone	16	U
124-48-1	Dibromochloromethane	6.2	U
106-93-4	1,2-Dibromoethane	6.2	U

exclude, RE

FORM I VOA

MM 07210

029

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS0
1D-10ARE

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-04RE1

Sample wt/vol: 6.08(g/mL) G Lab File ID: 1003103-04R59

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 34 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	6.2	U
100-41-4	Ethylbenzene	6.2	U
100-42-5	Styrene	5.6	J
75-25-2	Bromoform	6.2	U
98-82-8	Isopropyl Benzene	6.2	U
79-34-5	1,1,2,2-Tetrachloroethane	6.2	U
541-73-1	1,3-Dichlorobenzene	6.2	U
106-46-7	1,4-Dichlorobenzene	6.2	U
95-50-1	1,2-Dichlorobenzene	6.2	U
96-12-8	1,2-Dibromo-3-Chloropropane	6.2	U
120-82-1	1,2,4-Trichlorobenzene	6.2	U
1330-20-7	Xylene (total)	6.2	U
79-20-9	Methyl acetate	11	
110-82-7	Cyclohexane	6.2	U
108-87-2	Methylcyclohexane	6.2	U
108-38-3	m,p-Xylene (part of total)	12	U
95-47-6	o-Xylene (part of total)	6.2	U

exclude, RE

FORM I VOA

WM 8/12/10

030

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS03-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-05

Sample wt/vol: 6.2 (g/mL) G Lab File ID: 1003103-0559

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 27 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5.5	U
74-87-3	Chloromethane	5.5	U
75-01-4	Vinyl Chloride	5.5	U
74-83-9	Bromomethane	5.5	U
75-00-3	Chloroethane	5.5	U
75-69-4	Trichlorofluoromethane	5.5	U
75-35-4	1,1-Dichloroethene	5.5	U
75-15-0	Carbon disulfide	5.5	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	5.5	U
67-64-1	Acetone	230	J ICH
75-09-2	Methylene Chloride	5.5	U
156-60-5	trans-1,2-Dichloroethene	5.5	U
1634-04-4	Methyl-tert-butyl ether	5.5	U
75-34-3	1,1-Dichloroethane	5.5	U
156-59-2	cis-1,2-Dichloroethene	5.5	U
78-93-3	2-butanone	14 ~~12~~	J UEBL
67-66-3	Chloroform	5.5	U
71-55-6	1,1,1-Trichloroethane	5.5	U
56-23-5	Carbon Tetrachloride	5.5	U
71-43-2	Benzene	5.5	U
107-06-2	1,2-Dichloroethane	5.5	U
79-01-6	Trichloroethene	5.5	U
78-87-5	1,2-Dichloropropane	5.5	~~U~~ UJ ICH
75-27-4	Bromodichloromethane	5.5	U
10061-01-5	cis-1,3-Dichloropropene	5.5	U
108-10-1	4-Methyl-2-pentanone	14	~~U~~ UJ ICH
108-88-3	Toluene	5.5 ~~3.3~~	J UEBL
10061-02-6	trans-1,3-Dichloropropene	5.5	U
79-00-5	1,1,2-Trichloroethane	5.5	U
127-18-4	Tetrachloroethene	5.5	U
591-78-6	2-hexanone	14	~~U~~ UJ ICH
124-48-1	Dibromochloromethane	5.5	U
106-93-4	1,2-Dibromoethane	5.5	U

FORM I VOA

031

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS03-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-05

Sample wt/vol: 6.2 (g/mL) G Lab File ID: 1003103-0559

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 27 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	5.5	U
100-41-4	Ethylbenzene	5.5	U
100-42-5	Styrene	5.5	U
75-25-2	Bromoform	5.5	U
98-82-8	Isopropyl Benzene	5.5	U
79-34-5	1,1,2,2-Tetrachloroethane	5.5	U
541-73-1	1,3-Dichlorobenzene	5.5	U
106-46-7	1,4-Dichlorobenzene	5.5	U
95-50-1	1,2-Dichlorobenzene	5.5	U
96-12-8	1,2-Dibromo-3-Chloropropane	5.5	~~U~~ UJ DCH
120-82-1	1,2,4-Trichlorobenzene	5.5	U
1330-20-7	Xylene (total)	5.5	U
79-20-9	Methyl acetate	5.2	~~J~~ J DCH
110-82-7	Cyclohexane	5.5	U
108-87-2	Methylcyclohexane	5.5	U
108-38-3	m,p-Xylene (part of total)	11	U
95-47-6	o-Xylene (part of total)	5.5	U

FORM I VOA

MM 032410

032

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS03-10ARE

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-05RE1

Sample wt/vol: 5.93(g/mL) G Lab File ID: 1003103-05R59

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 27 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5.8	U
74-87-3	Chloromethane	5.8	U
75-01-4	Vinyl Chloride	5.8	U
74-83-9	Bromomethane	5.8	U
75-00-3	Chloroethane	5.8	U
75-69-4	Trichlorofluoromethane	5.8	U
75-35-4	1,1-Dichloroethene	5.8	U
75-15-0	Carbon disulfide	5.8	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	5.8	U
67-64-1	Acetone	700	E
75-09-2	Methylene Chloride	5.8	U
156-60-5	trans-1,2-Dichloroethene	5.8	U
1634-04-4	Methyl-tert-butyl ether	5.8	U
75-34-3	1,1-Dichloroethane	5.8	U
156-59-2	cis-1,2-Dichloroethene	5.8	U
78-93-3	2-butanone	6.4	J
67-66-3	Chloroform	5.8	U
71-55-6	1,1,1-Trichloroethane	5.8	U
56-23-5	Carbon Tetrachloride	5.8	U
71-43-2	Benzene	5.8	U
107-06-2	1,2-Dichloroethane	5.8	U
79-01-6	Trichloroethene	5.8	U
78-87-5	1,2-Dichloropropane	5.8	U
75-27-4	Bromodichloromethane	5.8	U
10061-01-5	cis-1,3-Dichloropropene	5.8	U
108-10-1	4-Methyl-2-pentanone	14	U
108-88-3	Toluene	5.8	U
10061-02-6	trans-1,3-Dichloropropene	5.8	U
79-00-5	1,1,2-Trichloroethane	5.8	U
127-18-4	Tetrachloroethene	5.8	U
591-78-6	2-hexanone	14	U
124-48-1	Dibromochloromethane	5.8	U
106-93-4	1,2-Dibromoethane	5.8	U

exclude, RE

FORM I VOA

033

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS03-10ARE

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-05RE1

Sample wt/vol: 5.93(g/mL) G Lab File ID: 1003103-05R59

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 27 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	5.8	U
100-41-4	Ethylbenzene	5.8	U
100-42-5	Styrene	5.8	U
75-25-2	Bromoform	5.8	U
98-82-8	Isopropyl Benzene	5.8	U
79-34-5	1,1,2,2-Tetrachloroethane	5.8	U
541-73-1	1,3-Dichlorobenzene	5.8	U
106-46-7	1,4-Dichlorobenzene	5.8	U
95-50-1	1,2-Dichlorobenzene	5.8	U
96-12-8	1,2-Dibromo-3-Chloropropane	5.8	U
120-82-1	1,2,4-Trichlorobenzene	5.8	U
1330-20-7	Xylene (total)	5.8	U
79-20-9	Methyl acetate	40	
110-82-7	Cyclohexane	5.8	U
108-87-2	Methylcyclohexane	5.8	U
108-38-3	m,p-Xylene (part of total)	12	U
95-47-6	o-Xylene (part of total)	5.8	U

exclude, RE

FORM I VOA

034

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS04-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-06

Sample wt/vol: 5.4 (g/mL) G Lab File ID: 1003103-0659

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 26 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	6.2	U
74-87-3	Chloromethane	6.2	U
75-01-4	Vinyl Chloride	6.2	U
74-83-9	Bromomethane	6.2	U
75-00-3	Chloroethane	6.2	U
75-69-4	Trichlorofluoromethane	6.2	U
75-35-4	1,1-Dichloroethene	6.2	U
75-15-0	Carbon disulfide	6.2	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	6.2	U
67-64-1	Acetone	470	J ICH
75-09-2	Methylene Chloride	6.2	U
156-60-5	trans-1,2-Dichloroethene	6.2	U
1634-04-4	Methyl-tert-butyl ether	6.2	U
75-34-3	1,1-Dichloroethane	6.2	U
156-59-2	cis-1,2-Dichloroethene	6.2	U
78-93-3	2-butanone	110	J ICH
67-66-3	Chloroform	6.2	U
71-55-6	1,1,1-Trichloroethane	6.2	U
56-23-5	Carbon Tetrachloride	6.2	U
71-43-2	Benzene	6.2	U
107-06-2	1,2-Dichloroethane	6.2	U
79-01-6	Trichloroethene	6.2	U
78-87-5	1,2-Dichloropropane	6.2	~~U~~ UJ ICH
75-27-4	Bromodichloromethane	6.2	U
10061-01-5	cis-1,3-Dichloropropene	6.2	U
108-10-1	4-Methyl-2-pentanone	16	~~U~~ UJ ICH
108-88-3	Toluene	58	
10061-02-6	trans-1,3-Dichloropropene	6.2	U
79-00-5	1,1,2-Trichloroethane	6.2	U
127-18-4	Tetrachloroethene	6.2	U
591-78-6	2-hexanone	16	~~U~~ UJ ICH
124-48-1	Dibromochloromethane	6.2	U
106-93-4	1,2-Dibromoethane	6.2	U

FORM I VOA

VM 03/10

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS04-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-06

Sample wt/vol: 5.4 (g/mL) G Lab File ID: 1003103-0659

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 26 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	6.2	U
100-41-4	Ethylbenzene	3.3	~~J~~ JSSH
100-42-5	Styrene	6.2	U
75-25-2	Bromoform	6.2	U
98-82-8	Isopropyl Benzene	6.2	U
79-34-5	1,1,2,2-Tetrachloroethane	6.2	U
541-73-1	1,3-Dichlorobenzene	6.2	U
106-46-7	1,4-Dichlorobenzene	6.2	U
95-50-1	1,2-Dichlorobenzene	6.2	U
96-12-8	1,2-Dibromo-3-Chloropropane	6.2	~~U~~ UJ CH
120-82-1	1,2,4-Trichlorobenzene	6.2	U
1330-20-7	Xylene (total)	14	J SSH
79-20-9	Methyl acetate	27	J CH
110-82-7	Cyclohexane	6.2	U
108-87-2	Methylcyclohexane	6.2	U
108-38-3	m,p-Xylene (part of total)	11	~~J~~ J SSH
95-47-6	o-Xylene (part of total)	~~2.9~~ 6.2	~~J~~ U PBL

FORM I VOA

WM 07/2/10

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS04-10ARE

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-06RE1

Sample wt/vol: 5.68(g/mL) G Lab File ID: 1003103-06R73

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 26 Date Analyzed: 03/18/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5.9	U exclude, RE
74-87-3	Chloromethane	5.9	U
75-01-4	Vinyl Chloride	5.9	U
74-83-9	Bromomethane	5.9	U
75-00-3	Chloroethane	5.9	U
75-69-4	Trichlorofluoromethane	5.9	U
75-35-4	1,1-Dichloroethene	5.9	U
75-15-0	Carbon disulfide	5.9	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	5.9	U
67-64-1	Acetone	300	
75-09-2	Methylene Chloride	5.9	U
156-60-5	trans-1,2-Dichloroethene	5.9	U
1634-04-4	Methyl-tert-butyl ether	5.9	U
75-34-3	1,1-Dichloroethane	5.9	U
156-59-2	cis-1,2-Dichloroethene	5.9	U
78-93-3	2-butanone	15	U
67-66-3	Chloroform	0.38	J
71-55-6	1,1,1-Trichloroethane	5.9	U
56-23-5	Carbon Tetrachloride	5.9	U
71-43-2	Benzene	5.9	U
107-06-2	1,2-Dichloroethane	5.9	U
79-01-6	Trichloroethene	5.9	U
78-87-5	1,2-Dichloropropane	5.9	U
75-27-4	Bromodichloromethane	5.9	U
10061-01-5	cis-1,3-Dichloropropene	5.9	U
108-10-1	4-Methyl-2-pentanone	6.0	J
108-88-3	Toluene	5.3	J
10061-02-6	trans-1,3-Dichloropropene	5.9	U
79-00-5	1,1,2-Trichloroethane	5.9	U
127-18-4	Tetrachloroethene	5.9	U
591-78-6	2-hexanone	15	
124-48-1	Dibromochloromethane	5.9	U
106-93-4	1,2-Dibromoethane	5.9	U

FORM I VOA

UM 6/2/10

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS04-10ARE

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-06RE1

Sample wt/vol: 5.68(g/mL) G Lab File ID: 1003103-06R73

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 26 Date Analyzed: 03/18/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	5.9	U
100-41-4	Ethylbenzene	0.82	J
100-42-5	Styrene	5.9	U
75-25-2	Bromoform	5.9	U
98-82-8	Isopropyl Benzene	0.54	J
79-34-5	1,1,2,2-Tetrachloroethane	5.9	U
541-73-1	1,3-Dichlorobenzene	3.6	J
106-46-7	1,4-Dichlorobenzene	4.6	J
95-50-1	1,2-Dichlorobenzene	5.1	J
96-12-8	1,2-Dibromo-3-Chloropropane	5.9	U
120-82-1	1,2,4-Trichlorobenzene	13	
1330-20-7	Xylene (total)	1.9	J
79-20-9	Methyl acetate	13	
110-82-7	Cyclohexane	1.2	JB
108-87-2	Methylcyclohexane	5.9	U
108-38-3	m,p-Xylene (part of total)	1.4	J
95-47-6	o-Xylene (part of total)	0.52	J

exclude RE

FORM I VOA

MM 07/21/10

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS05-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-07

Sample wt/vol: 5.6 (g/mL) G Lab File ID: 1003103-0759

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 48 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.5	U UJ ISL
74-87-3	Chloromethane	8.5	U
75-01-4	Vinyl Chloride	8.5	U
74-83-9	Bromomethane	8.5	U
75-00-3	Chloroethane	8.5	U
75-69-4	Trichlorofluoromethane	8.5	U
75-35-4	1,1-Dichloroethene	8.5	U
75-15-0	Carbon disulfide	8.5	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	8.5	U
67-64-1	Acetone	1100	E exclude, DL
75-09-2	Methylene Chloride	8.5	U UJ ISL
156-60-5	trans-1,2-Dichloroethene	8.5	U
1634-04-4	Methyl-tert-butyl ether	8.5	U
75-34-3	1,1-Dichloroethane	8.5	U
156-59-2	cis-1,2-Dichloroethene	8.5	U
78-93-3	2-butanone	27	
67-66-3	Chloroform	8.5	U UJ
71-55-6	1,1,1-Trichloroethane	8.5	U
56-23-5	Carbon Tetrachloride	8.5	U
71-43-2	Benzene	8.5	U
107-06-2	1,2-Dichloroethane	8.5	U
79-01-6	Trichloroethene	8.5	U
78-87-5	1,2-Dichloropropane	8.5	U
75-27-4	Bromodichloromethane	8.5	U
10061-01-5	cis-1,3-Dichloropropene	8.5	U
108-10-1	4-Methyl-2-pentanone	21	U UJ ICH
108-88-3	Toluene	8.5 ~~2.2~~	~~J~~ U EBL
10061-02-6	trans-1,3-Dichloropropene	8.5	U
79-00-5	1,1,2-Trichloroethane	8.5	U
127-18-4	Tetrachloroethene	8.5	U
591-78-6	2-hexanone	21	U UJ ICH
124-48-1	Dibromochloromethane	8.5	U
106-93-4	1,2-Dibromoethane	8.5	U

FORM I VOA

WM 03/10

039

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS05-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-07

Sample wt/vol: 5.6 (g/mL) G Lab File ID: 1003103-0759

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 48 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	8.5	U
100-41-4	Ethylbenzene	8.5	U
100-42-5	Styrene	8.5	U
75-25-2	Bromoform	8.5	U
98-82-8	Isopropyl Benzene	8.5	U
79-34-5	1,1,2,2-Tetrachloroethane	8.5	U
541-73-1	1,3-Dichlorobenzene	8.5	U
106-46-7	1,4-Dichlorobenzene	8.5	U
95-50-1	1,2-Dichlorobenzene	8.5	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.5	~~U~~ UJ DCH
120-82-1	1,2,4-Trichlorobenzene	8.5	U
1330-20-7	Xylene (total)	8.5	U
79-20-9	Methyl acetate	500	~~E~~ Excludo, NL
110-82-7	Cyclohexane	8.5	U
108-87-2	Methylcyclohexane	8.5	U
108-38-3	m,p-Xylene (part of total)	17	U
95-47-6	o-Xylene (part of total)	8.5	U

FORM I VOA

WM 072110

040

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS05-10ARE

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-07RE1

Sample wt/vol: 3.46(g/mL) G Lab File ID: 1003103-07R73

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 48 Date Analyzed: 03/18/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	14	U exclude, DL
74-87-3	Chloromethane	1.8	JB
75-01-4	Vinyl Chloride	14	U
74-83-9	Bromomethane	14	U
75-00-3	Chloroethane	14	U
75-69-4	Trichlorofluoromethane	14	U
75-35-4	1,1-Dichloroethene	14	U
75-15-0	Carbon disulfide	14	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	14	U
67-64-1	Acetone	840	
75-09-2	Methylene Chloride	14	U exclude, DL
156-60-5	trans-1,2-Dichloroethene	14	U
1634-04-4	Methyl-tert-butyl ether	14	U
75-34-3	1,1-Dichloroethane	14	U
156-59-2	cis-1,2-Dichloroethene	14	U
78-93-3	2-butanone	31	J
67-66-3	Chloroform	14	U
71-55-6	1,1,1-Trichloroethane	14	U
56-23-5	Carbon Tetrachloride	14	U
71-43-2	Benzene	14	U
107-06-2	1,2-Dichloroethane	14	U
79-01-6	Trichloroethene	14	U
78-87-5	1,2-Dichloropropane	14	U
75-27-4	Bromodichloromethane	14	U
10061-01-5	cis-1,3-Dichloropropene	14	U
108-10-1	4-Methyl-2-pentanone	35	U
108-88-3	Toluene	20	
10061-02-6	trans-1,3-Dichloropropene	14	U
79-00-5	1,1,2-Trichloroethane	14	U
127-18-4	Tetrachloroethene	14	U
591-78-6	2-hexanone	35	U
124-48-1	Dibromochloromethane	14	U
106-93-4	1,2-Dibromoethane	14	U

FORM I VOA

IM 07/10

041

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS05-10ARE

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-07RE1

Sample wt/vol: 3.46(g/mL) G Lab File ID: 1003103-07R73

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 48 Date Analyzed: 03/18/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	14	U exclude, DL
100-41-4	Ethylbenzene	14	U
100-42-5	Styrene	14	U
75-25-2	Bromoform	14	U
98-82-8	Isopropyl Benzene	14	U
79-34-5	1,1,2,2-Tetrachloroethane	14	U
541-73-1	1,3-Dichlorobenzene	14	U
106-46-7	1,4-Dichlorobenzene	14	U
95-50-1	1,2-Dichlorobenzene	14	U
96-12-8	1,2-Dibromo-3-Chloropropane	14	U
120-82-1	1,2,4-Trichlorobenzene	14	U
1330-20-7	Xylene (total)	14	U
79-20-9	Methyl acetate	170	
110-82-7	Cyclohexane	2.3	JB exclude, DL
108-87-2	Methylcyclohexane	14	U
108-38-3	m,p-Xylene (part of total)	28	U
95-47-6	o-Xylene (part of total)	14	U

FORM I VOA

WM 0721

042

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS06-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-08

Sample wt/vol: 5.1 (g/mL) G Lab File ID: 1003103-0859

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 31 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	7.1	U
74-87-3	Chloromethane	7.1	U
75-01-4	Vinyl Chloride	7.1	U
74-83-9	Bromomethane	7.1	U
75-00-3	Chloroethane	7.1	U
75-69-4	Trichlorofluoromethane	7.1	U
75-35-4	1,1-Dichloroethene	7.1	U
75-15-0	Carbon disulfide	7.1	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	7.1	U
67-64-1	Acetone	520	J ICH
75-09-2	Methylene Chloride	7.1	U
156-60-5	trans-1,2-Dichloroethene	7.1	U
1634-04-4	Methyl-tert-butyl ether	7.1	U
75-34-3	1,1-Dichloroethane	7.1	U
156-59-2	cis-1,2-Dichloroethene	7.1	U
78-93-3	2-butanone	18	~~U~~ UJ ICH
67-66-3	Chloroform	7.1	U
71-55-6	1,1,1-Trichloroethane	7.1	U
56-23-5	Carbon Tetrachloride	7.1	U
71-43-2	Benzene	7.1	U
107-06-2	1,2-Dichloroethane	7.1	U
79-01-6	Trichloroethene	7.1	U
78-87-5	1,2-Dichloropropane	7.1	~~U~~ UJ ICH
75-27-4	Bromodichloromethane	7.1	U
10061-01-5	cis-1,3-Dichloropropene	7.1	U
108-10-1	4-Methyl-2-pentanone	18	~~U~~ UJ ICH
108-88-3	Toluene	~~2.7~~ 7.1	~~J~~ U CBL
10061-02-6	trans-1,3-Dichloropropene	7.1	U
79-00-5	1,1,2-Trichloroethane	7.1	U
127-18-4	Tetrachloroethene	7.1	U
591-78-6	2-hexanone	18	~~U~~ UJ ICH
124-48-1	Dibromochloromethane	7.1	U
106-93-4	1,2-Dibromoethane	7.1	U

FORM I VOA

WM 072110

043

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS06-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-08

Sample wt/vol: 5.1 (g/mL) G Lab File ID: 1003103-0859

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 31 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	7.1	U
100-41-4	Ethylbenzene	7.1	U
100-42-5	Styrene	7.1	U
75-25-2	Bromoform	7.1	U
98-82-8	Isopropyl Benzene	7.1	U
79-34-5	1,1,2,2-Tetrachloroethane	7.1	U
541-73-1	1,3-Dichlorobenzene	7.1	U
106-46-7	1,4-Dichlorobenzene	7.1	U
95-50-1	1,2-Dichlorobenzene	7.1	U
96-12-8	1,2-Dibromo-3-Chloropropane	7.1	U VJCH
120-82-1	1,2,4-Trichlorobenzene	7.1	U
1330-20-7	Xylene (total)	7.1	U
79-20-9	Methyl acetate	18	J CCH
110-82-7	Cyclohexane	7.1	U
108-87-2	Methylcyclohexane	7.1	U
108-38-3	m,p-Xylene (part of total)	14	U
95-47-6	o-Xylene (part of total)	7.1	U

FORM I VOA

VM 03/11/10

044

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS06-10ARE

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-08RE1

Sample wt/vol: 5.45(g/mL) G Lab File ID: 1003103-08R73

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 31 Date Analyzed: 03/18/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	6.6	U
74-87-3	Chloromethane	0.94	JB
75-01-4	Vinyl Chloride	6.6	U
74-83-9	Bromomethane	6.6	U
75-00-3	Chloroethane	6.6	U
75-69-4	Trichlorofluoromethane	6.6	U
75-35-4	1,1-Dichloroethene	6.6	U
75-15-0	Carbon disulfide	6.6	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	6.6	U
67-64-1	Acetone	460	
75-09-2	Methylene Chloride	6.6	U
156-60-5	trans-1,2-Dichloroethene	6.6	U
1634-04-4	Methyl-tert-butyl ether	6.6	U
75-34-3	1,1-Dichloroethane	6.6	U
156-59-2	cis-1,2-Dichloroethene	6.6	U
78-93-3	2-butanone	5.0	J
67-66-3	Chloroform	6.6	U
71-55-6	1,1,1-Trichloroethane	6.6	U
56-23-5	Carbon Tetrachloride	6.6	U
71-43-2	Benzene	6.6	U
107-06-2	1,2-Dichloroethane	6.6	U
79-01-6	Trichloroethene	6.6	U
78-87-5	1,2-Dichloropropane	6.6	U
75-27-4	Bromodichloromethane	6.6	U
10061-01-5	cis-1,3-Dichloropropene	6.6	U
108-10-1	4-Methyl-2-pentanone	17	U
108-88-3	Toluene	3.0	J
10061-02-6	trans-1,3-Dichloropropene	6.6	U
79-00-5	1,1,2-Trichloroethane	6.6	U
127-18-4	Tetrachloroethene	6.6	U
591-78-6	2-hexanone	17	U
124-48-1	Dibromochloromethane	6.6	U
106-93-4	1,2-Dibromoethane	6.6	U

exclude, RE

FORM I VOA

WM 07/10

045

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS06-10ARE

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-08RE1

Sample wt/vol: 5.45(g/mL) G Lab File ID: 1003103-08R73

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 31 Date Analyzed: 03/18/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	6.6	U
100-41-4	Ethylbenzene	6.6	U
100-42-5	Styrene	6.6	U
75-25-2	Bromoform	6.6	U
98-82-8	Isopropyl Benzene	6.6	U
79-34-5	1,1,2,2-Tetrachloroethane	6.6	U
541-73-1	1,3-Dichlorobenzene	6.6	U
106-46-7	1,4-Dichlorobenzene	6.6	U
95-50-1	1,2-Dichlorobenzene	6.6	U
96-12-8	1,2-Dibromo-3-Chloropropane	6.6	U
120-82-1	1,2,4-Trichlorobenzene	1.7	J
1330-20-7	Xylene (total)	6.6	U
79-20-9	Methyl acetate	15	
110-82-7	Cyclohexane	1.2	JB
108-87-2	Methylcyclohexane	6.6	U
108-38-3	m,p-Xylene (part of total)	13	U
95-47-6	o-Xylene (part of total)	6.6	U

exclude, RE

FORM I VOA

046

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS01 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 WM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-01

Sample wt/vol: 5.8 (g/mL) G Lab File ID: 1003103-0159

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 23 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5.6	U
74-87-3	Chloromethane	5.6	U
75-01-4	Vinyl Chloride	5.6	U
74-83-9	Bromomethane	5.6	U
75-00-3	Chloroethane	5.6	U
75-69-4	Trichlorofluoromethane	5.6	U
75-35-4	1,1-Dichloroethene	5.6	U
75-15-0	Carbon disulfide	5.6	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	5.6	U
67-64-1	Acetone	360	J CCH
75-09-2	Methylene Chloride	5.6	U
156-60-5	trans-1,2-Dichloroethene	5.6	U
1634-04-4	Methyl-tert-butyl ether	5.6	U
75-34-3	1,1-Dichloroethane	5.6	U
156-59-2	cis-1,2-Dichloroethene	5.6	U
78-93-3	2-butanone	14 ~~9.9~~	J UL EBL
67-66-3	Chloroform	5.6	U
71-55-6	1,1,1-Trichloroethane	5.6	U
56-23-5	Carbon Tetrachloride	5.6	U
71-43-2	Benzene	5.6	U
107-06-2	1,2-Dichloroethane	5.6	U
79-01-6	Trichloroethene	5.6	U
78-87-5	1,2-Dichloropropane	5.6	U UJ CCH
75-27-4	Bromodichloromethane	5.6	U
10061-01-5	cis-1,3-Dichloropropene	5.6	U
108-10-1	4-Methyl-2-pentanone	14	U UJ CCH
108-88-3	Toluene	8.8	UL EBL
10061-02-6	trans-1,3-Dichloropropene	5.6	U
79-00-5	1,1,2-Trichloroethane	5.6	U
127-18-4	Tetrachloroethene	5.6	U
591-78-6	2-hexanone	14	U UJ CCH
124-48-1	Dibromochloromethane	5.6	U
106-93-4	1,2-Dibromoethane	5.6	U

FORM I VOA

WM 072110

047

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS01 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 LM 012410

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-01

Sample wt/vol: 5.8 (g/mL) G Lab File ID: 1003103-0159

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 23 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	5.6	U
100-41-4	Ethylbenzene	5.6	U
100-42-5	Styrene	5.6	U
75-25-2	Bromoform	5.6	U
98-82-8	Isopropyl Benzene	5.6	U
79-34-5	1,1,2,2-Tetrachloroethane	5.6	U
541-73-1	1,3-Dichlorobenzene	5.6	U
106-46-7	1,4-Dichlorobenzene	5.6	U
95-50-1	1,2-Dichlorobenzene	5.6	U
96-12-8	1,2-Dibromo-3-Chloropropane	5.6	U UJ CCH
120-82-1	1,2,4-Trichlorobenzene	5.6	U
1330-20-7	Xylene (total)	5.6	U
79-20-9	Methyl acetate	9.9	J CCH
110-82-7	Cyclohexane	5.6	U
108-87-2	Methylcyclohexane	5.6	U
108-38-3	m,p-Xylene (part of total)	11	U
95-47-6	o-Xylene (part of total)	5.6	U

FORM I VOA

LM 012410

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR6
9-SS01RE-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 WM 07210

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-01RE1

Sample wt/vol: 5.30(g/mL) G Lab File ID: 1003103-01R59

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 23 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	6.1	U
74-87-3	Chloromethane	6.1	U
75-01-4	Vinyl Chloride	6.1	U
74-83-9	Bromomethane	6.1	U
75-00-3	Chloroethane	6.1	U
75-69-4	Trichlorofluoromethane	6.1	U
75-35-4	1,1-Dichloroethene	6.1	U
75-15-0	Carbon disulfide	6.1	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	6.1	U
67-64-1	Acetone	420	
75-09-2	Methylene Chloride	6.1	U
156-60-5	trans-1,2-Dichloroethene	6.1	U
1634-04-4	Methyl-tert-butyl ether	6.1	U
75-34-3	1,1-Dichloroethane	6.1	U
156-59-2	cis-1,2-Dichloroethene	6.1	U
78-93-3	2-butanone	9.9	J
67-66-3	Chloroform	6.1	U
71-55-6	1,1,1-Trichloroethane	6.1	U
56-23-5	Carbon Tetrachloride	6.1	U
71-43-2	Benzene	6.1	U
107-06-2	1,2-Dichloroethane	6.1	U
79-01-6	Trichloroethene	6.1	U
78-87-5	1,2-Dichloropropane	6.1	U
75-27-4	Bromodichloromethane	6.1	U
10061-01-5	cis-1,3-Dichloropropene	6.1	U
108-10-1	4-Methyl-2-pentanone	15	U
108-88-3	Toluene	8.9	
10061-02-6	trans-1,3-Dichloropropene	6.1	U
79-00-5	1,1,2-Trichloroethane	6.1	U
127-18-4	Tetrachloroethene	6.1	U
591-78-6	2-hexanone	15	U
124-48-1	Dibromochloromethane	6.1	U
106-93-4	1,2-Dibromoethane	6.1	U

exclude, RE

FORM I VOA

WM 07210

049

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR6
9-SS01RE-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-01RE1

Sample wt/vol: 5.30(g/mL) G Lab File ID: 1003103-01R59

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 23 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	6.1	U
100-41-4	Ethylbenzene	6.1	U
100-42-5	Styrene	6.1	U
75-25-2	Bromoform	6.1	U
98-82-8	Isopropyl Benzene	6.1	U
79-34-5	1,1,2,2-Tetrachloroethane	6.1	U
541-73-1	1,3-Dichlorobenzene	6.1	U
106-46-7	1,4-Dichlorobenzene	6.1	U
95-50-1	1,2-Dichlorobenzene	6.1	U
96-12-8	1,2-Dibromo-3-Chloropropane	6.1	U
120-82-1	1,2,4-Trichlorobenzene	6.1	U
1330-20-7	Xylene (total)	0.49	J
79-20-9	Methyl acetate	21	
110-82-7	Cyclohexane	6.1	U
108-87-2	Methylcyclohexane	6.1	U
108-38-3	m,p-Xylene (part of total)	0.49	J
95-47-6	o-Xylene (part of total)	6.1	U

Exclude, RE

FORM I VOA

050

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS01D 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 WM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-02

Sample wt/vol: 4.9 (g/mL) G Lab File ID: 1003103-0259

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 22 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	6.6	U
74-87-3	Chloromethane	6.6	U
75-01-4	Vinyl Chloride	6.6	U
74-83-9	Bromomethane	6.6	U
75-00-3	Chloroethane	6.6	U
75-69-4	Trichlorofluoromethane	6.6	U
75-35-4	1,1-Dichloroethene	6.6	U
75-15-0	Carbon disulfide	6.6	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	6.6	U
67-64-1	Acetone	390	J ~~CCH~~
75-09-2	Methylene Chloride	6.6	U
156-60-5	trans-1,2-Dichloroethene	6.6	U
1634-04-4	Methyl-tert-butyl ether	6.6	U
75-34-3	1,1-Dichloroethane	6.6	U
156-59-2	cis-1,2-Dichloroethene	6.6	U
78-93-3	2-butanone	16 ~~12~~	~~J~~ UEBL
67-66-3	Chloroform	6.6	U
71-55-6	1,1,1-Trichloroethane	6.6	U
56-23-5	Carbon Tetrachloride	6.6	U
71-43-2	Benzene	6.6	U
107-06-2	1,2-Dichloroethane	6.6	U
79-01-6	Trichloroethene	6.6	U
78-87-5	1,2-Dichloropropane	6.6	~~U~~ UJ ~~CCH~~
75-27-4	Bromodichloromethane	6.6	U
10061-01-5	cis-1,3-Dichloropropene	6.6	U
108-10-1	4-Methyl-2-pentanone	16	~~U~~ UJ ~~CCH~~
108-88-3	Toluene	6.6 ~~5.3~~	~~J~~ UEBL
10061-02-6	trans-1,3-Dichloropropene	6.6	U
79-00-5	1,1,2-Trichloroethane	6.6	U
127-18-4	Tetrachloroethene	6.6	U
591-78-6	2-hexanone	16	~~U~~ UJ ~~CCH~~
124-48-1	Dibromochloromethane	6.6	U
106-93-4	1,2-Dibromoethane	6.6	U

FORM I VOA

WM 072110

051

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS01D -10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 VM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-02

Sample wt/vol: 4.9 (g/mL) G Lab File ID: 1003103-0259

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 22 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	6.6	U
100-41-4	Ethylbenzene	6.6	U
100-42-5	Styrene	6.6	U
75-25-2	Bromoform	6.6	U
98-82-8	Isopropyl Benzene	6.6	U
79-34-5	1,1,2,2-Tetrachloroethane	6.6	U
541-73-1	1,3-Dichlorobenzene	6.6	U
106-46-7	1,4-Dichlorobenzene	6.6	U
95-50-1	1,2-Dichlorobenzene	6.6	U
96-12-8	1,2-Dibromo-3-Chloropropane	6.6	~~U~~ UJ CH
120-82-1	1,2,4-Trichlorobenzene	6.6	U
1330-20-7	Xylene (total)	6.6	U
79-20-9	Methyl acetate	54	J CH
110-82-7	Cyclohexane	6.6	U
108-87-2	Methylcyclohexane	6.6	U
108-38-3	m,p-Xylene (part of total)	13	U
95-47-6	o-Xylene (part of total)	6.6	U

FORM I VOA

VM 072110

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR6
9-SS01DRE-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 WM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-02RE1

Sample wt/vol: 4.53(g/mL) G Lab File ID: 1003103-02R59

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 22 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	7.1	U exclude, RE
74-87-3	Chloromethane	7.1	U
75-01-4	Vinyl Chloride	7.1	U
74-83-9	Bromomethane	7.1	U
75-00-3	Chloroethane	7.1	U
75-69-4	Trichlorofluoromethane	7.1	U
75-35-4	1,1-Dichloroethene	7.1	U
75-15-0	Carbon disulfide	7.1	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	7.1	U
67-64-1	Acetone	590	
75-09-2	Methylene Chloride	7.1	U
156-60-5	trans-1,2-Dichloroethene	7.1	U
1634-04-4	Methyl-tert-butyl ether	7.1	U
75-34-3	1,1-Dichloroethane	7.1	U
156-59-2	cis-1,2-Dichloroethene	7.1	U
78-93-3	2-butanone	18	
67-66-3	Chloroform	7.1	U
71-55-6	1,1,1-Trichloroethane	7.1	U
56-23-5	Carbon Tetrachloride	7.1	U
71-43-2	Benzene	7.1	U
107-06-2	1,2-Dichloroethane	7.1	U
79-01-6	Trichloroethene	7.1	U
78-87-5	1,2-Dichloropropane	7.1	U
75-27-4	Bromodichloromethane	7.1	U
10061-01-5	cis-1,3-Dichloropropene	7.1	U
108-10-1	4-Methyl-2-pentanone	18	U
108-88-3	Toluene	5.0	J
10061-02-6	trans-1,3-Dichloropropene	7.1	U
79-00-5	1,1,2-Trichloroethane	7.1	U
127-18-4	Tetrachloroethene	7.1	U
591-78-6	2-hexanone	18	U
124-48-1	Dibromochloromethane	7.1	U
106-93-4	1,2-Dibromoethane	7.1	U

FORM I VOA

WM 072110

053

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR6
9-SS01DRE-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-02RE1

Sample wt/vol: 4.53(g/mL) G Lab File ID: 1003103-02R59

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 22 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	7.1	U
100-41-4	Ethylbenzene	7.1	U
100-42-5	Styrene	7.1	U
75-25-2	Bromoform	7.1	U
98-82-8	Isopropyl Benzene	7.1	U
79-34-5	1,1,2,2-Tetrachloroethane	7.1	U
541-73-1	1,3-Dichlorobenzene	7.1	U
106-46-7	1,4-Dichlorobenzene	7.1	U
95-50-1	1,2-Dichlorobenzene	7.1	U
96-12-8	1,2-Dibromo-3-Chloropropane	7.1	U
120-82-1	1,2,4-Trichlorobenzene	7.1	U
1330-20-7	Xylene (total)	7.1	U
79-20-9	Methyl acetate	310	E
110-82-7	Cyclohexane	7.1	U
108-87-2	Methylcyclohexane	7.1	U
108-38-3	m,p-Xylene (part of total)	14	U
95-47-6	o-Xylene (part of total)	7.1	U

exclude, RE

FORM I VOA

054

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS02 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 LM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-16

Sample wt/vol: 4.36(g/mL) G Lab File ID: 1003103-16D59

Level: (low/med) MED Date Received: 03/17/10

% Moisture: not dec. 16 Date Analyzed: 03/27/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:(5000)(ul) Soil Aliquot Volume: 100(ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-38-3	m,p-Xylene (part of total)	680	U
95-47-6	o-Xylene (part of total)	340	U
75-71-8	Dichlorodifluoromethane	340	U
74-87-3	Chloromethane	340	U
75-01-4	Vinyl Chloride	340	U
74-83-9	Bromomethane	340	U
75-00-3	Chloroethane	340	U
75-69-4	Trichlorofluoromethane	340	U
75-35-4	1,1-Dichloroethene	340	U
75-15-0	Carbon disulfide	340	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	340	U
67-64-1	Acetone	850	U
75-09-2	Methylene Chloride	340	U
156-60-5	trans-1,2-Dichloroethene	340	U
1634-04-4	Methyl-tert-butyl ether	340	U
75-34-3	1,1-Dichloroethane	340	U
156-59-2	cis-1,2-Dichloroethene	340	U
78-93-3	2-butanone	850	U
67-66-3	Chloroform	340	U
71-55-6	1,1,1-Trichloroethane	340	U
56-23-5	Carbon Tetrachloride	340	U
71-43-2	Benzene	340	U
107-06-2	1,2-Dichloroethane	340	U
79-01-6	Trichloroethene	340	U
78-87-5	1,2-Dichloropropane	340	U UJ ICH
75-27-4	Bromodichloromethane	340	U
10061-01-5	cis-1,3-Dichloropropene	340	U
108-10-1	4-Methyl-2-pentanone	850	U
108-88-3	Toluene	340	U
10061-02-6	trans-1,3-Dichloropropene	340	U
79-00-5	1,1,2-Trichloroethane	340	U
127-18-4	Tetrachloroethene	340	U
591-78-6	2-hexanone	850	U

FORM I VOA

LM 072110

055

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS02-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-16

Sample wt/vol: 4.36(g/mL) G Lab File ID: 1003103-16D59

Level: (low/med) MED Date Received: 03/17/10

% Moisture: not dec. 16 Date Analyzed: 03/27/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:(5000)(ul) Soil Aliquot Volume: 100(ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
124-48-1	Dibromochloromethane	340	U
106-93-4	1,2-Dibromoethane	340	U
108-90-7	Chlorobenzene	340	U
100-41-4	Ethylbenzene	340	U
100-42-5	Styrene	340	U
75-25-2	Bromoform	340	U
98-82-8	Isopropyl Benzene	340	U
79-34-5	1,1,2,2-Tetrachloroethane	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U
96-12-8	1,2-Dibromo-3-Chloropropane	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
1330-20-7	Xylene (total)	340	U
79-20-9	Methyl acetate	710	
110-82-7	Cyclohexane	340	U
108-87-2	Methylcyclohexane	340	U

FORM I VOA

056

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS04 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 WM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-17

Sample wt/vol: 5.96(g/mL) G Lab File ID: 1003103-1773

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. 22 Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5.4	U UJ SDL
74-87-3	Chloromethane	5.4	U
75-01-4	Vinyl Chloride	5.4	U
74-83-9	Bromomethane	5.4	U
75-00-3	Chloroethane	5.4	U
75-69-4	Trichlorofluoromethane	5.4	U
75-35-4	1,1-Dichloroethene	5.4	U
75-15-0	Carbon disulfide	5.4	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	5.4	U
67-64-1	Acetone	210	J
75-09-2	Methylene Chloride	5.4	U UJ
156-60-5	trans-1,2-Dichloroethene	5.4	U
1634-04-4	Methyl-tert-butyl ether	5.4	U
75-34-3	1,1-Dichloroethane	5.4	U
156-59-2	cis-1,2-Dichloroethene	5.4	U
78-93-3	2-butanone	13 ~~2.0~~	J UEBL
67-66-3	Chloroform	5.4	U UJ SDL
71-55-6	1,1,1-Trichloroethane	5.4	U
56-23-5	Carbon Tetrachloride	5.4	U
71-43-2	Benzene	5.4	U
107-06-2	1,2-Dichloroethane	5.4	U
79-01-6	Trichloroethene	5.4	U
78-87-5	1,2-Dichloropropane	5.4	U
75-27-4	Bromodichloromethane	5.4	U
10061-01-5	cis-1,3-Dichloropropene	5.4	U
108-10-1	4-Methyl-2-pentanone	13	U
108-88-3	Toluene	5.4 ~~0.84~~	J UEBL
10061-02-6	trans-1,3-Dichloropropene	5.4	U UJ SDL
79-00-5	1,1,2-Trichloroethane	5.4	U
127-18-4	Tetrachloroethene	5.4	U
591-78-6	2-hexanone	13	U
124-48-1	Dibromochloromethane	5.4	U
106-93-4	1,2-Dibromoethane	5.4	U

FORM I VOA

WM 072110

057

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS04 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 LM 032110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-17

Sample wt/vol: 5.96(g/mL) G Lab File ID: 1003103-1773

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. 22 Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	5.4	U UJ SSL
100-41-4	Ethylbenzene	5.4	U
100-42-5	Styrene	5.4	U
75-25-2	Bromoform	5.4	U
98-82-8	Isopropyl Benzene	5.4	U
79-34-5	1,1,2,2-Tetrachloroethane	5.4	U
541-73-1	1,3-Dichlorobenzene	5.4	U
106-46-7	1,4-Dichlorobenzene	5.4	U
95-50-1	1,2-Dichlorobenzene	5.4	U
96-12-8	1,2-Dibromo-3-Chloropropane	5.4	U
120-82-1	1,2,4-Trichlorobenzene	5.4	U
1330-20-7	Xylene (total)	5.4	U
79-20-9	Methyl acetate	4.7	J
110-82-7	Cyclohexane	0.44	J
108-87-2	Methylcyclohexane	5.4	U
108-38-3	m,p-Xylene (part of total)	11	U
95-47-6	o-Xylene (part of total)	5.4	U

FORM I VOA

LM 032110

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR6
9-SS04RE-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-17RE1

Sample wt/vol: 5.62(g/mL) G Lab File ID: 1003103-17R73

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. 22 Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5.7	U
74-87-3	Chloromethane	5.7	U
75-01-4	Vinyl Chloride	5.7	U
74-83-9	Bromomethane	5.7	U
75-00-3	Chloroethane	5.7	U
75-69-4	Trichlorofluoromethane	5.7	U
75-35-4	1,1-Dichloroethene	5.7	U
75-15-0	Carbon disulfide	5.7	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	5.7	U
67-64-1	Acetone	1700	E
75-09-2	Methylene Chloride	5.7	U
156-60-5	trans-1,2-Dichloroethene	5.7	U
1634-04-4	Methyl-tert-butyl ether	5.7	U
75-34-3	1,1-Dichloroethane	5.7	U
156-59-2	cis-1,2-Dichloroethene	5.7	U
78-93-3	2-butanone	14	U
67-66-3	Chloroform	5.7	U
71-55-6	1,1,1-Trichloroethane	5.7	U
56-23-5	Carbon Tetrachloride	5.7	U
71-43-2	Benzene	5.7	U
107-06-2	1,2-Dichloroethane	5.7	U
79-01-6	Trichloroethene	5.7	U
78-87-5	1,2-Dichloropropane	5.7	U
75-27-4	Bromodichloromethane	5.7	U
10061-01-5	cis-1,3-Dichloropropene	5.7	U
108-10-1	4-Methyl-2-pentanone	14	U
108-88-3	Toluene	5.2	J
10061-02-6	trans-1,3-Dichloropropene	5.7	U
79-00-5	1,1,2-Trichloroethane	5.7	U
127-18-4	Tetrachloroethene	5.7	U
591-78-6	2-hexanone	14	U
124-48-1	Dibromochloromethane	5.7	U
106-93-4	1,2-Dibromoethane	5.7	U

exclude, RE

FORM I VOA

059

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR6
9-SS04RE-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 WM 07210

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-17RE1

Sample wt/vol: 5.62(g/mL) G Lab File ID: 1003103-17R73

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. 22 Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	5.7	U exclude, RE
100-41-4	Ethylbenzene	5.7	U
100-42-5	Styrene	5.7	U
75-25-2	Bromoform	5.7	U
98-82-8	Isopropyl Benzene	5.7	U
79-34-5	1,1,2,2-Tetrachloroethane	5.7	U
541-73-1	1,3-Dichlorobenzene	5.7	U
106-46-7	1,4-Dichlorobenzene	5.7	U
95-50-1	1,2-Dichlorobenzene	5.7	U
96-12-8	1,2-Dibromo-3-Chloropropane	5.7	U
120-82-1	1,2,4-Trichlorobenzene	5.7	U
1330-20-7	Xylene (total)	5.7	U
79-20-9	Methyl acetate	100	
110-82-7	Cyclohexane	5.7	U
108-87-2	Methylcyclohexane	5.7	U
108-38-3	m,p-Xylene (part of total)	11	U
95-47-6	o-Xylene (part of total)	5.7	U

FORM I VOA

WM 07210

060

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS05-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 LM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-18

Sample wt/vol: 6.31(g/mL) G Lab File ID: 1003103-1873

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. 16 Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	4.7	U RISL
74-87-3	Chloromethane	4.7	U
75-01-4	Vinyl Chloride	4.7	U
74-83-9	Bromomethane	4.7	U
75-00-3	Chloroethane	4.7	U
75-69-4	Trichlorofluoromethane	4.7	U
75-35-4	1,1-Dichloroethene	4.7	U
75-15-0	Carbon disulfide	4.7	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	4.7	U
67-64-1	Acetone	420	J
75-09-2	Methylene Chloride	4.7	U
156-60-5	trans-1,2-Dichloroethene	4.7	U R
1634-04-4	Methyl-tert-butyl ether	4.7	U
75-34-3	1,1-Dichloroethane	4.7	U
156-59-2	cis-1,2-Dichloroethene	4.7	U
78-93-3	2-butanone	12 ~~3.5~~	~~J~~ ~~UEBL~~ RISL
67-66-3	Chloroform	4.7	U RISL
71-55-6	1,1,1-Trichloroethane	4.7	U
56-23-5	Carbon Tetrachloride	4.7	U
71-43-2	Benzene	4.7	U
107-06-2	1,2-Dichloroethane	4.7	U
79-01-6	Trichloroethene	4.7	U
78-87-5	1,2-Dichloropropane	4.7	U
75-27-4	Bromodichloromethane	4.7	U
10061-01-5	cis-1,3-Dichloropropene	4.7	U
108-10-1	4-Methyl-2-pentanone	12	U UJ ISL
108-88-3	Toluene	4.7 ~~0.64~~	~~J~~ ~~UEBL~~
10061-02-6	trans-1,3-Dichloropropene	4.7	U UJ ISL
79-00-5	1,1,2-Trichloroethane	4.7	U
127-18-4	Tetrachloroethene	4.7	U
591-78-6	2-hexanone	12	U
124-48-1	Dibromochloromethane	4.7	U
106-93-4	1,2-Dibromoethane	4.7	U

FORM I VOA

1 correction
LM 072110

LM 072110

061

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS05-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-18

Sample wt/vol: 6.31(g/mL) G Lab File ID: 1003103-1873

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. 16 Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	4.7	U
100-41-4	Ethylbenzene	4.7	U
100-42-5	Styrene	4.7	U
75-25-2	Bromoform	4.7	U
98-82-8	Isopropyl Benzene	4.7	U
79-34-5	1,1,2,2-Tetrachloroethane	4.7	U
541-73-1	1,3-Dichlorobenzene	4.7	U
106-46-7	1,4-Dichlorobenzene	4.7	U
95-50-1	1,2-Dichlorobenzene	4.7	U
96-12-8	1,2-Dibromo-3-Chloropropane	4.7	U
120-82-1	1,2,4-Trichlorobenzene	4.7	U
1330-20-7	Xylene (total)	4.7	U
79-20-9	Methyl acetate	35	
110-82-7	Cyclohexane	0.44	J
108-87-2	Methylcyclohexane	4.7	U
108-38-3	m,p-Xylene (part of total)	9.4	U
95-47-6	o-Xylene (part of total)	4.7	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR6
9-SS05RE-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 LM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-18RE1

Sample wt/vol: 5.26(g/mL) G Lab File ID: 1003103-18R73

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. 16 Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5.7	U exclude, RE
74-87-3	Chloromethane	5.7	U
75-01-4	Vinyl Chloride	5.7	U
74-83-9	Bromomethane	5.7	U
75-00-3	Chloroethane	5.7	U
75-69-4	Trichlorofluoromethane	5.7	U
75-35-4	1,1-Dichloroethene	5.7	U
75-15-0	Carbon disulfide	5.7	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	5.7	U
67-64-1	Acetone	1100	E
75-09-2	Methylene Chloride	5.7	U
156-60-5	trans-1,2-Dichloroethene	5.7	U
1634-04-4	Methyl-tert-butyl ether	5.7	U
75-34-3	1,1-Dichloroethane	5.7	U
156-59-2	cis-1,2-Dichloroethene	5.7	U
78-93-3	2-butanone	14	U
67-66-3	Chloroform	5.7	U
71-55-6	1,1,1-Trichloroethane	5.7	U
56-23-5	Carbon Tetrachloride	5.7	U
71-43-2	Benzene	5.7	U
107-06-2	1,2-Dichloroethane	5.7	U
79-01-6	Trichloroethene	5.7	U
78-87-5	1,2-Dichloropropane	5.7	U
75-27-4	Bromodichloromethane	5.7	U
10061-01-5	cis-1,3-Dichloropropene	5.7	U
108-10-1	4-Methyl-2-pentanone	14	U
108-88-3	Toluene	5.7	U
10061-02-6	trans-1,3-Dichloropropene	5.7	U
79-00-5	1,1,2-Trichloroethane	5.7	U
127-18-4	Tetrachloroethene	5.7	U
591-78-6	2-hexanone	14	U
124-48-1	Dibromochloromethane	5.7	U
106-93-4	1,2-Dibromoethane	5.7	U

FORM I VOA

LM 072110

063

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR6
9-SS05RE -10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 WM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-18RE1

Sample wt/vol: 5.26(g/mL) G Lab File ID: 1003103-18R73

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. 16 Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	5.7	U
100-41-4	Ethylbenzene	5.7	U
100-42-5	Styrene	5.7	U
75-25-2	Bromoform	5.7	U
98-82-8	Isopropyl Benzene	5.7	U
79-34-5	1,1,2,2-Tetrachloroethane	5.7	U
541-73-1	1,3-Dichlorobenzene	5.7	U
106-46-7	1,4-Dichlorobenzene	5.7	U
95-50-1	1,2-Dichlorobenzene	5.7	U
96-12-8	1,2-Dibromo-3-Chloropropane	5.7	U
120-82-1	1,2,4-Trichlorobenzene	5.7	U
1330-20-7	Xylene (total)	5.7	U
79-20-9	Methyl acetate	5.7	U
110-82-7	Cyclohexane	5.7	U
108-87-2	Methylcyclohexane	5.7	U
108-38-3	m,p-Xylene (part of total)	11	U
95-47-6	o-Xylene (part of total)	5.7	U

Exclude, RE

FORM I VOA

WM 072110

064

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS06-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 UM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-19

Sample wt/vol: 2.49(g/mL) G Lab File ID: 1003103-19R59

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. 20 Date Analyzed: 03/27/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	13	U UJ SBL
74-87-3	Chloromethane	13	U
75-01-4	Vinyl Chloride	13	U
74-83-9	Bromomethane	13	U
75-00-3	Chloroethane	13	U
75-69-4	Trichlorofluoromethane	13	U
75-35-4	1,1-Dichloroethene	13	U
75-15-0	Carbon disulfide	13	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	13	U
67-64-1	Acetone	730	J
75-09-2	Methylene Chloride	13	U UJ
156-60-5	trans-1,2-Dichloroethene	13	U
1634-04-4	Methyl-tert-butyl ether	13	U
75-34-3	1,1-Dichloroethane	13	U
156-59-2	cis-1,2-Dichloroethene	13	U
78-93-3	2-butanone	31	U
67-66-3	Chloroform	13	U
71-55-6	1,1,1-Trichloroethane	13	U
56-23-5	Carbon Tetrachloride	13	U
71-43-2	Benzene	13	U
107-06-2	1,2-Dichloroethane	13	U
79-01-6	Trichloroethene	13	U
78-87-5	1,2-Dichloropropane	13	U
75-27-4	Bromodichloromethane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
108-10-1	4-Methyl-2-pentanone	31	U
108-88-3	Toluene	13 ~~1.4~~	J UJ SBL
10061-02-6	trans-1,3-Dichloropropene	13	U UJ SBL
79-00-5	1,1,2-Trichloroethane	13	U
127-18-4	Tetrachloroethene	13	U
591-78-6	2-hexanone	31	U
124-48-1	Dibromochloromethane	13	U
106-93-4	1,2-Dibromoethane	13	U

FORM I VOA

UM 072110

065

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS06-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 WM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-19

Sample wt/vol: 2.49(g/mL) G Lab File ID: 1003103-19R59

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. 20 Date Analyzed: 03/27/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	13	U UJ SSL
100-41-4	Ethylbenzene	13	U
100-42-5	Styrene	13	U
75-25-2	Bromoform	13	U
98-82-8	Isopropyl Benzene	13	U
79-34-5	1,1,2,2-Tetrachloroethane	13	U
541-73-1	1,3-Dichlorobenzene	13	U
106-46-7	1,4-Dichlorobenzene	13	U
95-50-1	1,2-Dichlorobenzene	13	U
96-12-8	1,2-Dibromo-3-Chloropropane	13	U
120-82-1	1,2,4-Trichlorobenzene	1.1	J J
1330-20-7	Xylene (total)	13	U UJ
79-20-9	Methyl acetate	980	E Exclude, DL
110-82-7	Cyclohexane	13	U UJ SSL
108-87-2	Methylcyclohexane	13	U
108-38-3	m,p-Xylene (part of total)	25	U
95-47-6	o-Xylene (part of total)	13	U

FORM I VOA

WM 072110

066

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR6
9-SS06DL -10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 WM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-19RE1

Sample wt/vol: 5.8 (g/mL) G Lab File ID: 1003103-19D59

Level: (low/med) MED Date Received: 03/17/10

% Moisture: not dec. 20 Date Analyzed: 03/29/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:(5000)(ul) Soil Aliquot Volume: 100(ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-38-3	m,p-Xylene (part of total)	540	U exclude DL
95-47-6	o-Xylene (part of total)	270	U
75-71-8	Dichlorodifluoromethane	270	U
74-87-3	Chloromethane	270	U
75-01-4	Vinyl Chloride	270	U
74-83-9	Bromomethane	270	U
75-00-3	Chloroethane	270	U
75-69-4	Trichlorofluoromethane	270	U
75-35-4	1,1-Dichloroethene	270	U
75-15-0	Carbon disulfide	270	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	270	U
67-64-1	Acetone	670	U
75-09-2	Methylene Chloride	270	U
156-60-5	trans-1,2-Dichloroethene	270	U
1634-04-4	Methyl-tert-butyl ether	270	U
75-34-3	1,1-Dichloroethane	270	U
156-59-2	cis-1,2-Dichloroethene	270	U
78-93-3	2-butanone	670	U
67-66-3	Chloroform	270	U
71-55-6	1,1,1-Trichloroethane	270	U
56-23-5	Carbon Tetrachloride	270	U
71-43-2	Benzene	270	U
107-06-2	1,2-Dichloroethane	270	U
79-01-6	Trichloroethene	270	U
78-87-5	1,2-Dichloropropane	270	U
75-27-4	Bromodichloromethane	270	U
10061-01-5	cis-1,3-Dichloropropene	270	U
108-10-1	4-Methyl-2-pentanone	670	U
108-88-3	Toluene	270	U
10061-02-6	trans-1,3-Dichloropropene	270	U
79-00-5	1,1,2-Trichloroethane	270	U
127-18-4	Tetrachloroethene	270	U
591-78-6	2-hexanone	670	U

FORM I VOA

WM 072110

067

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR6
9-SS06DL -10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 UM 07210

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-19RE1

Sample wt/vol: 5.8 (g/mL) G Lab File ID: 1003103-19D59

Level: (low/med) MED Date Received: 03/17/10

% Moisture: not dec. 20 Date Analyzed: 03/29/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:(5000)(ul) Soil Aliquot Volume: 100(ul)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
124-48-1	Dibromochloromethane	270	U exclude DL
106-93-4	1,2-Dibromoethane	270	U
108-90-7	Chlorobenzene	270	U
100-41-4	Ethylbenzene	270	U
100-42-5	Styrene	270	U
75-25-2	Bromoform	270	U
98-82-8	Isopropyl Benzene	270	U
79-34-5	1,1,2,2-Tetrachloroethane	270	U
541-73-1	1,3-Dichlorobenzene	270	U
106-46-7	1,4-Dichlorobenzene	270	U
95-50-1	1,2-Dichlorobenzene	270	U
96-12-8	1,2-Dibromo-3-Chloropropane	270	U
120-82-1	1,2,4-Trichlorobenzene	270	U
1330-20-7	Xylene (total)	270	U
79-20-9	Methyl acetate	350	D
110-82-7	Cyclohexane	270	U exclude DL
108-87-2	Methylcyclohexane	270	U exclude DL

FORM I VOA

UM 07210

068

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRL9 - SB01-01-02-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-12

Sample wt/vol: 6.58(g/mL) G Lab File ID: 1003103-12R73

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 20 Date Analyzed: 03/18/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	4.7	U
74-87-3	Chloromethane	4.7	U
75-01-4	Vinyl Chloride	4.7	U
74-83-9	Bromomethane	4.7	U
75-00-3	Chloroethane	4.7	U
75-69-4	Trichlorofluoromethane	4.7	U
75-35-4	1,1-Dichloroethene	4.7	U
75-15-0	Carbon disulfide	4.7	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	4.7	U
67-64-1	Acetone	19	U EBL
75-09-2	Methylene Chloride	4.7	U
156-60-5	trans-1,2-Dichloroethene	4.7	U
1634-04-4	Methyl-tert-butyl ether	4.7	U
75-34-3	1,1-Dichloroethane	4.7	U
156-59-2	cis-1,2-Dichloroethene	4.7	U
78-93-3	2-butanone	12	U
67-66-3	Chloroform	4.7	U
71-55-6	1,1,1-Trichloroethane	4.7	U
56-23-5	Carbon Tetrachloride	4.7	U
71-43-2	Benzene	4.7	U
107-06-2	1,2-Dichloroethane	4.7	U
79-01-6	Trichloroethene	4.7	U
78-87-5	1,2-Dichloropropane	4.7	U
75-27-4	Bromodichloromethane	4.7	U
10061-01-5	cis-1,3-Dichloropropene	4.7	U
108-10-1	4-Methyl-2-pentanone	12	U
108-88-3	Toluene	4.7 ~~0.39~~	~~J~~ U EBL
10061-02-6	trans-1,3-Dichloropropene	4.7	U
79-00-5	1,1,2-Trichloroethane	4.7	U
127-18-4	Tetrachloroethene	4.7	U
591-78-6	2-hexanone	12	U
124-48-1	Dibromochloromethane	4.7	U
106-93-4	1,2-Dibromoethane	4.7	U

FORM I VOA

069

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB01-01-02 -10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-12

Sample wt/vol: 6.58(g/mL) G Lab File ID: 1003103-12R73

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 20 Date Analyzed: 03/18/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	4.7	U
100-41-4	Ethylbenzene	4.7	U
100-42-5	Styrene	4.7	U
75-25-2	Bromoform	4.7	U
98-82-8	Isopropyl Benzene	4.7	U
79-34-5	1,1,2,2-Tetrachloroethane	4.7	U
541-73-1	1,3-Dichlorobenzene	4.7	U
106-46-7	1,4-Dichlorobenzene	4.7	U
95-50-1	1,2-Dichlorobenzene	4.7	U
96-12-8	1,2-Dibromo-3-Chloropropane	4.7	U
120-82-1	1,2,4-Trichlorobenzene	4.7	U
1330-20-7	Xylene (total)	4.7	U
79-20-9	Methyl acetate	3.0	J
110-82-7	Cyclohexane	~~0.88~~ 4.7	~~JB~~ U MBL
108-87-2	Methylcyclohexane	4.7	U
108-38-3	m,p-Xylene (part of total)	9.5	U
95-47-6	o-Xylene (part of total)	4.7	U

FORM I VOA

070

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRL9 SB01D-01-02-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-13

Sample wt/vol: 6.32(g/mL) G Lab File ID: 1003103-13R73

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 16 Date Analyzed: 03/18/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	4.7	U
74-87-3	Chloromethane	4.7 ~~0.38~~	~~JB~~ U MRBL
75-01-4	Vinyl Chloride	4.7	U
74-83-9	Bromomethane	4.7	U
75-00-3	Chloroethane	4.7	U
75-69-4	Trichlorofluoromethane	4.7	U
75-35-4	1,1-Dichloroethene	4.7	U
75-15-0	Carbon disulfide	4.7	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	4.7	U
67-64-1	Acetone	26	U EBL
75-09-2	Methylene Chloride	4.7	U
156-60-5	trans-1,2-Dichloroethene	4.7	U
1634-04-4	Methyl-tert-butyl ether	4.7	U
75-34-3	1,1-Dichloroethane	4.7	U
156-59-2	cis-1,2-Dichloroethene	4.7	U
78-93-3	2-butanone	12 ~~1.3~~	~~J~~ U EBL
67-66-3	Chloroform	4.7	U
71-55-6	1,1,1-Trichloroethane	4.7	U
56-23-5	Carbon Tetrachloride	4.7	U
71-43-2	Benzene	4.7	U
107-06-2	1,2-Dichloroethane	4.7	U
79-01-6	Trichloroethene	4.7	U
78-87-5	1,2-Dichloropropane	4.7	U
75-27-4	Bromodichloromethane	4.7	U
10061-01-5	cis-1,3-Dichloropropene	4.7	U
108-10-1	4-Methyl-2-pentanone	12	U
108-88-3	Toluene	4.7 ~~0.52~~	~~J~~ U EBL
10061-02-6	trans-1,3-Dichloropropene	4.7	U
79-00-5	1,1,2-Trichloroethane	4.7	U
127-18-4	Tetrachloroethene	4.7	U
591-78-6	2-hexanone	12	U
124-48-1	Dibromochloromethane	4.7	U
106-93-4	1,2-Dibromoethane	4.7	U

FORM I VOA

071

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB01D-01-02-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-13

Sample wt/vol: 6.32(g/mL) G Lab File ID: 1003103-13R73

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 16 Date Analyzed: 03/18/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	4.7	U
100-41-4	Ethylbenzene	4.7	U
100-42-5	Styrene	4.7	U
75-25-2	Bromoform	4.7	U
98-82-8	Isopropyl Benzene	4.7	U
79-34-5	1,1,2,2-Tetrachloroethane	4.7	U
541-73-1	1,3-Dichlorobenzene	4.7	U
106-46-7	1,4-Dichlorobenzene	4.7	U
95-50-1	1,2-Dichlorobenzene	4.7	U
96-12-8	1,2-Dibromo-3-Chloropropane	4.7	U
120-82-1	1,2,4-Trichlorobenzene	4.7	U
1330-20-7	Xylene (total)	4.7	U
79-20-9	Methyl acetate	4.5	J
110-82-7	Cyclohexane	~~0.90~~ 4.7	~~JB~~ U
108-87-2	Methylcyclohexane	4.7	U
108-38-3	m,p-Xylene (part of total)	9.4	U
95-47-6	o-Xylene (part of total)	4.7	U

FORM I VOA

072

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IA9 SB04-06-07-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-09

Sample wt/vol: 7.5 (g/mL) G Lab File ID: 1003103-0959

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 22 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	4.3	U
74-87-3	Chloromethane	4.3	U
75-01-4	Vinyl Chloride	4.3	U
74-83-9	Bromomethane	4.3	U
75-00-3	Chloroethane	4.3	U
75-69-4	Trichlorofluoromethane	4.3	U
75-35-4	1,1-Dichloroethene	4.3	U
75-15-0	Carbon disulfide	4.3	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	4.3	U
67-64-1	Acetone	~~9.1~~ 11	~~J~~ U EBL
75-09-2	Methylene Chloride	4.3	U
156-60-5	trans-1,2-Dichloroethene	4.3	U
1634-04-4	Methyl-tert-butyl ether	4.3	U
75-34-3	1,1-Dichloroethane	4.3	U
156-59-2	cis-1,2-Dichloroethene	4.3	U
78-93-3	2-butanone	11	U
67-66-3	Chloroform	4.3	U
71-55-6	1,1,1-Trichloroethane	4.3	U
56-23-5	Carbon Tetrachloride	4.3	U
71-43-2	Benzene	4.3	U
107-06-2	1,2-Dichloroethane	4.3	U
79-01-6	Trichloroethene	4.3	U
78-87-5	1,2-Dichloropropane	4.3	U
75-27-4	Bromodichloromethane	4.3	U
10061-01-5	cis-1,3-Dichloropropene	4.3	U
108-10-1	4-Methyl-2-pentanone	11	U
108-88-3	Toluene	4.3	U
10061-02-6	trans-1,3-Dichloropropene	4.3	U
79-00-5	1,1,2-Trichloroethane	4.3	U
127-18-4	Tetrachloroethene	4.3	U
591-78-6	2-hexanone	11	U
124-48-1	Dibromochloromethane	4.3	U
106-93-4	1,2-Dibromoethane	4.3	U

FORM I VOA

073

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB04-06-07-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-09

Sample wt/vol: 7.5 (g/mL) G Lab File ID: 1003103-0959

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 22 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	4.3	U
100-41-4	Ethylbenzene	4.3	U
100-42-5	Styrene	4.3	U
75-25-2	Bromoform	4.3	U
98-82-8	Isopropyl Benzene	4.3	U
79-34-5	1,1,2,2-Tetrachloroethane	4.3	U
541-73-1	1,3-Dichlorobenzene	4.3	U
106-46-7	1,4-Dichlorobenzene	4.3	U
95-50-1	1,2-Dichlorobenzene	4.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	4.3	U
120-82-1	1,2,4-Trichlorobenzene	4.3	U
1330-20-7	Xylene (total)	4.3	U
79-20-9	Methyl acetate	2.5	J
110-82-7	Cyclohexane	4.3	U
108-87-2	Methylcyclohexane	4.3	U
108-38-3	m,p-Xylene (part of total)	8.6	U
95-47-6	o-Xylene (part of total)	4.3	U

FORM I VOA

074

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRM SB05-06-07-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 WM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-10

Sample wt/vol: 6.8 (g/mL) G Lab File ID: 1003103-1059

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 31 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5.3	U
74-87-3	Chloromethane	5.3	U
75-01-4	Vinyl Chloride	5.3	U
74-83-9	Bromomethane	5.3	U
75-00-3	Chloroethane	5.3	U
75-69-4	Trichlorofluoromethane	5.3	U
75-35-4	1,1-Dichloroethene	5.3	U
75-15-0	Carbon disulfide	5.3	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	5.3	U
67-64-1	Acetone	41	J ~~CCH~~
75-09-2	Methylene Chloride	5.3	U
156-60-5	trans-1,2-Dichloroethene	5.3	U
1634-04-4	Methyl-tert-butyl ether	5.3	U
75-34-3	1,1-Dichloroethane	5.3	U
156-59-2	cis-1,2-Dichloroethene	5.3	U
78-93-3	2-butanone	13	U UJ ~~CCH~~
67-66-3	Chloroform	5.3	U
71-55-6	1,1,1-Trichloroethane	5.3	U
56-23-5	Carbon Tetrachloride	5.3	U
71-43-2	Benzene	5.3	U
107-06-2	1,2-Dichloroethane	5.3	U
79-01-6	Trichloroethene	5.3	U
78-87-5	1,2-Dichloropropane	5.3	U UJ ~~CCH~~
75-27-4	Bromodichloromethane	5.3	U
10061-01-5	cis-1,3-Dichloropropene	5.3	U
108-10-1	4-Methyl-2-pentanone	13	U UJ ~~CCH~~
108-88-3	Toluene	5.3 ~~0.53~~	~~J~~ UEBL
10061-02-6	trans-1,3-Dichloropropene	5.3	U
79-00-5	1,1,2-Trichloroethane	5.3	U
127-18-4	Tetrachloroethene	5.3	U
591-78-6	2-hexanone	13	U UJ ~~CCH~~
124-48-1	Dibromochloromethane	5.3	U
106-93-4	1,2-Dibromoethane	5.3	U

FORM I VOA

WM 072110

075

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB05-06-07-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-10

Sample wt/vol: 6.8 (g/mL) G Lab File ID: 1003103-1059

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 31 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	5.3	U
100-41-4	Ethylbenzene	5.3	U
100-42-5	Styrene	5.3	U
75-25-2	Bromoform	5.3	U
98-82-8	Isopropyl Benzene	5.3	U
79-34-5	1,1,2,2-Tetrachloroethane	5.3	U
541-73-1	1,3-Dichlorobenzene	5.3	U
106-46-7	1,4-Dichlorobenzene	5.3	U
95-50-1	1,2-Dichlorobenzene	5.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	5.3	~~U~~ UJ CH
120-82-1	1,2,4-Trichlorobenzene	5.3	U
1330-20-7	Xylene (total)	5.3	U
79-20-9	Methyl acetate	5.3	~~U~~ UJ CH
110-82-7	Cyclohexane	5.3	U
108-87-2	Methylcyclohexane	5.3	U
108-38-3	m,p-Xylene (part of total)	11	U
95-47-6	o-Xylene (part of total)	5.3	U

FORM I VOA

076

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB05-06-07RE

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-10RE1

Sample wt/vol: 6.01(g/mL) G Lab File ID: 1003103-10R73

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 31 Date Analyzed: 03/18/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	6.0	U
74-87-3	Chloromethane	6.0	U
75-01-4	Vinyl Chloride	6.0	U
74-83-9	Bromomethane	6.0	U
75-00-3	Chloroethane	6.0	U
75-69-4	Trichlorofluoromethane	6.0	U
75-35-4	1,1-Dichloroethene	6.0	U
75-15-0	Carbon disulfide	6.0	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	6.0	U
67-64-1	Acetone	25	
75-09-2	Methylene Chloride	6.0	U
156-60-5	trans-1,2-Dichloroethene	6.0	U
1634-04-4	Methyl-tert-butyl ether	6.0	U
75-34-3	1,1-Dichloroethane	6.0	U
156-59-2	cis-1,2-Dichloroethene	6.0	U
78-93-3	2-butanone	15	U
67-66-3	Chloroform	6.0	U
71-55-6	1,1,1-Trichloroethane	6.0	U
56-23-5	Carbon Tetrachloride	6.0	U
71-43-2	Benzene	6.0	U
107-06-2	1,2-Dichloroethane	6.0	U
79-01-6	Trichloroethene	6.0	U
78-87-5	1,2-Dichloropropane	6.0	U
75-27-4	Bromodichloromethane	6.0	U
10061-01-5	cis-1,3-Dichloropropene	6.0	U
108-10-1	4-Methyl-2-pentanone	15	U
108-88-3	Toluene	0.42	J
10061-02-6	trans-1,3-Dichloropropene	6.0	U
79-00-5	1,1,2-Trichloroethane	6.0	U
127-18-4	Tetrachloroethene	6.0	U
591-78-6	2-hexanone	15	U
124-48-1	Dibromochloromethane	6.0	U
106-93-4	1,2-Dibromoethane	6.0	U

Exclude RE

FORM I VOA

077

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FR69 SB05-06-07RE -10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 UM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-10RE1

Sample wt/vol: 6.01(g/mL) G Lab File ID: 1003103-10R73

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 31 Date Analyzed: 03/18/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	6.0	U exclude RE
100-41-4	Ethylbenzene	6.0	U
100-42-5	Styrene	6.0	U
75-25-2	Bromoform	6.0	U
98-82-8	Isopropyl Benzene	6.0	U
79-34-5	1,1,2,2-Tetrachloroethane	6.0	U
541-73-1	1,3-Dichlorobenzene	6.0	U
106-46-7	1,4-Dichlorobenzene	6.0	U
95-50-1	1,2-Dichlorobenzene	6.0	U
96-12-8	1,2-Dibromo-3-Chloropropane	6.0	U
120-82-1	1,2,4-Trichlorobenzene	6.0	U
1330-20-7	Xylene (total)	6.0	U
79-20-9	Methyl acetate	6.0	U
110-82-7	Cyclohexane	1.2	JB
108-87-2	Methylcyclohexane	6.0	U
108-38-3	m,p-Xylene (part of total)	12	U
95-47-6	o-Xylene (part of total)	6.0	U

FORM I VOA

UM 072110

078

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR6 SB06-06-07 10

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-11

Sample wt/vol: 6.74(g/mL) G Lab File ID: 1003103-11R73

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 23 Date Analyzed: 03/18/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	4.8	U
74-87-3	Chloromethane	4.8 ~~0.32~~	~~JB~~ U MRL
75-01-4	Vinyl Chloride	4.8	U
74-83-9	Bromomethane	4.8	U
75-00-3	Chloroethane	4.8	U
75-69-4	Trichlorofluoromethane	4.8	U
75-35-4	1,1-Dichloroethene	4.8	U
75-15-0	Carbon disulfide	4.8	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	4.8	U
67-64-1	Acetone	12	U UJ ICH
75-09-2	Methylene Chloride	4.8	U
156-60-5	trans-1,2-Dichloroethene	4.8	U
1634-04-4	Methyl-tert-butyl ether	4.8	U
75-34-3	1,1-Dichloroethane	4.8	U
156-59-2	cis-1,2-Dichloroethene	4.8	U
78-93-3	2-butanone	12	U UJ ICH
67-66-3	Chloroform	4.8	U
71-55-6	1,1,1-Trichloroethane	4.8	U
56-23-5	Carbon Tetrachloride	4.8	U
71-43-2	Benzene	4.8	U
107-06-2	1,2-Dichloroethane	4.8	U
79-01-6	Trichloroethene	4.8	U
78-87-5	1,2-Dichloropropane	4.8	U UJ ICH
75-27-4	Bromodichloromethane	4.8	U
10061-01-5	cis-1,3-Dichloropropene	4.8	U
108-10-1	4-Methyl-2-pentanone	12	U UJ ICH
108-88-3	Toluene	4.8	U
10061-02-6	trans-1,3-Dichloropropene	4.8	U
79-00-5	1,1,2-Trichloroethane	4.8	U
127-18-4	Tetrachloroethene	4.8	U
591-78-6	2-hexanone	12	U UJ ICH
124-48-1	Dibromochloromethane	4.8	U
106-93-4	1,2-Dibromoethane	4.8	U

FORM I VOA

WM 07/21/10

079

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRA SB06-06-07-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-11

Sample wt/vol: 6.74(g/mL) G Lab File ID: 1003103-11R73

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 23 Date Analyzed: 03/18/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	4.8	U
100-41-4	Ethylbenzene	4.8	U
100-42-5	Styrene	4.8	U
75-25-2	Bromoform	4.8	U
98-82-8	Isopropyl Benzene	4.8	U
79-34-5	1,1,2,2-Tetrachloroethane	4.8	U
541-73-1	1,3-Dichlorobenzene	4.8	U
106-46-7	1,4-Dichlorobenzene	4.8	U
95-50-1	1,2-Dichlorobenzene	4.8	U
96-12-8	1,2-Dibromo-3-Chloropropane	4.8	U VJ CH
120-82-1	1,2,4-Trichlorobenzene	4.8	U
1330-20-7	Xylene (total)	4.8	U
79-20-9	Methyl acetate	4.8	U VJ CH
110-82-7	Cyclohexane	~~0.92~~ 4.8	~~JB~~ U MBL
108-87-2	Methylcyclohexane	4.8	U
108-38-3	m,p-Xylene (part of total)	9.6	U
95-47-6	o-Xylene (part of total)	4.8	U

FORM I VOA

VM 07/21/10

080

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD01-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-14

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-14A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 77 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	130	J
108-95-2	Phenol	1400	U
111-44-4	Bis(2-chloroethyl)ether	740	U
95-57-8	2-Chlorophenol	1400	U
95-48-7	2-Methylphenol	1400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	740	U
98-86-2	Acetophenone	740	U
106-44-5	4-Methylphenol	1400	U
621-64-7	N-Nitroso-di-N-propylamine	740	U
67-72-1	Hexachloroethane	740	U
98-95-3	Nitrobenzene	740	U
78-59-1	Isophorone	740	U
88-75-5	2-Nitrophenol	1400	U
105-67-9	2,4-Dimethylphenol	1400	U
111-91-1	Bis(2-chloroethoxy)methane	740	U
120-83-2	2,4-Dichlorophenol	1400	U
91-20-3	Naphthalene	740	U
106-47-8	4-Chloroaniline	1400	U
87-68-3	Hexachlorobutadiene	740	U
105-60-2	Caprolactam	740	U
59-50-7	4-Chloro-3-methylphenol	1400	U
91-57-6	2-Methylnaphthalene	740	U
77-47-4	Hexachlorocyclopentadiene	740	U
88-06-2	2,4,6-Trichlorophenol	1400	U
95-95-4	2,4,5-Trichlorophenol	1400	U
92-52-4	1,1'-Biphenyl	740	U
91-58-7	2-Chloronaphthalene	740	U
88-74-4	2-Nitroaniline	1400	U
131-11-3	Dimethylphthalate	740	U
606-20-2	2,6-Dinitrotoluene	740	U
208-96-8	Acenaphthylene	740	U
99-09-2	3-Nitroaniline	1400	U
83-32-9	Acenaphthene	740	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD01-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 UM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-14

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-14A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 77 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1400	U
100-02-7	4-Nitrophenol	1400	U
121-14-2	2,4-Dinitrotoluene	740	U
132-64-9	Dibenzofuran	740	U
84-66-2	Diethylphthalate	740	U
7005-72-3	4-Chlorophenyl-phenylether	740	U
86-73-7	Fluorene	740	U
100-01-6	4-Nitroaniline	1400	U
534-52-1	4,6-Dinitro-2-methylphenol	1400	U
86-30-6	N-Nitrosodiphenylamine (1)	740	U
101-55-3	4-Bromophenyl-phenylether	740	U 05 CCH
118-74-1	Hexachlorobenzene	740	U
1912-24-9	Atrazine	740	U
87-86-5	Pentachlorophenol	1400	U
85-01-8	Phenanthrene	740	U
120-12-7	Anthracene	740	U
86-74-8	Carbazole	740	U
84-74-2	Di-n-butylphthalate	740	U
206-44-0	Fluoranthene	740	U
129-00-0	Pyrene	740	U
85-68-7	Butylbenzylphthalate	740	U
91-94-1	3,3'-Dichlorobenzidine	740	U
117-81-7	bis(2-ethylhexyl)Phthalate	400	J
56-55-3	Benzo(a)anthracene	740	U
218-01-9	Chrysene	740	U
117-84-0	Di-n-octylphthalate	740	U
205-99-2	Benzo(b)fluoranthene	740	U
207-08-9	Benzo(k)fluoranthene	740	U
50-32-8	Benzo(a)pyrene	740	U
193-39-5	Indeno(1,2,3-cd)pyrene	740	U
53-70-3	Dibenzo(a,h)anthracene	740	U
191-24-2	Benzo(g,h,i)perylene	740	U

(1) - Cannot be separated from Diphenylamine

UM 072110

082

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD01-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 UM 07210

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-14

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-14C60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 77 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	~~12~~ 36	~~JB~~ UNB BAP 04/26/10
91-57-6	2-Methylnaphthalene	10	J
208-96-8	Acenaphthylene	36	U
83-32-9	Acenaphthene	4.3	J
86-73-7	Fluorene	5.4	~~J~~ J ISH
85-01-8	Phenanthrene	21	~~J~~ J ISH
120-12-7	Anthracene	14	~~J~~ J ISH
206-44-0	Fluoranthene	25	J
129-00-0	Pyrene	22	J
56-55-3	Benzo(a)anthracene	17	J
218-01-9	Chrysene	18	J
205-99-2	Benzo(b)fluoranthene	24	J
207-08-9	Benzo(k)fluoranthene	17	J
50-32-8	Benzo(a)pyrene	32	J
193-39-5	Indeno(1,2,3-cd)pyrene	36	U
53-70-3	Dibenzo(a,h)anthracene	36	U
191-24-2	Benzo(g,h,i)perylene	36	U

UM 07210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD01RE-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-14

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-14JC60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 77 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	11	JB
91-57-6	2-Methylnaphthalene	9.1	U
208-96-8	Acenaphthylene	36	U
83-32-9	Acenaphthene	36	U
86-73-7	Fluorene	2.0	J
85-01-8	Phenanthrene	12	U
120-12-7	Anthracene	8.1	U
206-44-0	Fluoranthene	13	U
129-00-0	Pyrene	11	U
56-55-3	Benzo(a)anthracene	4.2	U
218-01-9	Chrysene	7.3	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	6.4	U
50-32-8	Benzo(a)pyrene	31	U
193-39-5	Indeno(1,2,3-cd)pyrene	36	U
53-70-3	Dibenzo(a,h)anthracene	36	U
191-24-2	Benzo(g,h,i)perylene	36	U

exclude, RE 04/26/10

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD01D-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-15

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-15J2C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 76 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	240	J
108-95-2	Phenol	1400	U
111-44-4	Bis(2-chloroethyl)ether	710	U
95-57-8	2-Chlorophenol	1400	U
95-48-7	2-Methylphenol	1400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	710	U
98-86-2	Acetophenone	710	U
106-44-5	4-Methylphenol	1400	U
621-64-7	N-Nitroso-di-N-propylamine	710	U
67-72-1	Hexachloroethane	710	U
98-95-3	Nitrobenzene	710	U
78-59-1	Isophorone	710	U
88-75-5	2-Nitrophenol	1400	U
105-67-9	2,4-Dimethylphenol	1400	U
111-91-1	Bis(2-chloroethoxy)methane	710	U
120-83-2	2,4-Dichlorophenol	1400	U
91-20-3	Naphthalene	710	U
106-47-8	4-Chloroaniline	1400	U
87-68-3	Hexachlorobutadiene	710	U
105-60-2	Caprolactam	710	U
59-50-7	4-Chloro-3-methylphenol	1400	U
91-57-6	2-Methylnaphthalene	710	U
77-47-4	Hexachlorocyclopentadiene	710	U
88-06-2	2,4,6-Trichlorophenol	1400	U
95-95-4	2,4,5-Trichlorophenol	1400	U
92-52-4	1,1'-Biphenyl	710	U
91-58-7	2-Chloronaphthalene	710	U
88-74-4	2-Nitroaniline	1400	U
131-11-3	Dimethylphthalate	710	U
606-20-2	2,6-Dinitrotoluene	710	U
208-96-8	Acenaphthylene	710	U
99-09-2	3-Nitroaniline	1400	U
83-32-9	Acenaphthene	710	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD01D -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-15

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-15J2C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 76 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1400	U
100-02-7	4-Nitrophenol	1400	U
121-14-2	2,4-Dinitrotoluene	710	U
132-64-9	Dibenzofuran	710	U
84-66-2	Diethylphthalate	710	U
7005-72-3	4-Chlorophenyl-phenylether	710	U
86-73-7	Fluorene	710	U
100-01-6	4-Nitroaniline	1400	U
534-52-1	4,6-Dinitro-2-methylphenol	1400	U
86-30-6	N-Nitrosodiphenylamine (1)	710	U
101-55-3	4-Bromophenyl-phenylether	710	U
118-74-1	Hexachlorobenzene	710	U
1912-24-9	Atrazine	710	U
87-86-5	Pentachlorophenol	1400	U
85-01-8	Phenanthrene	710	U
120-12-7	Anthracene	710	U
86-74-8	Carbazole	710	U
84-74-2	Di-n-butylphthalate	710	U
206-44-0	Fluoranthene	710	U
129-00-0	Pyrene	710	U
85-68-7	Butylbenzylphthalate	710	U
91-94-1	3,3'-Dichlorobenzidine	710	U
117-81-7	bis(2-ethylhexyl)Phthalate	710	U
56-55-3	Benzo(a)anthracene	710	U
218-01-9	Chrysene	710	U
117-84-0	Di-n-octylphthalate	710	U
205-99-2	Benzo(b)fluoranthene	710	U
207-08-9	Benzo(k)fluoranthene	710	U
50-32-8	Benzo(a)pyrene	710	U
193-39-5	Indeno(1,2,3-cd)pyrene	710	U
53-70-3	Dibenzo(a,h)anthracene	710	U
191-24-2	Benzo(g,h,i)perylene	710	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD01D-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-15

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-15C60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 76 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	6.6	JB
91-57-6	2-Methylnaphthalene	9.1	J
208-96-8	Acenaphthylene	35	U
83-32-9	Acenaphthene	35	U
86-73-7	Fluorene	35	U
85-01-8	Phenanthrene	11	J
120-12-7	Anthracene	7.0	J
206-44-0	Fluoranthene	10	J
129-00-0	Pyrene	7.6	J
56-55-3	Benzo(a)anthracene	3.1	J
218-01-9	Chrysene	6.8	J
205-99-2	Benzo(b)fluoranthene	8.5	J
207-08-9	Benzo(k)fluoranthene	6.1	J
50-32-8	Benzo(a)pyrene	29	U
193-39-5	Indeno(1,2,3-cd)pyrene	35	U
53-70-3	Dibenzo(a,h)anthracene	35	U
191-24-2	Benzo(g,h,i)perylene	35	U

exclude, RE 04/26/10

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD01DRE 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 WM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-15

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-15JC60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 76 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	~~7.7~~ 35	~~JB~~ U MB 04/16/10
91-57-6	2-Methylnaphthalene	8.4	J
208-96-8	Acenaphthylene	35	U
83-32-9	Acenaphthene	35	U
86-73-7	Fluorene	35	U
85-01-8	Phenanthrene	9.7	~~J~~ J ISH
120-12-7	Anthracene	5.1	~~J~~ J ISH
206-44-0	Fluoranthene	9.2	J
129-00-0	Pyrene	6.8	J
56-55-3	Benzo(a)anthracene	2.6	J
218-01-9	Chrysene	6.1	J
205-99-2	Benzo(b)fluoranthene	9.6	J
207-08-9	Benzo(k)fluoranthene	6.1	J
50-32-8	Benzo(a)pyrene	37	
193-39-5	Indeno(1,2,3-cd)pyrene	35	U
53-70-3	Dibenzo(a,h)anthracene	35	U
191-24-2	Benzo(g,h,i)perylene	35	U

WM 072110

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS01-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-03C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 34 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	100	J
108-95-2	Phenol	500	U
111-44-4	Bis(2-chloroethyl)ether	260	U
95-57-8	2-Chlorophenol	500	U
95-48-7	2-Methylphenol	500	U
108-60-1	2,2'-oxybis(1-Chloropropane)	260	U
98-86-2	Acetophenone	260	U
106-44-5	4-Methylphenol	500	U
621-64-7	N-Nitroso-di-N-propylamine	260	U
67-72-1	Hexachloroethane	260	U
98-95-3	Nitrobenzene	260	U
78-59-1	Isophorone	260	U
88-75-5	2-Nitrophenol	500	U
105-67-9	2,4-Dimethylphenol	500	U
111-91-1	Bis(2-chloroethoxy)methane	260	U
120-83-2	2,4-Dichlorophenol	500	U
91-20-3	Naphthalene	260	U
106-47-8	4-Chloroaniline	500	U
87-68-3	Hexachlorobutadiene	260	U
105-60-2	Caprolactam	260	U
59-50-7	4-Chloro-3-methylphenol	500	U
91-57-6	2-Methylnaphthalene	260	U
77-47-4	Hexachlorocyclopentadiene	260	U
88-06-2	2,4,6-Trichlorophenol	500	U
95-95-4	2,4,5-Trichlorophenol	500	U
92-52-4	1,1'-Biphenyl	260	U
91-58-7	2-Chloronaphthalene	260	U
88-74-4	2-Nitroaniline	500	U
131-11-3	Dimethylphthalate	260	U
606-20-2	2,6-Dinitrotoluene	260	U
208-96-8	Acenaphthylene	260	U
99-09-2	3-Nitroaniline	500	U
83-32-9	Acenaphthene	260	U

WM 072110

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS01-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-03C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 34 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	500	U
100-02-7	4-Nitrophenol	500	U
121-14-2	2,4-Dinitrotoluene	260	U
132-64-9	Dibenzofuran	260	U
84-66-2	Diethylphthalate	260	U
7005-72-3	4-Chlorophenyl-phenylether	260	U
86-73-7	Fluorene	260	U
100-01-6	4-Nitroaniline	500	U
534-52-1	4,6-Dinitro-2-methylphenol	500	U
86-30-6	N-Nitrosodiphenylamine (1)	260	U
101-55-3	4-Bromophenyl-phenylether	260	U
118-74-1	Hexachlorobenzene	260	U
1912-24-9	Atrazine	260	U
87-86-5	Pentachlorophenol	500	U
85-01-8	Phenanthrene	260	U
120-12-7	Anthracene	260	U
86-74-8	Carbazole	260	U
84-74-2	Di-n-butylphthalate	260	U
206-44-0	Fluoranthene	260	U
129-00-0	Pyrene	260	U
85-68-7	Butylbenzylphthalate	260	U
91-94-1	3,3'-Dichlorobenzidine	260	U
117-81-7	bis(2-ethylhexyl)Phthalate	260	U
56-55-3	Benzo(a)anthracene	260	U
218-01-9	Chrysene	260	U
117-84-0	Di-n-octylphthalate	260	U
205-99-2	Benzo(b)fluoranthene	260	U
207-08-9	Benzo(k)fluoranthene	260	U
50-32-8	Benzo(a)pyrene	260	U
193-39-5	Indeno(1,2,3-cd)pyrene	260	U
53-70-3	Dibenzo(a,h)anthracene	260	U
191-24-2	Benzo(g,h,i)perylene	260	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS01-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-03JC60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 34 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	2.6	J
91-57-6	2-Methylnaphthalene	1.9	J
208-96-8	Acenaphthylene	13	U
83-32-9	Acenaphthene	1.0	J
86-73-7	Fluorene	13	U
85-01-8	Phenanthrene	2.8	J
120-12-7	Anthracene	13	U
206-44-0	Fluoranthene	2.4	J
129-00-0	Pyrene	1.6	J
56-55-3	Benzo(a)anthracene	2.6	J
218-01-9	Chrysene	1.9	J
205-99-2	Benzo(b)fluoranthene	1.4	J
207-08-9	Benzo(k)fluoranthene	1.8	J
50-32-8	Benzo(a)pyrene	1.6	J
193-39-5	Indeno(1,2,3-cd)pyrene	0.84	J
53-70-3	Dibenzo(a,h)anthracene	13	U
191-24-2	Benzo(g,h,i)perylene	0.70	J

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS01D-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-04C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 34 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	59	J
108-95-2	Phenol	500	U
111-44-4	Bis(2-chloroethyl)ether	260	U
95-57-8	2-Chlorophenol	500	U
95-48-7	2-Methylphenol	500	U
108-60-1	2,2'-oxybis(1-Chloropropane)	260	U
98-86-2	Acetophenone	260	U
106-44-5	4-Methylphenol	500	U
621-64-7	N-Nitroso-di-N-propylamine	260	U
67-72-1	Hexachloroethane	260	U
98-95-3	Nitrobenzene	260	U
78-59-1	Isophorone	260	U
88-75-5	2-Nitrophenol	500	U
105-67-9	2,4-Dimethylphenol	500	U
111-91-1	Bis(2-chloroethoxy)methane	260	U
120-83-2	2,4-Dichlorophenol	500	U
91-20-3	Naphthalene	260	U
106-47-8	4-Chloroaniline	500	U
87-68-3	Hexachlorobutadiene	260	U
105-60-2	Caprolactam	260	U
59-50-7	4-Chloro-3-methylphenol	500	U
91-57-6	2-Methylnaphthalene	260	U
77-47-4	Hexachlorocyclopentadiene	260	U
88-06-2	2,4,6-Trichlorophenol	500	U
95-95-4	2,4,5-Trichlorophenol	500	U
92-52-4	1,1'-Biphenyl	260	U
91-58-7	2-Chloronaphthalene	260	U
88-74-4	2-Nitroaniline	500	U
131-11-3	Dimethylphthalate	260	U
606-20-2	2,6-Dinitrotoluene	260	U
208-96-8	Acenaphthylene	260	U
99-09-2	3-Nitroaniline	500	U
83-32-9	Acenaphthene	260	U

VM 07210

092

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS01D-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-04C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 34 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	500	U
100-02-7	4-Nitrophenol	500	U
121-14-2	2,4-Dinitrotoluene	260	U
132-64-9	Dibenzofuran	260	U
84-66-2	Diethylphthalate	260	U
7005-72-3	4-Chlorophenyl-phenylether	260	U
86-73-7	Fluorene	260	U
100-01-6	4-Nitroaniline	500	U
534-52-1	4,6-Dinitro-2-methylphenol	500	U
86-30-6	N-Nitrosodiphenylamine (1)	260	U
101-55-3	4-Bromophenyl-phenylether	260	U
118-74-1	Hexachlorobenzene	260	U
1912-24-9	Atrazine	260	U
87-86-5	Pentachlorophenol	500	U
85-01-8	Phenanthrene	260	U
120-12-7	Anthracene	260	U
86-74-8	Carbazole	260	U
84-74-2	Di-n-butylphthalate	260	U
206-44-0	Fluoranthene	260	U
129-00-0	Pyrene	260	U
85-68-7	Butylbenzylphthalate	260	U
91-94-1	3,3'-Dichlorobenzidine	260	U
117-81-7	bis(2-ethylhexyl)Phthalate	260 ~~130~~	~~J~~ U FBL
56-55-3	Benzo(a)anthracene	260	U
218-01-9	Chrysene	260	U
117-84-0	Di-n-octylphthalate	260 ~~220~~	~~J~~ U FBL
205-99-2	Benzo(b)fluoranthene	260	U
207-08-9	Benzo(k)fluoranthene	260	U
50-32-8	Benzo(a)pyrene	260	U
193-39-5	Indeno(1,2,3-cd)pyrene	260	U
53-70-3	Dibenzo(a,h)anthracene	260	U
191-24-2	Benzo(g,h,i)perylene	260	U

(1) - Cannot be separated from Diphenylamine

LM 07210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS01D-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-04A60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 34 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	1.9	J
91-57-6	2-Methylnaphthalene	1.4	J
208-96-8	Acenaphthylene	13	U
83-32-9	Acenaphthene	13	U
86-73-7	Fluorene	0.83	J
85-01-8	Phenanthrene	4.3	J
120-12-7	Anthracene	1.2	J
206-44-0	Fluoranthene	5.8	J
129-00-0	Pyrene	4.4	J
56-55-3	Benzo(a)anthracene	3.0	J
218-01-9	Chrysene	2.9	J
205-99-2	Benzo(b)fluoranthene	2.5	J
207-08-9	Benzo(k)fluoranthene	2.7	J
50-32-8	Benzo(a)pyrene	1.5	J
193-39-5	Indeno(1,2,3-cd)pyrene	1.4	J
53-70-3	Dibenzo(a,h)anthracene	13	U
191-24-2	Benzo(g,h,i)perylene	1.1	J

MM 07/2/10

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS03-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-05C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 27 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	86	J
108-95-2	Phenol	450	U
111-44-4	Bis(2-chloroethyl)ether	230	U
95-57-8	2-Chlorophenol	450	U
95-48-7	2-Methylphenol	450	U
108-60-1	2,2'-oxybis(1-Chloropropane)	230	U
98-86-2	Acetophenone	230	U
106-44-5	4-Methylphenol	450	U
621-64-7	N-Nitroso-di-N-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	450	U
105-67-9	2,4-Dimethylphenol	450	U
111-91-1	Bis(2-chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	450	U
91-20-3	Naphthalene	230	U
106-47-8	4-Chloroaniline	450	U
87-68-3	Hexachlorobutadiene	230	U
105-60-2	Caprolactam	230	U
59-50-7	4-Chloro-3-methylphenol	450	U
91-57-6	2-Methylnaphthalene	230	U
77-47-4	Hexachlorocyclopentadiene	230	U
88-06-2	2,4,6-Trichlorophenol	450	U
95-95-4	2,4,5-Trichlorophenol	450	U
92-52-4	1,1'-Biphenyl	230	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	450	U
131-11-3	Dimethylphthalate	230	U
606-20-2	2,6-Dinitrotoluene	230	U
208-96-8	Acenaphthylene	230	U
99-09-2	3-Nitroaniline	450	U
83-32-9	Acenaphthene	230	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS03-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-05C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 27 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	450	U
100-02-7	4-Nitrophenol	450	U
121-14-2	2,4-Dinitrotoluene	230	U
132-64-9	Dibenzofuran	230	U
84-66-2	Diethylphthalate	230	U
7005-72-3	4-Chlorophenyl-phenylether	230	U
86-73-7	Fluorene	230	U
100-01-6	4-Nitroaniline	450	U
534-52-1	4,6-Dinitro-2-methylphenol	450	U UJ CH
86-30-6	N-Nitrosodiphenylamine (1)	230	U
101-55-3	4-Bromophenyl-phenylether	230	U
118-74-1	Hexachlorobenzene	230	U
1912-24-9	Atrazine	230	U
87-86-5	Pentachlorophenol	450	U
85-01-8	Phenanthrene	230	U
120-12-7	Anthracene	230	U
86-74-8	Carbazole	230	U
84-74-2	Di-n-butylphthalate	230	U
206-44-0	Fluoranthene	230	U
129-00-0	Pyrene	230	U
85-68-7	Butylbenzylphthalate	230	U
91-94-1	3,3'-Dichlorobenzidine	230	U
117-81-7	bis(2-ethylhexyl)Phthalate	230 ~~110~~	~~J~~ U FBL
56-55-3	Benzo(a)anthracene	230	U
218-01-9	Chrysene	230	U
117-84-0	Di-n-octylphthalate	230	U
205-99-2	Benzo(b)fluoranthene	230	U
207-08-9	Benzo(k)fluoranthene	230	U
50-32-8	Benzo(a)pyrene	230	U
193-39-5	Indeno(1,2,3-cd)pyrene	230	U
53-70-3	Dibenzo(a,h)anthracene	230	U
191-24-2	Benzo(g,h,i)perylene	230	U

(1) - Cannot be separated from Diphenylamine

MM 07/2/10

096

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS03-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-05A60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 27 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	3.2	J
91-57-6	2-Methylnaphthalene	2.2	J
208-96-8	Acenaphthylene	11	U
83-32-9	Acenaphthene	1.9	J
86-73-7	Fluorene	11	U
85-01-8	Phenanthrene	3.8	~~J~~ J
120-12-7	Anthracene	1.6	~~J~~ J
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	1.2	~~J~~ J ISH
56-55-3	Benzo(a)anthracene	11	U
218-01-9	Chrysene	1.3	~~J~~ J ISH
205-99-2	Benzo(b)fluoranthene	3.2	J
207-08-9	Benzo(k)fluoranthene	3.3	J
50-32-8	Benzo(a)pyrene	1.8	J
193-39-5	Indeno(1,2,3-cd)pyrene	11	U
53-70-3	Dibenzo(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	11	U

WM 07210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS03-10ARE

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-05JC60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 27 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	3.8	J
91-57-6	2-Methylnaphthalene	2.7	J
208-96-8	Acenaphthylene	11	U
83-32-9	Acenaphthene	1.3	J
86-73-7	Fluorene	11	U
85-01-8	Phenanthrene	4.2	J
120-12-7	Anthracene	1.6	J
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
56-55-3	Benzo(a)anthracene	11	U
218-01-9	Chrysene	11	U
205-99-2	Benzo(b)fluoranthene	1.9	J
207-08-9	Benzo(k)fluoranthene	3.5	J
50-32-8	Benzo(a)pyrene	2.1	J
193-39-5	Indeno(1,2,3-cd)pyrene	11	U
53-70-3	Dibenzo(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	11	U

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MM 07/2/10

098

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS04-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-06C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 26 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	62	J
108-95-2	Phenol	450	U
111-44-4	Bis(2-chloroethyl)ether	230	U
95-57-8	2-Chlorophenol	450	U
95-48-7	2-Methylphenol	450	U
108-60-1	2,2'-oxybis(1-Chloropropane)	230	U
98-86-2	Acetophenone	230	U
106-44-5	4-Methylphenol	450	U
621-64-7	N-Nitroso-di-N-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	450	U
105-67-9	2,4-Dimethylphenol	450	U
111-91-1	Bis(2-chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	450	U
91-20-3	Naphthalene	230	U
106-47-8	4-Chloroaniline	450	U
87-68-3	Hexachlorobutadiene	230	U
105-60-2	Caprolactam	230	U
59-50-7	4-Chloro-3-methylphenol	450	U
91-57-6	2-Methylnaphthalene	230	U
77-47-4	Hexachlorocyclopentadiene	230	U
88-06-2	2,4,6-Trichlorophenol	450	U
95-95-4	2,4,5-Trichlorophenol	450	U
92-52-4	1,1'-Biphenyl	230	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	450	U
131-11-3	Dimethylphthalate	230	U
606-20-2	2,6-Dinitrotoluene	230	U
208-96-8	Acenaphthylene	230	U
99-09-2	3-Nitroaniline	450	U
83-32-9	Acenaphthene	230	U

WM 032110

099

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS04-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-06C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 26 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	450	U
100-02-7	4-Nitrophenol	450	U
121-14-2	2,4-Dinitrotoluene	230	U
132-64-9	Dibenzofuran	230	U
84-66-2	Diethylphthalate	230	U
7005-72-3	4-Chlorophenyl-phenylether	230	U
86-73-7	Fluorene	230	U
100-01-6	4-Nitroaniline	450	U
534-52-1	4,6-Dinitro-2-methylphenol	450	U
86-30-6	N-Nitrosodiphenylamine (1)	230	U
101-55-3	4-Bromophenyl-phenylether	230	U
118-74-1	Hexachlorobenzene	230	U
1912-24-9	Atrazine	230	U
87-86-5	Pentachlorophenol	450	U
85-01-8	Phenanthrene	230	U
120-12-7	Anthracene	230	U
86-74-8	Carbazole	230	U
84-74-2	Di-n-butylphthalate	230	U
206-44-0	Fluoranthene	230	U
129-00-0	Pyrene	230	U
85-68-7	Butylbenzylphthalate	230	U
91-94-1	3,3'-Dichlorobenzidine	230	U
117-81-7	bis(2-ethylhexyl)Phthalate	230 ~~120~~	J
56-55-3	Benzo(a)anthracene	230	U
218-01-9	Chrysene	230	U
117-84-0	Di-n-octylphthalate	230	U
205-99-2	Benzo(b)fluoranthene	230	U
207-08-9	Benzo(k)fluoranthene	230	U
50-32-8	Benzo(a)pyrene	230	U
193-39-5	Indeno(1,2,3-cd)pyrene	230	U
53-70-3	Dibenzo(a,h)anthracene	230	U
191-24-2	Benzo(g,h,i)perylene	230	U

(1) - Cannot be separated from Diphenylamine

100

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS04-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-06A60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 26 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	2.6	J
91-57-6	2-Methylnaphthalene	1.8	J
208-96-8	Acenaphthylene	11	U
83-32-9	Acenaphthene	1.5	J
86-73-7	Fluorene	0.86	J
85-01-8	Phenanthrene	3.1	J
120-12-7	Anthracene	0.99	J
206-44-0	Fluoranthene	2.6	J
129-00-0	Pyrene	2.0	J
56-55-3	Benzo(a)anthracene	0.88	J
218-01-9	Chrysene	1.6	J
205-99-2	Benzo(b)fluoranthene	2.1	J
207-08-9	Benzo(k)fluoranthene	2.3	J
50-32-8	Benzo(a)pyrene	1.9	J
193-39-5	Indeno(1,2,3-cd)pyrene	0.75	J
53-70-3	Dibenzo(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	11	U

UM 07210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS05-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-07C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 48 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	82	J
108-95-2	Phenol	630	U
111-44-4	Bis(2-chloroethyl)ether	330	U
95-57-8	2-Chlorophenol	630	U
95-48-7	2-Methylphenol	630	U
108-60-1	2,2'-oxybis(1-Chloropropane)	330	U
98-86-2	Acetophenone	330	U
106-44-5	4-Methylphenol	630	U
621-64-7	N-Nitroso-di-N-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	630	U
105-67-9	2,4-Dimethylphenol	630	U
111-91-1	Bis(2-chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	630	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	630	U
87-68-3	Hexachlorobutadiene	330	U
105-60-2	Caprolactam	81	J
59-50-7	4-Chloro-3-methylphenol	630	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	630	U
95-95-4	2,4,5-Trichlorophenol	630	U
92-52-4	1,1'-Biphenyl	330	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	630	U
131-11-3	Dimethylphthalate	330	U
606-20-2	2,6-Dinitrotoluene	330	U
208-96-8	Acenaphthylene	330	U
99-09-2	3-Nitroaniline	630	U
83-32-9	Acenaphthene	330	U

VM 072110

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS05-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-07C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 48 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	630	U
100-02-7	4-Nitrophenol	630	U
121-14-2	2,4-Dinitrotoluene	330	U
132-64-9	Dibenzofuran	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	630	U
534-52-1	4,6-Dinitro-2-methylphenol	630	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
1912-24-9	Atrazine	330	U
87-86-5	Pentachlorophenol	630	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
86-74-8	Carbazole	330	U
84-74-2	Di-n-butylphthalate	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	U
117-81-7	bis(2-ethylhexyl)Phthalate	330	U
56-55-3	Benzo(a)anthracene	330	U
218-01-9	Chrysene	330	U
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenzo(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS05-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-07A60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 48 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	1.7	J
91-57-6	2-Methylnaphthalene	1.6	J
208-96-8	Acenaphthylene	16	U
83-32-9	Acenaphthene	16	U
86-73-7	Fluorene	16	U
85-01-8	Phenanthrene	3.1	J
120-12-7	Anthracene	16	U
206-44-0	Fluoranthene	4.7	J
129-00-0	Pyrene	3.6	J
56-55-3	Benzo(a)anthracene	2.4	J
218-01-9	Chrysene	2.2	J
205-99-2	Benzo(b)fluoranthene	2.1	J
207-08-9	Benzo(k)fluoranthene	1.8	J
50-32-8	Benzo(a)pyrene	1.4	J
193-39-5	Indeno(1,2,3-cd)pyrene	1.1	J
53-70-3	Dibenzo(a,h)anthracene	16	U
191-24-2	Benzo(g,h,i)perylene	16	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS06-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-08

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-08A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 31 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	140	J
108-95-2	Phenol	480	U UJ SSL
111-44-4	Bis(2-chloroethyl)ether	250	U
95-57-8	2-Chlorophenol	480	U UJ SSL
95-48-7	2-Methylphenol	480	U UJ SSL
108-60-1	2,2'-oxybis(1-Chloropropane)	250	U
98-86-2	Acetophenone	250	U
106-44-5	4-Methylphenol	480	U UJ SSL
621-64-7	N-Nitroso-di-N-propylamine	250	U
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	480	U UJ SSL
105-67-9	2,4-Dimethylphenol	480	U UJ SSL
111-91-1	Bis(2-chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	480	U UJ SSL
91-20-3	Naphthalene	250	U
106-47-8	4-Chloroaniline	480	U
87-68-3	Hexachlorobutadiene	250	U
105-60-2	Caprolactam	250	U
59-50-7	4-Chloro-3-methylphenol	480	U UJ SSL
91-57-6	2-Methylnaphthalene	250	U
77-47-4	Hexachlorocyclopentadiene	250	U
88-06-2	2,4,6-Trichlorophenol	480	U UJ SSL
95-95-4	2,4,5-Trichlorophenol	480	U UJ SSL
92-52-4	1,1'-Biphenyl	250	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	480	U
131-11-3	Dimethylphthalate	250	U
606-20-2	2,6-Dinitrotoluene	250	U
208-96-8	Acenaphthylene	250	U
99-09-2	3-Nitroaniline	480	U
83-32-9	Acenaphthene	250	U

VM 07/10

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS06-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-08

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-08A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 31 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	480	U UJ SSL
100-02-7	4-Nitrophenol	480	U UJ SSL
121-14-2	2,4-Dinitrotoluene	250	U
132-64-9	Dibenzofuran	250	U
84-66-2	Diethylphthalate	250	U
7005-72-3	4-Chlorophenyl-phenylether	250	U
86-73-7	Fluorene	250	U
100-01-6	4-Nitroaniline	480	U
534-52-1	4,6-Dinitro-2-methylphenol	480	U UJ SSL
86-30-6	N-Nitrosodiphenylamine (1)	250	U
101-55-3	4-Bromophenyl-phenylether	250	U
118-74-1	Hexachlorobenzene	250	U
1912-24-9	Atrazine	250	U
87-86-5	Pentachlorophenol	480	U UJ SSL
85-01-8	Phenanthrene	250	U
120-12-7	Anthracene	250	U
86-74-8	Carbazole	250	U
84-74-2	Di-n-butylphthalate	250	U
206-44-0	Fluoranthene	250	U
129-00-0	Pyrene	250	U
85-68-7	Butylbenzylphthalate	250	U
91-94-1	3,3'-Dichlorobenzidine	250	U
117-81-7	bis(2-ethylhexyl)Phthalate	250 ~~190~~ J	UP SSL
56-55-3	Benzo(a)anthracene	250	U
218-01-9	Chrysene	250	U
117-84-0	Di-n-octylphthalate	250	U
205-99-2	Benzo(b)fluoranthene	250	U
207-08-9	Benzo(k)fluoranthene	250	U
50-32-8	Benzo(a)pyrene	250	U
193-39-5	Indeno(1,2,3-cd)pyrene	250	U
53-70-3	Dibenzo(a,h)anthracene	250	U
191-24-2	Benzo(g,h,i)perylene	250	U

(1) - Cannot be separated from Diphenylamine

UM 07/21/10

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS06-10ARE

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-08J

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-08JA70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 31 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	250	U
108-95-2	Phenol	480	U
111-44-4	Bis(2-chloroethyl)ether	250	U
95-57-8	2-Chlorophenol	480	U
95-48-7	2-Methylphenol	480	U
108-60-1	2,2'-oxybis(1-Chloropropane)	250	U
98-86-2	Acetophenone	250	U
106-44-5	4-Methylphenol	480	U
621-64-7	N-Nitroso-di-N-propylamine	250	U
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	480	U
105-67-9	2,4-Dimethylphenol	480	U
111-91-1	Bis(2-chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	480	U
91-20-3	Naphthalene	250	U
106-47-8	4-Chloroaniline	480	U
87-68-3	Hexachlorobutadiene	250	U
105-60-2	Caprolactam	250	U
59-50-7	4-Chloro-3-methylphenol	480	U
91-57-6	2-Methylnaphthalene	250	U
77-47-4	Hexachlorocyclopentadiene	250	U
88-06-2	2,4,6-Trichlorophenol	480	U
95-95-4	2,4,5-Trichlorophenol	480	U
92-52-4	1,1'-Biphenyl	250	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	480	U
131-11-3	Dimethylphthalate	250	U
606-20-2	2,6-Dinitrotoluene	250	U
208-96-8	Acenaphthylene	250	U
99-09-2	3-Nitroaniline	480	U
83-32-9	Acenaphthene	250	U

exclude, RE

VM 072110

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS06-10ARE

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-08J

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-08JA70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 31 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	480	U
100-02-7	4-Nitrophenol	480	U
121-14-2	2,4-Dinitrotoluene	250	U
132-64-9	Dibenzofuran	250	U
84-66-2	Diethylphthalate	250	U
7005-72-3	4-Chlorophenyl-phenylether	250	U
86-73-7	Fluorene	250	U
100-01-6	4-Nitroaniline	480	U
534-52-1	4,6-Dinitro-2-methylphenol	480	U
86-30-6	N-Nitrosodiphenylamine (1)	250	U
101-55-3	4-Bromophenyl-phenylether	250	U
118-74-1	Hexachlorobenzene	250	U
1912-24-9	Atrazine	250	U
87-86-5	Pentachlorophenol	480	U
85-01-8	Phenanthrene	250	U
120-12-7	Anthracene	250	U
86-74-8	Carbazole	250	U
84-74-2	Di-n-butylphthalate	250	U
206-44-0	Fluoranthene	250	U
129-00-0	Pyrene	250	U
85-68-7	Butylbenzylphthalate	250	U
91-94-1	3,3'-Dichlorobenzidine	250	U
117-81-7	bis(2-ethylhexyl)Phthalate	190	J
56-55-3	Benzo(a)anthracene	250	U
218-01-9	Chrysene	250	U
117-84-0	Di-n-octylphthalate	250	U
205-99-2	Benzo(b)fluoranthene	250	U
207-08-9	Benzo(k)fluoranthene	250	U
50-32-8	Benzo(a)pyrene	250	U
193-39-5	Indeno(1,2,3-cd)pyrene	250	U
53-70-3	Dibenzo(a,h)anthracene	250	U
191-24-2	Benzo(g,h,i)perylene	250	U

include, RE

(1) - Cannot be separated from Diphenylamine

WM 07/2/10

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS06-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-08

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-08A60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 31 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	2.0	J
91-57-6	2-Methylnaphthalene	1.2	J
208-96-8	Acenaphthylene	12	U
83-32-9	Acenaphthene	4.6	J
86-73-7	Fluorene	12	U
85-01-8	Phenanthrene	3.6	J
120-12-7	Anthracene	1.6	J
206-44-0	Fluoranthene	12	U
129-00-0	Pyrene	12	U
56-55-3	Benzo(a)anthracene	12	U
218-01-9	Chrysene	12	U
205-99-2	Benzo(b)fluoranthene	5.7	J
207-08-9	Benzo(k)fluoranthene	3.2	J
50-32-8	Benzo(a)pyrene	1.9	J
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	J
53-70-3	Dibenzo(a,h)anthracene	12	U
191-24-2	Benzo(g,h,i)perylene	0.64	J

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS06-10ARE

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-08

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-08JC60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 31 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	2.8	J
91-57-6	2-Methylnaphthalene	1.7	J
208-96-8	Acenaphthylene	12	U
83-32-9	Acenaphthene	3.7	J
86-73-7	Fluorene	12	U
85-01-8	Phenanthrene	4.3	J
120-12-7	Anthracene	1.0	J
206-44-0	Fluoranthene	2.2	J
129-00-0	Pyrene	1.6	J
56-55-3	Benzo(a)anthracene	0.91	J
218-01-9	Chrysene	1.9	J
205-99-2	Benzo(b)fluoranthene	3.5	J
207-08-9	Benzo(k)fluoranthene	4.0	J
50-32-8	Benzo(a)pyrene	2.3	J
193-39-5	Indeno(1,2,3-cd)pyrene	1.2	J
53-70-3	Dibenzo(a,h)anthracene	12	U
191-24-2	Benzo(g,h,i)perylene	12	U

include, RE

MM 07210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS01 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-01C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 23 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	110	J
108-95-2	Phenol	430	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	430	U
95-48-7	2-Methylphenol	430	U
108-60-1	2,2'-oxybis(1-Chloropropane)	220	U
98-86-2	Acetophenone	220	U
106-44-5	4-Methylphenol	430	U
621-64-7	N-Nitroso-di-N-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	430	U
105-67-9	2,4-Dimethylphenol	430	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	430	U
91-20-3	Naphthalene	220	U
106-47-8	4-Chloroaniline	430	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	430	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	U
88-06-2	2,4,6-Trichlorophenol	430	U
95-95-4	2,4,5-Trichlorophenol	430	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	430	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U
99-09-2	3-Nitroaniline	430	U
83-32-9	Acenaphthene	220	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS01 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 WM 07210

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-01C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 23 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	430	U
100-02-7	4-Nitrophenol	430	U
121-14-2	2,4-Dinitrotoluene	220	U
132-64-9	Dibenzofuran	220	U
84-66-2	Diethylphthalate	220	U
7005-72-3	4-Chlorophenyl-phenylether	220	U
86-73-7	Fluorene	220	U
100-01-6	4-Nitroaniline	430	U
534-52-1	4,6-Dinitro-2-methylphenol	430	~~U~~ UJ CCH
86-30-6	N-Nitrosodiphenylamine (1)	220	U
101-55-3	4-Bromophenyl-phenylether	220	~~U~~ ~~UJ CCH~~ U
118-74-1	Hexachlorobenzene	220	U
1912-24-9	Atrazine	220	U
87-86-5	Pentachlorophenol	430	U
85-01-8	Phenanthrene	220	U
120-12-7	Anthracene	220	U
86-74-8	Carbazole	220	U
84-74-2	Di-n-butylphthalate	220	U
206-44-0	Fluoranthene	220	U
129-00-0	Pyrene	220	U
85-68-7	Butylbenzylphthalate	220	U
91-94-1	3,3'-Dichlorobenzidine	220	U
117-81-7	bis(2-ethylhexyl)Phthalate	220	U
56-55-3	Benzo(a)anthracene	220	U
218-01-9	Chrysene	220	U
117-84-0	Di-n-octylphthalate	220	U
205-99-2	Benzo(b)fluoranthene	220	U
207-08-9	Benzo(k)fluoranthene	220	U
50-32-8	Benzo(a)pyrene	220	U
193-39-5	Indeno(1,2,3-cd)pyrene	220	U
53-70-3	Dibenzo(a,h)anthracene	220	U
191-24-2	Benzo(g,h,i)perylene	220	U

(1) - Cannot be separated from Diphenylamine

Corrected WM 07210

WM 07210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS01 DA

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 LM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-01A60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 23 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	2.0	J exclude, RE
91-57-6	2-Methylnaphthalene	1.7	J
208-96-8	Acenaphthylene	11	U
83-32-9	Acenaphthene	1.8	J
86-73-7	Fluorene	0.94	J
85-01-8	Phenanthrene	2.6	J
120-12-7	Anthracene	1.1	J
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
56-55-3	Benzo(a)anthracene	0.74	J
218-01-9	Chrysene	11	U
205-99-2	Benzo(b)fluoranthene	1.9	J
207-08-9	Benzo(k)fluoranthene	1.7	J
50-32-8	Benzo(a)pyrene	2.2	J
193-39-5	Indeno(1,2,3-cd)pyrene	0.86	J
53-70-3	Dibenzo(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	0.57	J

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
MR02-IR6
9-SS01RE -10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 WM 07/2/10

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-01JC60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 23 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	2.6	J
91-57-6	2-Methylnaphthalene	1.9	J
208-96-8	Acenaphthylene	11	U
83-32-9	Acenaphthene	2.1	J
86-73-7	Fluorene	1.2	J
85-01-8	Phenanthrene	3.0	J
120-12-7	Anthracene	1.4	J
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	2.0	J
56-55-3	Benzo(a)anthracene	1.8	J
218-01-9	Chrysene	1.8	J
205-99-2	Benzo(b)fluoranthene	2.1	J
207-08-9	Benzo(k)fluoranthene	2.0	J
50-32-8	Benzo(a)pyrene	4.1	J
193-39-5	Indeno(1,2,3-cd)pyrene	1.2	J
53-70-3	Dibenzo(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	0.82	J

ISH

WM 07/2/10

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS01D -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 LM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-02C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 22 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	78	J
108-95-2	Phenol	420	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	420	U
95-48-7	2-Methylphenol	420	U
108-60-1	2,2'-oxybis(1-Chloropropane)	220	U
98-86-2	Acetophenone	220	U
106-44-5	4-Methylphenol	420	U
621-64-7	N-Nitroso-di-N-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	420	U
91-20-3	Naphthalene	220	U
106-47-8	4-Chloroaniline	420	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	420	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	U
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	420	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	420	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U
99-09-2	3-Nitroaniline	420	U
83-32-9	Acenaphthene	220	U

LM 072110

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS01D -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 LM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-02C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 22 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	420	U
100-02-7	4-Nitrophenol	420	U
121-14-2	2,4-Dinitrotoluene	220	U
132-64-9	Dibenzofuran	220	U
84-66-2	Diethylphthalate	220	U
7005-72-3	4-Chlorophenyl-phenylether	220	U
86-73-7	Fluorene	220	U
100-01-6	4-Nitroaniline	420	U
534-52-1	4,6-Dinitro-2-methylphenol	420	U
86-30-6	N-Nitrosodiphenylamine (1)	220	U
101-55-3	4-Bromophenyl-phenylether	220	U
118-74-1	Hexachlorobenzene	220	U
1912-24-9	Atrazine	220	U
87-86-5	Pentachlorophenol	420	U
85-01-8	Phenanthrene	220	U
120-12-7	Anthracene	220	U
86-74-8	Carbazole	220	U
84-74-2	Di-n-butylphthalate	220	U
206-44-0	Fluoranthene	220	U
129-00-0	Pyrene	220	U
85-68-7	Butylbenzylphthalate	220	U
91-94-1	3,3'-Dichlorobenzidine	220	U
117-81-7	bis(2-ethylhexyl)Phthalate	220 ~~110~~	~~J~~ UFBL
56-55-3	Benzo(a)anthracene	220	U
218-01-9	Chrysene	220	U
117-84-0	Di-n-octylphthalate	220	U
205-99-2	Benzo(b)fluoranthene	220	U
207-08-9	Benzo(k)fluoranthene	220	U
50-32-8	Benzo(a)pyrene	220	U
193-39-5	Indeno(1,2,3-cd)pyrene	220	U
53-70-3	Dibenzo(a,h)anthracene	220	U
191-24-2	Benzo(g,h,i)perylene	220	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

1 corrections LM 072110

LM 072110

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS01D

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-02A60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 22 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	1.7	J
91-57-6	2-Methylnaphthalene	1.4	J
208-96-8	Acenaphthylene	0.93	J
83-32-9	Acenaphthene	1.8	J
86-73-7	Fluorene	0.99	J
85-01-8	Phenanthrene	3.9	J
120-12-7	Anthracene	1.1	J
206-44-0	Fluoranthene	3.9	J
129-00-0	Pyrene	3.5	J
56-55-3	Benzo(a)anthracene	3.2	J
218-01-9	Chrysene	2.1	J
205-99-2	Benzo(b)fluoranthene	2.0	J
207-08-9	Benzo(k)fluoranthene	1.8	J
50-32-8	Benzo(a)pyrene	3.7	J
193-39-5	Indeno(1,2,3-cd)pyrene	0.97	J
53-70-3	Dibenzo(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	0.62	J

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS02-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-16

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-16A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 17 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	74	J
108-95-2	Phenol	400	U
111-44-4	Bis(2-chloroethyl)ether	200	U
95-57-8	2-Chlorophenol	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	200	U
98-86-2	Acetophenone	200	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-di-N-propylamine	200	U
67-72-1	Hexachloroethane	200	U
98-95-3	Nitrobenzene	200	U
78-59-1	Isophorone	200	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	Bis(2-chloroethoxy)methane	200	U
120-83-2	2,4-Dichlorophenol	400	U
91-20-3	Naphthalene	200	U
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	200	U
105-60-2	Caprolactam	200	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	200	U
77-47-4	Hexachlorocyclopentadiene	200	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	400	U
92-52-4	1,1'-Biphenyl	200	U
91-58-7	2-Chloronaphthalene	200	U
88-74-4	2-Nitroaniline	400	U
131-11-3	Dimethylphthalate	200	U
606-20-2	2,6-Dinitrotoluene	200	U
208-96-8	Acenaphthylene	200	U
99-09-2	3-Nitroaniline	400	U
83-32-9	Acenaphthene	200	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS02 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-16

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-16A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 17 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	400	U
100-02-7	4-Nitrophenol	400	U
121-14-2	2,4-Dinitrotoluene	200	U
132-64-9	Dibenzofuran	200	U
84-66-2	Diethylphthalate	200	U
7005-72-3	4-Chlorophenyl-phenylether	200	U
86-73-7	Fluorene	200	U
100-01-6	4-Nitroaniline	400	U
534-52-1	4,6-Dinitro-2-methylphenol	400	U
86-30-6	N-Nitrosodiphenylamine (1)	200	U
101-55-3	4-Bromophenyl-phenylether	200	U
118-74-1	Hexachlorobenzene	200	U
1912-24-9	Atrazine	200	U
87-86-5	Pentachlorophenol	400	U
85-01-8	Phenanthrene	200	U
120-12-7	Anthracene	200	U
86-74-8	Carbazole	200	U
84-74-2	Di-n-butylphthalate	200	U
206-44-0	Fluoranthene	200	U
129-00-0	Pyrene	200	U
85-68-7	Butylbenzylphthalate	200	U
91-94-1	3,3'-Dichlorobenzidine	200	U
117-81-7	bis(2-ethylhexyl)Phthalate	200	U
56-55-3	Benzo(a)anthracene	200	U
218-01-9	Chrysene	200	U
117-84-0	Di-n-octylphthalate	200	U
205-99-2	Benzo(b)fluoranthene	200	U
207-08-9	Benzo(k)fluoranthene	200	U
50-32-8	Benzo(a)pyrene	200	U
193-39-5	Indeno(1,2,3-cd)pyrene	200	U
53-70-3	Dibenzo(a,h)anthracene	200	U
191-24-2	Benzo(g,h,i)perylene	200	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS02 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-16

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-16C60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 17 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	~~2.3~~ 10	~~J~~ B
91-57-6	2-Methylnaphthalene	2.0	J
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	0.80	J
86-73-7	Fluorene	0.59	J
85-01-8	Phenanthrene	3.2	J
120-12-7	Anthracene	0.68	J
206-44-0	Fluoranthene	4.1	J
129-00-0	Pyrene	3.5	J
56-55-3	Benzo(a)anthracene	3.0	J
218-01-9	Chrysene	3.0	J
205-99-2	Benzo(b)fluoranthene	3.2	J
207-08-9	Benzo(k)fluoranthene	2.8	J
50-32-8	Benzo(a)pyrene	1.8	J
193-39-5	Indeno(1,2,3-cd)pyrene	0.86	J
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS04 10A

ab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-17

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-17A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 22 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	91	J
108-95-2	Phenol	420	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	420	U
95-48-7	2-Methylphenol	420	U
108-60-1	2,2'-oxybis(1-Chloropropane)	220	U
98-86-2	Acetophenone	220	U
106-44-5	4-Methylphenol	420	U
621-64-7	N-Nitroso-di-N-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	420	U
91-20-3	Naphthalene	220	U
106-47-8	4-Chloroaniline	420	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	420	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	U
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	420	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	420	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U
99-09-2	3-Nitroaniline	420	U
83-32-9	Acenaphthene	220	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS04 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-17

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-17A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 22 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	420	U
100-02-7	4-Nitrophenol	420	U
121-14-2	2,4-Dinitrotoluene	220	U
132-64-9	Dibenzofuran	220	U
84-66-2	Diethylphthalate	220	U
7005-72-3	4-Chlorophenyl-phenylether	220	U
86-73-7	Fluorene	220	U
100-01-6	4-Nitroaniline	420	U
534-52-1	4,6-Dinitro-2-methylphenol	420	U
86-30-6	N-Nitrosodiphenylamine (1)	220	U
101-55-3	4-Bromophenyl-phenylether	220	U
118-74-1	Hexachlorobenzene	220	U
1912-24-9	Atrazine	220	U
87-86-5	Pentachlorophenol	420	U
85-01-8	Phenanthrene	220	U
120-12-7	Anthracene	220	U
86-74-8	Carbazole	220	U
84-74-2	Di-n-butylphthalate	220	U
206-44-0	Fluoranthene	220	U
129-00-0	Pyrene	220	U
85-68-7	Butylbenzylphthalate	220	U
91-94-1	3,3'-Dichlorobenzidine	220	U
117-81-7	bis(2-ethylhexyl)Phthalate	200	J
56-55-3	Benzo(a)anthracene	220	U
218-01-9	Chrysene	220	U
117-84-0	Di-n-octylphthalate	220	U
205-99-2	Benzo(b)fluoranthene	220	U
207-08-9	Benzo(k)fluoranthene	220	U
50-32-8	Benzo(a)pyrene	220	U
193-39-5	Indeno(1,2,3-cd)pyrene	220	U
53-70-3	Dibenzo(a,h)anthracene	220	U
191-24-2	Benzo(g,h,i)perylene	220	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS04 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-17

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-17C60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 22 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	~~3.4~~	~~J~~ B
91-57-6	2-Methylnaphthalene	11	U
208-96-8	Acenaphthylene	1.1	J
83-32-9	Acenaphthene	1.8	J
86-73-7	Fluorene	1.1	J
85-01-8	Phenanthrene	5.5	J
120-12-7	Anthracene	1.6	J
206-44-0	Fluoranthene	5.7	J
129-00-0	Pyrene	4.4	J
56-55-3	Benzo(a)anthracene	2.1	J
218-01-9	Chrysene	4.2	J
205-99-2	Benzo(b)fluoranthene	4.9	J
207-08-9	Benzo(k)fluoranthene	3.9	J
50-32-8	Benzo(a)pyrene	7.3	J
193-39-5	Indeno(1,2,3-cd)pyrene	11	U
53-70-3	Dibenzo(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	11	U

J ISM

04/26/10

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR6
9-SS04RE -10 A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-17

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-17JC60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 22 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	3.2	JB
91-57-6	2-Methylnaphthalene	2.0	J
208-96-8	Acenaphthylene	1.1	J
83-32-9	Acenaphthene	1.7	J
86-73-7	Fluorene	0.83	J
85-01-8	Phenanthrene	5.1	J
120-12-7	Anthracene	2.0	J
206-44-0	Fluoranthene	6.4	J
129-00-0	Pyrene	4.9	J
56-55-3	Benzo(a)anthracene	2.2	J
218-01-9	Chrysene	4.6	J
205-99-2	Benzo(b)fluoranthene	5.9	J
207-08-9	Benzo(k)fluoranthene	3.7	J
50-32-8	Benzo(a)pyrene	8.7	J
193-39-5	Indeno(1,2,3-cd)pyrene	11	U
53-70-3	Dibenzo(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	11	U

exclude, RE SW 04/26/10

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS05-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-18

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-18A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 16 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	36	J
108-95-2	Phenol	390	U
111-44-4	Bis(2-chloroethyl)ether	200	U
95-57-8	2-Chlorophenol	390	U
95-48-7	2-Methylphenol	390	U
108-60-1	2,2'-oxybis(1-Chloropropane)	200	U
98-86-2	Acetophenone	200	U
106-44-5	4-Methylphenol	390	U
621-64-7	N-Nitroso-di-N-propylamine	200	U
67-72-1	Hexachloroethane	200	U
98-95-3	Nitrobenzene	200	U
78-59-1	Isophorone	200	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	Bis(2-chloroethoxy)methane	200	U
120-83-2	2,4-Dichlorophenol	390	U
91-20-3	Naphthalene	200	U
106-47-8	4-Chloroaniline	390	U
87-68-3	Hexachlorobutadiene	200	U
105-60-2	Caprolactam	200	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	200	U
77-47-4	Hexachlorocyclopentadiene	200	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	390	U
92-52-4	1,1'-Biphenyl	200	U
91-58-7	2-Chloronaphthalene	200	U
88-74-4	2-Nitroaniline	390	U
131-11-3	Dimethylphthalate	200	U
606-20-2	2,6-Dinitrotoluene	200	U
208-96-8	Acenaphthylene	200	U
99-09-2	3-Nitroaniline	390	U
83-32-9	Acenaphthene	200	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS05 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-18

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-18A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 16 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	390	U
100-02-7	4-Nitrophenol	390	U
121-14-2	2,4-Dinitrotoluene	200	U
132-64-9	Dibenzofuran	200	U
84-66-2	Diethylphthalate	200	U
7005-72-3	4-Chlorophenyl-phenylether	200	U
86-73-7	Fluorene	200	U
100-01-6	4-Nitroaniline	390	U
534-52-1	4,6-Dinitro-2-methylphenol	390	U
86-30-6	N-Nitrosodiphenylamine (1)	200	U
101-55-3	4-Bromophenyl-phenylether	200	U UJ CKH
118-74-1	Hexachlorobenzene	200	U
1912-24-9	Atrazine	200	U
87-86-5	Pentachlorophenol	390	U
85-01-8	Phenanthrene	200	U
120-12-7	Anthracene	200	U
86-74-8	Carbazole	200	U
84-74-2	Di-n-butylphthalate	200	U
206-44-0	Fluoranthene	200	U
129-00-0	Pyrene	200	U
85-68-7	Butylbenzylphthalate	200	U
91-94-1	3,3'-Dichlorobenzidine	200	U
117-81-7	bis(2-ethylhexyl)Phthalate	200	U
56-55-3	Benzo(a)anthracene	200	U
218-01-9	Chrysene	200	U
117-84-0	Di-n-octylphthalate	200	U
205-99-2	Benzo(b)fluoranthene	200	U
207-08-9	Benzo(k)fluoranthene	200	U
50-32-8	Benzo(a)pyrene	200	U
193-39-5	Indeno(1,2,3-cd)pyrene	200	U
53-70-3	Dibenzo(a,h)anthracene	200	U
191-24-2	Benzo(g,h,i)perylene	200	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS05 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-18

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-18C60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 16 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	~~3.2~~ 9.9	~~J~~ B
91-57-6	2-Methylnaphthalene	1.9	J
208-96-8	Acenaphthylene	9.9	U
83-32-9	Acenaphthene	2.3	J
86-73-7	Fluorene	0.56	J
85-01-8	Phenanthrene	4.4	J
120-12-7	Anthracene	9.9	U
206-44-0	Fluoranthene	3.9	J
129-00-0	Pyrene	2.8	J
56-55-3	Benzo(a)anthracene	1.0	J
218-01-9	Chrysene	2.6	J
205-99-2	Benzo(b)fluoranthene	2.7	J
207-08-9	Benzo(k)fluoranthene	1.9	J
50-32-8	Benzo(a)pyrene	1.6	J
193-39-5	Indeno(1,2,3-cd)pyrene	9.9	U
53-70-3	Dibenzo(a,h)anthracene	9.9	U
191-24-2	Benzo(g,h,i)perylene	9.9	U

UM 07/2/10 SAK 04/26/10

UM 07/2/10

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS06 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-19

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-19A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 20 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	170	J
108-95-2	Phenol	410	U
111-44-4	Bis(2-chloroethyl)ether	210	U
95-57-8	2-Chlorophenol	410	U
95-48-7	2-Methylphenol	410	U
108-60-1	2,2'-oxybis(1-Chloropropane)	210	U
98-86-2	Acetophenone	210	U
106-44-5	4-Methylphenol	410	U
621-64-7	N-Nitroso-di-N-propylamine	210	U
67-72-1	Hexachloroethane	210	U
98-95-3	Nitrobenzene	210	U
78-59-1	Isophorone	210	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	Bis(2-chloroethoxy)methane	210	U
120-83-2	2,4-Dichlorophenol	410	U
91-20-3	Naphthalene	210	U
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	210	U
105-60-2	Caprolactam	210	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	210	U
77-47-4	Hexachlorocyclopentadiene	210	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	410	U
92-52-4	1,1'-Biphenyl	210	U
91-58-7	2-Chloronaphthalene	210	U
88-74-4	2-Nitroaniline	410	U
131-11-3	Dimethylphthalate	210	U
606-20-2	2,6-Dinitrotoluene	210	U
208-96-8	Acenaphthylene	210	U
99-09-2	3-Nitroaniline	410	U
83-32-9	Acenaphthene	210	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS06 ICA

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-19

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-19A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 20 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	410	U
100-02-7	4-Nitrophenol	410	U
121-14-2	2,4-Dinitrotoluene	210	U
132-64-9	Dibenzofuran	210	U
84-66-2	Diethylphthalate	210	U
7005-72-3	4-Chlorophenyl-phenylether	210	U
86-73-7	Fluorene	210	U
100-01-6	4-Nitroaniline	410	U
534-52-1	4,6-Dinitro-2-methylphenol	410	U
86-30-6	N-Nitrosodiphenylamine (1)	210	U
101-55-3	4-Bromophenyl-phenylether	210	U
118-74-1	Hexachlorobenzene	210	U
1912-24-9	Atrazine	210	U
87-86-5	Pentachlorophenol	410	U
85-01-8	Phenanthrene	210	U
120-12-7	Anthracene	210	U
86-74-8	Carbazole	210	U
84-74-2	Di-n-butylphthalate	210	U
206-44-0	Fluoranthene	210	U
129-00-0	Pyrene	210	U
85-68-7	Butylbenzylphthalate	210	U
91-94-1	3,3'-Dichlorobenzidine	210	U
117-81-7	bis(2-ethylhexyl)Phthalate	310	
56-55-3	Benzo(a)anthracene	210	U
218-01-9	Chrysene	210	U
117-84-0	Di-n-octylphthalate	210	U
205-99-2	Benzo(b)fluoranthene	210	U
207-08-9	Benzo(k)fluoranthene	210	U
50-32-8	Benzo(a)pyrene	210	U
193-39-5	Indeno(1,2,3-cd)pyrene	210	U
53-70-3	Dibenzo(a,h)anthracene	210	U
191-24-2	Benzo(g,h,i)perylene	210	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS06 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-19

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-19C60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 20 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	5.3	J B
91-57-6	2-Methylnaphthalene	3.5	J
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	1.6	J
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	5.7	J
120-12-7	Anthracene	1.6	J
206-44-0	Fluoranthene	4.4	J
129-00-0	Pyrene	2.9	J
56-55-3	Benzo(a)anthracene	0.96	J
218-01-9	Chrysene	3.3	J
205-99-2	Benzo(b)fluoranthene	6.6	J
207-08-9	Benzo(k)fluoranthene	4.5	J
50-32-8	Benzo(a)pyrene	2.5	J
193-39-5	Indeno(1,2,3-cd)pyrene	0.90	J
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	0.65	J

Exceeded RL 04/26/10

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR6
9-SS06RE -10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-19

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-19JA60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 20 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	10 ~~5.7~~	~~JB~~ U
91-57-6	2-Methylnaphthalene	3.6	J
208-96-8	Acenaphthylene	1.1	J
83-32-9	Acenaphthene	1.5	J
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	6.0	J
120-12-7	Anthracene	1.7	J
206-44-0	Fluoranthene	4.0	J
129-00-0	Pyrene	2.7	J
56-55-3	Benzo(a)anthracene	0.81	J
218-01-9	Chrysene	3.4	J
205-99-2	Benzo(b)fluoranthene	6.2	J
207-08-9	Benzo(k)fluoranthene	3.3	J
50-32-8	Benzo(a)pyrene	1.8	J
193-39-5	Indeno(1,2,3-cd)pyrene	2.1	J
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	1.7	J

SH 04/26/10

J ISH

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB01-01-02 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-12

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-12A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 20 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	210	U
108-95-2	Phenol	410	U
111-44-4	Bis(2-chloroethyl)ether	210	U
95-57-8	2-Chlorophenol	410	U
95-48-7	2-Methylphenol	410	U
108-60-1	2,2'-oxybis(1-Chloropropane)	210	U
98-86-2	Acetophenone	210	U
106-44-5	4-Methylphenol	410	U
621-64-7	N-Nitroso-di-N-propylamine	210	U
67-72-1	Hexachloroethane	210	U
98-95-3	Nitrobenzene	210	U
78-59-1	Isophorone	210	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	Bis(2-chloroethoxy)methane	210	U
120-83-2	2,4-Dichlorophenol	410	U
91-20-3	Naphthalene	210	U
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	210	U
105-60-2	Caprolactam	210	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	210	U
77-47-4	Hexachlorocyclopentadiene	210	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	410	U
92-52-4	1,1'-Biphenyl	210	U
91-58-7	2-Chloronaphthalene	210	U
88-74-4	2-Nitroaniline	410	U
131-11-3	Dimethylphthalate	210	U
606-20-2	2,6-Dinitrotoluene	210	U
208-96-8	Acenaphthylene	210	U
99-09-2	3-Nitroaniline	410	U
83-32-9	Acenaphthene	210	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB01-01-02-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-12

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-12A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 20 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	410	U
100-02-7	4-Nitrophenol	410	U
121-14-2	2,4-Dinitrotoluene	210	U
132-64-9	Dibenzofuran	210	U
84-66-2	Diethylphthalate	210	U
7005-72-3	4-Chlorophenyl-phenylether	210	U
86-73-7	Fluorene	210	U
100-01-6	4-Nitroaniline	410	U
534-52-1	4,6-Dinitro-2-methylphenol	410	U
86-30-6	N-Nitrosodiphenylamine (1)	210	U
101-55-3	4-Bromophenyl-phenylether	210	U
118-74-1	Hexachlorobenzene	210	U
1912-24-9	Atrazine	210	U
87-86-5	Pentachlorophenol	410	U
85-01-8	Phenanthrene	210	U
120-12-7	Anthracene	210	U
86-74-8	Carbazole	210	U
84-74-2	Di-n-butylphthalate	210	U
206-44-0	Fluoranthene	210	U
129-00-0	Pyrene	210	U
85-68-7	Butylbenzylphthalate	210	U
91-94-1	3,3'-Dichlorobenzidine	210	U
117-81-7	bis(2-ethylhexyl)Phthalate	210	U
56-55-3	Benzo(a)anthracene	210	U
218-01-9	Chrysene	210	U
117-84-0	Di-n-octylphthalate	210	U
205-99-2	Benzo(b)fluoranthene	210	U
207-08-9	Benzo(k)fluoranthene	210	U
50-32-8	Benzo(a)pyrene	210	U
193-39-5	Indeno(1,2,3-cd)pyrene	210	U
53-70-3	Dibenzo(a,h)anthracene	210	U
191-24-2	Benzo(g,h,i)perylene	210	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB01-01-02 -10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-12

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-12A60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 20 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	10	U
91-57-6	2-Methylnaphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB01D-01-02

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-13

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-13A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 16 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	200	U
108-95-2	Phenol	390	U
111-44-4	Bis(2-chloroethyl)ether	200	U
95-57-8	2-Chlorophenol	390	U
95-48-7	2-Methylphenol	390	U
108-60-1	2,2'-oxybis(1-Chloropropane)	200	U
98-86-2	Acetophenone	200	U
106-44-5	4-Methylphenol	390	U
621-64-7	N-Nitroso-di-N-propylamine	200	U
67-72-1	Hexachloroethane	200	U
98-95-3	Nitrobenzene	200	U
78-59-1	Isophorone	200	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	Bis(2-chloroethoxy)methane	200	U
120-83-2	2,4-Dichlorophenol	390	U
91-20-3	Naphthalene	200	U
106-47-8	4-Chloroaniline	390	U
87-68-3	Hexachlorobutadiene	200	U
105-60-2	Caprolactam	200	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	200	U
77-47-4	Hexachlorocyclopentadiene	200	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	390	U
92-52-4	1,1'-Biphenyl	200	U
91-58-7	2-Chloronaphthalene	200	U
88-74-4	2-Nitroaniline	390	U
131-11-3	Dimethylphthalate	200	U
606-20-2	2,6-Dinitrotoluene	200	U
208-96-8	Acenaphthylene	200	U
99-09-2	3-Nitroaniline	390	U
83-32-9	Acenaphthene	200	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB01D-01-02-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-13

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-13A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 16 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	390	U
100-02-7	4-Nitrophenol	390	U
121-14-2	2,4-Dinitrotoluene	200	U
132-64-9	Dibenzofuran	200	U
84-66-2	Diethylphthalate	200	U
7005-72-3	4-Chlorophenyl-phenylether	200	U
86-73-7	Fluorene	200	U
100-01-6	4-Nitroaniline	390	U
534-52-1	4,6-Dinitro-2-methylphenol	390	U
86-30-6	N-Nitrosodiphenylamine (1)	200	U
101-55-3	4-Bromophenyl-phenylether	200	U
118-74-1	Hexachlorobenzene	200	U
1912-24-9	Atrazine	200	U
87-86-5	Pentachlorophenol	390	U
85-01-8	Phenanthrene	200	U
120-12-7	Anthracene	200	U
86-74-8	Carbazole	200	U
84-74-2	Di-n-butylphthalate	200	U
206-44-0	Fluoranthene	200	U
129-00-0	Pyrene	200	U
85-68-7	Butylbenzylphthalate	200	U
91-94-1	3,3'-Dichlorobenzidine	200	U
117-81-7	bis(2-ethylhexyl)Phthalate	200	U
56-55-3	Benzo(a)anthracene	200	U
218-01-9	Chrysene	200	U
117-84-0	Di-n-octylphthalate	200	U
205-99-2	Benzo(b)fluoranthene	200	U
207-08-9	Benzo(k)fluoranthene	200	U
50-32-8	Benzo(a)pyrene	200	U
193-39-5	Indeno(1,2,3-cd)pyrene	200	U
53-70-3	Dibenzo(a,h)anthracene	200	U
191-24-2	Benzo(g,h,i)perylene	200	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB01D-01-02-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-13

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-13A60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 16 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	9.9	U
91-57-6	2-Methylnaphthalene	9.9	U
208-96-8	Acenaphthylene	9.9	U
83-32-9	Acenaphthene	9.9	U
86-73-7	Fluorene	9.9	U
85-01-8	Phenanthrene	9.9	U
120-12-7	Anthracene	9.9	U
206-44-0	Fluoranthene	9.9	U
129-00-0	Pyrene	9.9	U
56-55-3	Benzo(a)anthracene	9.9	U
218-01-9	Chrysene	9.9	U
205-99-2	Benzo(b)fluoranthene	9.9	U
207-08-9	Benzo(k)fluoranthene	0.52	J
50-32-8	Benzo(a)pyrene	9.9	U
193-39-5	Indeno(1,2,3-cd)pyrene	9.9	U
53-70-3	Dibenzo(a,h)anthracene	9.9	U
191-24-2	Benzo(g,h,i)perylene	9.9	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB04-06-07-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-09A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 22 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	220	U
108-95-2	Phenol	420	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	420	U
95-48-7	2-Methylphenol	420	U
108-60-1	2,2'-oxybis(1-Chloropropane)	220	U
98-86-2	Acetophenone	220	U
106-44-5	4-Methylphenol	420	U
621-64-7	N-Nitroso-di-N-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	420	U
91-20-3	Naphthalene	220	U
106-47-8	4-Chloroaniline	420	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	61	J
59-50-7	4-Chloro-3-methylphenol	420	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	U
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	420	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	420	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U
99-09-2	3-Nitroaniline	420	U
83-32-9	Acenaphthene	220	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB04-06-07

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-09A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 22 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	420	U
100-02-7	4-Nitrophenol	420	U
121-14-2	2,4-Dinitrotoluene	220	U
132-64-9	Dibenzofuran	220	U
84-66-2	Diethylphthalate	220	U
7005-72-3	4-Chlorophenyl-phenylether	220	U
86-73-7	Fluorene	220	U
100-01-6	4-Nitroaniline	420	U
534-52-1	4,6-Dinitro-2-methylphenol	420	U
86-30-6	N-Nitrosodiphenylamine (1)	220	U
101-55-3	4-Bromophenyl-phenylether	220	U
118-74-1	Hexachlorobenzene	220	U
1912-24-9	Atrazine	220	U
87-86-5	Pentachlorophenol	420	U
85-01-8	Phenanthrene	220	U
120-12-7	Anthracene	220	U
86-74-8	Carbazole	220	U
84-74-2	Di-n-butylphthalate	220	U
206-44-0	Fluoranthene	220	U
129-00-0	Pyrene	220	U
85-68-7	Butylbenzylphthalate	220	U
91-94-1	3,3'-Dichlorobenzidine	220	U
117-81-7	bis(2-ethylhexyl)Phthalate	220	U
56-55-3	Benzo(a)anthracene	220	U
218-01-9	Chrysene	220	U
117-84-0	Di-n-octylphthalate	220	U
205-99-2	Benzo(b)fluoranthene	220	U
207-08-9	Benzo(k)fluoranthene	220	U
50-32-8	Benzo(a)pyrene	220	U
193-39-5	Indeno(1,2,3-cd)pyrene	220	U
53-70-3	Dibenzo(a,h)anthracene	220	U
191-24-2	Benzo(g,h,i)perylene	220	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB04-06-07-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-09A60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 22 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	11	U
91-57-6	2-Methylnaphthalene	11	U
208-96-8	Acenaphthylene	11	U
83-32-9	Acenaphthene	11	U
86-73-7	Fluorene	11	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
56-55-3	Benzo(a)anthracene	11	U
218-01-9	Chrysene	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)fluoranthene	11	U
50-32-8	Benzo(a)pyrene	11	U
193-39-5	Indeno(1,2,3-cd)pyrene	11	U
53-70-3	Dibenzo(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	11	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB05-06-07 -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-10A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 31 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	250	U
108-95-2	Phenol	480	U
111-44-4	Bis(2-chloroethyl)ether	250	U
95-57-8	2-Chlorophenol	480	U
95-48-7	2-Methylphenol	480	U
108-60-1	2,2'-oxybis(1-Chloropropane)	250	U
98-86-2	Acetophenone	250	U
106-44-5	4-Methylphenol	480	U
621-64-7	N-Nitroso-di-N-propylamine	250	U
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	480	U
105-67-9	2,4-Dimethylphenol	480	U
111-91-1	Bis(2-chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	480	U
91-20-3	Naphthalene	250	U
106-47-8	4-Chloroaniline	480	U
87-68-3	Hexachlorobutadiene	250	U
105-60-2	Caprolactam	150	J
59-50-7	4-Chloro-3-methylphenol	480	U
91-57-6	2-Methylnaphthalene	250	U
77-47-4	Hexachlorocyclopentadiene	250	U
88-06-2	2,4,6-Trichlorophenol	480	U
95-95-4	2,4,5-Trichlorophenol	480	U
92-52-4	1,1'-Biphenyl	250	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	480	U
131-11-3	Dimethylphthalate	250	U
606-20-2	2,6-Dinitrotoluene	250	U
208-96-8	Acenaphthylene	250	U
99-09-2	3-Nitroaniline	480	U
83-32-9	Acenaphthene	250	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB05-06-07-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-10A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 31 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	480	U
100-02-7	4-Nitrophenol	480	U
121-14-2	2,4-Dinitrotoluene	250	U
132-64-9	Dibenzofuran	250	U
84-66-2	Diethylphthalate	250	U
7005-72-3	4-Chlorophenyl-phenylether	250	U
86-73-7	Fluorene	250	U
100-01-6	4-Nitroaniline	480	U
534-52-1	4,6-Dinitro-2-methylphenol	480	U
86-30-6	N-Nitrosodiphenylamine (1)	250	U
101-55-3	4-Bromophenyl-phenylether	250	U
118-74-1	Hexachlorobenzene	250	U
1912-24-9	Atrazine	250	U
87-86-5	Pentachlorophenol	480	U
85-01-8	Phenanthrene	250	U
120-12-7	Anthracene	250	U
86-74-8	Carbazole	250	U
84-74-2	Di-n-butylphthalate	250	U
206-44-0	Fluoranthene	250	U
129-00-0	Pyrene	250	U
85-68-7	Butylbenzylphthalate	250	U
91-94-1	3,3'-Dichlorobenzidine	250	U
117-81-7	bis(2-ethylhexyl)Phthalate	540	
56-55-3	Benzo(a)anthracene	250	U
218-01-9	Chrysene	250	U
117-84-0	Di-n-octylphthalate	250	U
205-99-2	Benzo(b)fluoranthene	250	U
207-08-9	Benzo(k)fluoranthene	250	U
50-32-8	Benzo(a)pyrene	250	U
193-39-5	Indeno(1,2,3-cd)pyrene	250	U
53-70-3	Dibenzo(a,h)anthracene	250	U
191-24-2	Benzo(g,h,i)perylene	250	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB05-06-07 -10A

Lab Name: COMPUCHEM Method: 8270C-SIM IR69

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-10 VM 072110

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-10A60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 31 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	12	U
91-57-6	2-Methylnaphthalene	12	U
208-96-8	Acenaphthylene	12	U
83-32-9	Acenaphthene	12	U
86-73-7	Fluorene	12	U
85-01-8	Phenanthrene	12	U
120-12-7	Anthracene	12	U
206-44-0	Fluoranthene	12	U
129-00-0	Pyrene	12	U
56-55-3	Benzo(a)anthracene	12	U
218-01-9	Chrysene	12	U
205-99-2	Benzo(b)fluoranthene	12	U
207-08-9	Benzo(k)fluoranthene	12	U
50-32-8	Benzo(a)pyrene	12	U
193-39-5	Indeno(1,2,3-cd)pyrene	12	U
53-70-3	Dibenzo(a,h)anthracene	12	U
191-24-2	Benzo(g,h,i)perylene	12	U

VM 072110

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB06-06-07 -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-11J

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-11JA70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 23 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	220	U
108-95-2	Phenol	430	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	430	U
95-48-7	2-Methylphenol	430	U
108-60-1	2,2'-oxybis(1-Chloropropane)	220	U
98-86-2	Acetophenone	220	U
106-44-5	4-Methylphenol	430	U
621-64-7	N-Nitroso-di-N-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	430	U
105-67-9	2,4-Dimethylphenol	430	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	430	U
91-20-3	Naphthalene	220	U
106-47-8	4-Chloroaniline	430	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	430	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	U
88-06-2	2,4,6-Trichlorophenol	430	U
95-95-4	2,4,5-Trichlorophenol	430	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	430	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U
99-09-2	3-Nitroaniline	430	U
83-32-9	Acenaphthene	220	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB06-06-07 -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-11J

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-11JA70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 23 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	430	U
100-02-7	4-Nitrophenol	430	U
121-14-2	2,4-Dinitrotoluene	220	U
132-64-9	Dibenzofuran	220	U
84-66-2	Diethylphthalate	220	U
7005-72-3	4-Chlorophenyl-phenylether	220	U
86-73-7	Fluorene	220	U
100-01-6	4-Nitroaniline	430	U
534-52-1	4,6-Dinitro-2-methylphenol	430	U
86-30-6	N-Nitrosodiphenylamine (1)	220	U
101-55-3	4-Bromophenyl-phenylether	220	U
118-74-1	Hexachlorobenzene	220	U
1912-24-9	Atrazine	220	U
87-86-5	Pentachlorophenol	430	U
85-01-8	Phenanthrene	220	U
120-12-7	Anthracene	220	U
86-74-8	Carbazole	220	U
84-74-2	Di-n-butylphthalate	220	U
206-44-0	Fluoranthene	220	U
129-00-0	Pyrene	220	U
85-68-7	Butylbenzylphthalate	220	U
91-94-1	3,3'-Dichlorobenzidine	220	U
117-81-7	bis(2-ethylhexyl)Phthalate	220	U
56-55-3	Benzo(a)anthracene	220	U
218-01-9	Chrysene	220	U
117-84-0	Di-n-octylphthalate	220	U
205-99-2	Benzo(b)fluoranthene	220	U
207-08-9	Benzo(k)fluoranthene	220	U
50-32-8	Benzo(a)pyrene	220	U
193-39-5	Indeno(1,2,3-cd)pyrene	220	U
53-70-3	Dibenzo(a,h)anthracene	220	U
191-24-2	Benzo(g,h,i)perylene	220	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB06-06-07 -10A

Lab Name: COMPUCHEM Method: 8270C-SIM IRM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-11 WM 072110

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-11A60

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 23 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	11	U
91-57-6	2-Methylnaphthalene	11	U
208-96-8	Acenaphthylene	11	U
83-32-9	Acenaphthene	11	U
86-73-7	Fluorene	11	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
56-55-3	Benzo(a)anthracene	11	U
218-01-9	Chrysene	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)fluoranthene	11	U
50-32-8	Benzo(a)pyrene	11	U
193-39-5	Indeno(1,2,3-cd)pyrene	11	U
53-70-3	Dibenzo(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	11	U

WM 072110

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MR02-IR69-SS01

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 23 decanted: (Y/N) N Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/30/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	~~2.2~~	~~U~~ exclude RE
319-85-7	beta-BHC	0.62	JP
319-84-6	alpha-BHC	0.69	JP
319-86-8	delta-BHC	2.2	U
58-89-9	gamma-BHC (Lindane)	2.2	U
72-54-8	4,4'-DDD	4.3	U
72-55-9	4,4'-DDE	48	E
50-29-3	4,4'-DDT	24	
60-57-1	Dieldrin	4.3	U
959-98-8	Endosulfan I	0.61	JP
33213-65-9	Endosulfan II	4.3	U
1031-07-8	Endosulfan sulfate	6.5	
72-20-8	Endrin	4.3	U
7421-93-4	Endrin Aldehyde	0.51	JP
76-44-8	Heptachlor	0.53	J
1024-57-3	Heptachlor Epoxide	2.2	U
72-43-5	Methoxychlor	22	U
8001-35-2	Toxaphene	110	U
12674-11-2	Aroclor-1016	31	U
11104-28-2	Aroclor-1221	44	U
11141-16-5	Aroclor-1232	22	U
53469-21-9	Aroclor-1242	22	U
12672-29-6	Aroclor-1248	22	U
11097-69-1	Aroclor-1254	22	U
11096-82-5	Aroclor-1260	22	U
53494-70-5	Endrin Ketone	3.9	JP
5103-74-2	gamma-Chlordane	2.2	U
5103-71-9	alpha-Chlordane	~~1.5~~	~~JP~~

FORM I PEST

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1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MR02-IR6
9-SS01DL -10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-01RE1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 23 decanted: (Y/N) N Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/02/10

Injection Volume: 1.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	11	U
319-85-7	beta-BHC	5.5	~~U~~ UJ CCL
319-84-6	alpha-BHC	1.4	~~DJP~~ J CCL
319-86-8	delta-BHC	11	~~U~~ UJ CCL
58-89-9	gamma-BHC (Lindane)	11	U
72-54-8	4,4'-DDD	21	~~U~~ UJ OT
72-55-9	4,4'-DDE	73	~~D~~ NJ OT
50-29-3	4,4'-DDT	36	~~D~~ J OT
60-57-1	Dieldrin	21	U
959-98-8	Endosulfan I	11	U
33213-65-9	Endosulfan II	21	U
1031-07-8	Endosulfan sulfate	21	U
72-20-8	Endrin	21	U
7421-93-4	Endrin Aldehyde	21	U
76-44-8	Heptachlor	11	U
1024-57-3	Heptachlor Epoxide	11	U
72-43-5	Methoxychlor	110	~~U~~ UJ CCL
8001-35-2	Toxaphene	540	U
12674-11-2	Aroclor-1016	160	U
11104-28-2	Aroclor-1221	220	U
11141-16-5	Aroclor-1232	110	U
53469-21-9	Aroclor-1242	110	U
12672-29-6	Aroclor-1248	110	U
11097-69-1	Aroclor-1254	110	U
11096-82-5	Aroclor-1260	110	U
53494-70-5	Endrin Ketone	7.2	~~DJP~~ J 2C
5103-74-2	gamma-Chlordane	11	U
5103-71-9	alpha-Chlordane	1.8	~~DJP~~ J 2C

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MR02-IR69-SS01D 10A gjc 7300

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 22 decanted: (Y/N) N Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/30/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	~~2.2~~	~~U~~
319-85-7	beta-BHC	1.1	U
319-84-6	alpha-BHC	2.2	U
319-86-8	delta-BHC	2.2	U
58-89-9	gamma-BHC (Lindane)	2.2	U
72-54-8	4,4'-DDD	2.7	JP
72-55-9	4,4'-DDE	47	E
50-29-3	4,4'-DDT	26	
60-57-1	Dieldrin	4.2	U
959-98-8	Endosulfan I	0.32	JP
33213-65-9	Endosulfan II	2.3	J
1031-07-8	Endosulfan sulfate	21	
72-20-8	Endrin	0.82	JP
7421-93-4	Endrin Aldehyde	2.4	J
76-44-8	Heptachlor	0.38	JP
1024-57-3	Heptachlor Epoxide	2.2	U
72-43-5	Methoxychlor	10	J
8001-35-2	Toxaphene	110	U
12674-11-2	Aroclor-1016	31	U
11104-28-2	Aroclor-1221	44	U
11141-16-5	Aroclor-1232	22	U
53469-21-9	Aroclor-1242	22	U
12672-29-6	Aroclor-1248	22	U
11097-69-1	Aroclor-1254	22	U
11096-82-5	Aroclor-1260	22	U
53494-70-5	Endrin Ketone	7.6	P
5103-74-2	gamma-Chlordane	2.2	U
5103-71-9	alpha-Chlordane	~~2.0~~	~~J~~

exclude KE

gjc 12/10

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MR02-IR6
9-SS01DDL -10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-02RE1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 22 decanted: (Y/N) N Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/02/10

Injection Volume: 1.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	11	U
319-85-7	beta-BHC	5.5	~~U~~ UJ CCL
319-84-6	alpha-BHC	3.3	~~DJ~~ J CCL
319-86-8	delta-BHC	11	~~U~~ UJ CCL
58-89-9	gamma-BHC (Lindane)	11	U
72-54-8	4,4'-DDD	2.7	~~DJP~~ NJ OT
72-55-9	4,4'-DDE	73	~~D~~ NJ OT
50-29-3	4,4'-DDT	39	~~D~~ J OT
60-57-1	Dieldrin	21	U
959-98-8	Endosulfan I	11	U
33213-65-9	Endosulfan II	21	U
1031-07-8	Endosulfan sulfate	17	~~DJP~~ J 2C
72-20-8	Endrin	21	U
7421-93-4	Endrin Aldehyde	21	U
76-44-8	Heptachlor	11	U
1024-57-3	Heptachlor Epoxide	11	U
72-43-5	Methoxychlor	110	~~U~~ UJ CCL
8001-35-2	Toxaphene	530	U
12674-11-2	Aroclor-1016	150	U
11104-28-2	Aroclor-1221	220	U
11141-16-5	Aroclor-1232	110	U
53469-21-9	Aroclor-1242	110	U
12672-29-6	Aroclor-1248	110	U
11097-69-1	Aroclor-1254	110	U
11096-82-5	Aroclor-1260	110	U
53494-70-5	Endrin Ketone	20	~~DJP~~ J 2C
5103-74-2	gamma-Chlordane	11	U
5103-71-9	alpha-Chlordane	2.5	~~DJ~~

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SS01-10A-

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 34 decanted: (Y/N) N Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/30/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	~~0.39~~	~~J~~ exclude RE
319-85-7	beta-BHC	1.3	U
319-84-6	alpha-BHC	0.31	JP
319-86-8	delta-BHC	2.6	U
58-89-9	gamma-BHC (Lindane)	0.97	J
72-54-8	4,4'-DDD	1.7	JP
72-55-9	4,4'-DDE	70	E
50-29-3	4,4'-DDT	32	
60-57-1	Dieldrin	0.75	J
959-98-8	Endosulfan I	2.6	U
33213-65-9	Endosulfan II	5.0	U
1031-07-8	Endosulfan sulfate	18	
72-20-8	Endrin	5.0	U
7421-93-4	Endrin Aldehyde	5.0	U
76-44-8	Heptachlor	2.6	U
1024-57-3	Heptachlor Epoxide	2.6	U
72-43-5	Methoxychlor	26	U
8001-35-2	Toxaphene	130	U
12674-11-2	Aroclor-1016	36	U
11104-28-2	Aroclor-1221	52	U
11141-16-5	Aroclor-1232	26	U
53469-21-9	Aroclor-1242	26	U
12672-29-6	Aroclor-1248	26	U
11097-69-1	Aroclor-1254	26	U
11096-82-5	Aroclor-1260	26	U
53494-70-5	Endrin Ketone	3.6	JP
5103-74-2	gamma-Chlordane	2.6	U
5103-71-9	alpha-Chlordane	~~1.9~~	~~J~~

gpc 12710

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SS01-10ADL

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-03RE1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 34 decanted: (Y/N) N Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/02/10

Injection Volume: 1.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
309-00-2	Aldrin	1.8	~~D~~J	
319-85-7	beta-BHC	6.4	~~U~~ UJ	CCL
319-84-6	alpha-BHC	13	~~U~~ UJ	CCL
319-86-8	delta-BHC	13	~~U~~ UJ	CCL
58-89-9	gamma-BHC (Lindane)	13	U	
72-54-8	4,4'-DDD	25	~~U~~ UJ	CCL
72-55-9	4,4'-DDE	99	~~D~~ NJ	OT
50-29-3	4,4'-DDT	45	~~D~~ J	OT
60-57-1	Dieldrin	25	U	
959-98-8	Endosulfan I	13	U	
33213-65-9	Endosulfan II	25	U	
1031-07-8	Endosulfan sulfate	11	~~DJP~~ J	2C
72-20-8	Endrin	25	U	
7421-93-4	Endrin Aldehyde	25	U	
76-44-8	Heptachlor	13	U	
1024-57-3	Heptachlor Epoxide	13	U	
72-43-5	Methoxychlor	130	~~U~~ UJ	CCL
8001-35-2	Toxaphene	630	U	
12674-11-2	Aroclor-1016	180	U	
11104-28-2	Aroclor-1221	260	U	
11141-16-5	Aroclor-1232	130	U	
53469-21-9	Aroclor-1242	130	U	
12672-29-6	Aroclor-1248	130	U	
11097-69-1	Aroclor-1254	130	U	
11096-82-5	Aroclor-1260	130	U	
53494-70-5	Endrin Ketone	13	~~DJP~~ J	2C
5103-74-2	gamma-Chlordane	13	U	
5103-71-9	alpha-Chlordane	1.5	~~DJP~~ J	2C

FORM I PEST

JLC 12/10

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SS01D-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 34 decanted: (Y/N) N Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/30/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	~~0.30~~	~~JP~~ exclude RE
319-85-7	beta-BHC	1.8	P
319-84-6	alpha-BHC	2.6	U
319-86-8	delta-BHC	2.6	U
58-89-9	gamma-BHC (Lindane)	2.6	U
72-54-8	4,4'-DDD	1.8	JP
72-55-9	4,4'-DDE	83	E
50-29-3	4,4'-DDT	40	
60-57-1	Dieldrin	5.0	U
959-98-8	Endosulfan I	2.6	U
33213-65-9	Endosulfan II	0.73	JP
1031-07-8	Endosulfan sulfate	13	P
72-20-8	Endrin	5.0	U
7421-93-4	Endrin Aldehyde	5.0	U
76-44-8	Heptachlor	2.6	U
1024-57-3	Heptachlor Epoxide	2.6	U
72-43-5	Methoxychlor	26	U
8001-35-2	Toxaphene	130	U
12674-11-2	Aroclor-1016	36	U
11104-28-2	Aroclor-1221	52	U
11141-16-5	Aroclor-1232	26	U
53469-21-9	Aroclor-1242	26	U
12672-29-6	Aroclor-1248	26	U
11097-69-1	Aroclor-1254	26	U
11096-82-5	Aroclor-1260	26	U
53494-70-5	Endrin Ketone	6.0	
5103-74-2	gamma-Chlordane	2.6	U
5103-71-9	alpha-Chlordane	~~1.3~~	~~JP~~

FORM I PEST

JC 12/10

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SS0
1D-10ADL

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-04RE1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 34 decanted: (Y/N) N Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/02/10

Injection Volume: 1.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
309-00-2	Aldrin	13	U	
319-85-7	beta-BHC	6.4	~~U~~ NJ	CCL
319-84-6	alpha-BHC	13	~~U~~ NJ	CCL
319-86-8	delta-BHC	13	~~U~~ NJ	CCL
58-89-9	gamma-BHC (Lindane)	13	U	
72-54-8	4,4'-DDD	3.5	~~DJ~~ NJ	OT
72-55-9	4,4'-DDE	110	~~D~~ NJ	OT
50-29-3	4,4'-DDT	56	~~D~~ J	OT
60-57-1	Dieldrin	25	U	
959-98-8	Endosulfan I	13	U	
33213-65-9	Endosulfan II	25	U	
1031-07-8	Endosulfan sulfate	9.7	~~DJP~~ J	2C
72-20-8	Endrin	25	U	
7421-93-4	Endrin Aldehyde	25	U	
76-44-8	Heptachlor	13	U	
1024-57-3	Heptachlor Epoxide	13	U	
72-43-5	Methoxychlor	130	~~U~~ NJ	CCL
8001-35-2	Toxaphene	630	U	
12674-11-2	Aroclor-1016	180	U	
11104-28-2	Aroclor-1221	260	U	
11141-16-5	Aroclor-1232	130	U	
53469-21-9	Aroclor-1242	130	U	
12672-29-6	Aroclor-1248	130	U	
11097-69-1	Aroclor-1254	130	U	
11096-82-5	Aroclor-1260	130	U	
53494-70-5	Endrin Ketone	18	DJ	
5103-74-2	gamma-Chlordane	13	U	
5103-71-9	alpha-Chlordane	13	U	

JAC 12/10

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SS03-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 27 decanted: (Y/N) N Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/30/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	~~2.3~~	~~U~~ exclude RE
319-85-7	beta-BHC	4.6	
319-84-6	alpha-BHC	2.3	U
319-86-8	delta-BHC	2.3	U
58-89-9	gamma-BHC (Lindane)	0.44	JP
72-54-8	4,4'-DDD	4.5	U
72-55-9	4,4'-DDE	1.3	JP
50-29-3	4,4'-DDT	4.5	U
60-57-1	Dieldrin	4.5	U
959-98-8	Endosulfan I	2.3	U
33213-65-9	Endosulfan II	4.5	U
1031-07-8	Endosulfan sulfate	18	P
72-20-8	Endrin	4.5	U
7421-93-4	Endrin Aldehyde	0.54	JP
76-44-8	Heptachlor	2.3	U
1024-57-3	Heptachlor Epoxide	2.3	U
72-43-5	Methoxychlor	5.4	J
8001-35-2	Toxaphene	110	U
12674-11-2	Aroclor-1016	33	U
11104-28-2	Aroclor-1221	47	U
11141-16-5	Aroclor-1232	23	U
53469-21-9	Aroclor-1242	23	U
12672-29-6	Aroclor-1248	23	U
11097-69-1	Aroclor-1254	23	U
11096-82-5	Aroclor-1260	23	U
53494-70-5	Endrin Ketone	8.5	P
5103-74-2	gamma-Chlordane	2.3	U
5103-71-9	alpha-Chlordane	~~0.35~~	~~JP~~

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SS03-10ARE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-05RE1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 27 decanted: (Y/N) N Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/02/10

Injection Volume: 1.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
309-00-2	Aldrin	4.7	U	
319-85-7	beta-BHC	2.3	~~U~~ UJ	CCL
319-84-6	alpha-BHC	4.7	~~U~~ UJ	CCL
319-86-8	delta-BHC	0.55	~~JP~~ J	CCL
58-89-9	gamma-BHC (Lindane)	4.7	U	
72-54-8	4,4'-DDD	1.4	~~JP~~ UJ	OT
72-55-9	4,4'-DDE	2.0	~~J~~ UJ	OT
50-29-3	4,4'-DDT	1.6	~~J~~ J	OT
60-57-1	Dieldrin	9.0	U	
959-98-8	Endosulfan I	2.3	~~J~~ J	CCH
33213-65-9	Endosulfan II	9.0	U	
1031-07-8	Endosulfan sulfate	30	~~P~~ J	2C
72-20-8	Endrin	9.0	U	
7421-93-4	Endrin Aldehyde	9.0	U	
76-44-8	Heptachlor	0.52	~~JP~~ J	~~2C~~H JAC 7/3/10
1024-57-3	Heptachlor Epoxide	4.7	U	
72-43-5	Methoxychlor	47	~~U~~ UJ	CCL
8001-35-2	Toxaphene	230	U	
12674-11-2	Aroclor-1016	66	U	
11104-28-2	Aroclor-1221	93	U	
11141-16-5	Aroclor-1232	47	U	
53469-21-9	Aroclor-1242	47	U	
12672-29-6	Aroclor-1248	47	U	
11097-69-1	Aroclor-1254	47	U	
11096-82-5	Aroclor-1260	47	U	
53494-70-5	Endrin Ketone	6.5	~~JP~~ J	2C
5103-74-2	gamma-Chlordane	4.7	U	
5103-71-9	alpha-Chlordane	4.7	U	

FORM I PEST

JAC 7/3/10

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SS04-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 26 decanted: (Y/N) N Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/30/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	~~0.84~~	~~JP~~ exclude RE
319-85-7	beta-BHC	1.2	U
319-84-6	alpha-BHC	1.2	JP
319-86-8	delta-BHC	0.30	JP
58-89-9	gamma-BHC (Lindane)	1.3	JP
72-54-8	4,4'-DDD	4.5	U
72-55-9	4,4'-DDE	4.2	JP
50-29-3	4,4'-DDT	1.1	U
60-57-1	Dieldrin	4.5	U
959-98-8	Endosulfan I	3.8	
33213-65-9	Endosulfan II	4.5	U
1031-07-8	Endosulfan sulfate	2.8	JP
72-20-8	Endrin	4.5	U
7421-93-4	Endrin Aldehyde	0.98	JP
76-44-8	Heptachlor	2.3	U
1024-57-3	Heptachlor Epoxide	0.35	JP
72-43-5	Methoxychlor	4.1	JP
8001-35-2	Toxaphene	110	U
12674-11-2	Aroclor-1016	32	U
11104-28-2	Aroclor-1221	46	U
11141-16-5	Aroclor-1232	23	U
53469-21-9	Aroclor-1242	23	U
12672-29-6	Aroclor-1248	23	U
11097-69-1	Aroclor-1254	23	U
11096-82-5	Aroclor-1260	23	U
53494-70-5	Endrin Ketone	1.2	JP
5103-74-2	gamma-Chlordane	0.39	JP
5103-71-9	alpha-Chlordane	~~0.46~~	~~J~~

JAC 7/2/10

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SS04-10ARE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-06RE1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 26 decanted: (Y/N) N Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/02/10

Injection Volume: 1.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
309-00-2	Aldrin	0.49	J	
319-85-7	beta-BHC	2.3	~~U~~ UJ	CCL
319-84-6	alpha-BHC	2.8	~~JP~~ J	~~CCL~~ JAC 7/2/10
319-86-8	delta-BHC	4.6	~~U~~ UJ	CCL
58-89-9	gamma-BHC (Lindane)	8.4		
72-54-8	4,4'-DDD	8.9	~~U~~ UJ	CCL
72-55-9	4,4'-DDE	3.8	~~JP~~ NJ	OT
50-29-3	4,4'-DDT	1.7	~~JP~~ J	OT
60-57-1	Dieldrin	8.9	U	
959-98-8	Endosulfan I	0.75	~~JP~~ J	CCH
33213-65-9	Endosulfan II	8.9	U	
1031-07-8	Endosulfan sulfate	8.1	~~JP~~ J	2C
72-20-8	Endrin	8.9	U	
7421-93-4	Endrin Aldehyde	25		
76-44-8	Heptachlor	4.6	U	
1024-57-3	Heptachlor Epoxide	4.6	U	
72-43-5	Methoxychlor	11	~~JP~~ J	CCL
8001-35-2	Toxaphene	220	U	
12674-11-2	Aroclor-1016	65	U	
11104-28-2	Aroclor-1221	92	U	
11141-16-5	Aroclor-1232	46	U	
53469-21-9	Aroclor-1242	46	U	
12672-29-6	Aroclor-1248	46	U	
11097-69-1	Aroclor-1254	46	U	
11096-82-5	Aroclor-1260	46	U	
53494-70-5	Endrin Ketone	11	~~P~~ J	2C
5103-74-2	gamma-Chlordane	1.3	~~JP~~ J	2C
5103-71-9	alpha-Chlordane	0.80	~~JP~~ J	2C

FORM I PEST

JAC 7/2/10

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SS05-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 48 decanted: (Y/N) N Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/30/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	3.3	U
319-85-7	beta-BHC	1.6	U
319-84-6	alpha-BHC	3.3	U
319-86-8	delta-BHC	3.3	U
58-89-9	gamma-BHC (Lindane)	3.3	U
72-54-8	4,4'-DDD	0.66	JP
72-55-9	4,4'-DDE	6.3	U
50-29-3	4,4'-DDT	6.3	U
60-57-1	Dieldrin	3.7	J
959-98-8	Endosulfan I	3.5	
33213-65-9	Endosulfan II	6.3	U
1031-07-8	Endosulfan sulfate	12	P
72-20-8	Endrin	1.2	JP
7421-93-4	Endrin Aldehyde	6.3	U
76-44-8	Heptachlor	3.3	U
1024-57-3	Heptachlor Epoxide	3.3	U
72-43-5	Methoxychlor	33	U
8001-35-2	Toxaphene	160	U
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	65	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	33	U
53494-70-5	Endrin Ketone	3.4	J
5103-74-2	gamma-Chlordane	0.39	JP
5103-71-9	alpha-Chlordane	1.8	JP

exclude RE

JAC 12/10

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SS05-10ARE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-07RE1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 48 decanted: (Y/N) N Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/02/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
309-00-2	Aldrin	1.2	~~JP~~ J	~~JC~~ SSH
319-85-7	beta-BHC	1.6	~~U~~ UJ	CCL
319-84-6	alpha-BHC	3.3	~~U~~ UJ	CCL
319-86-8	delta-BHC	3.3	~~U~~ UJ	CCL
58-89-9	gamma-BHC (Lindane)	3.3	U	
72-54-8	4,4'-DDD	1.9	~~JP~~ NJ	OT
72-55-9	4,4'-DDE	1.3	~~JP~~ NJ	OT
50-29-3	4,4'-DDT	4.8	~~JP~~ J	OT
60-57-1	Dieldrin	6.3	U	
959-98-8	Endosulfan I	3.3	U	
33213-65-9	Endosulfan II	6.3	U	
1031-07-8	Endosulfan sulfate	26	~~P~~ J	~~JC~~ SSH
72-20-8	Endrin	3.9	~~JP~~ J	~~JC~~ SSH
7421-93-4	Endrin Aldehyde	3.1	~~JP~~ J	~~JC~~ SSH
76-44-8	Heptachlor	1.1	~~JP~~ J	~~JC~~ H
1024-57-3	Heptachlor Epoxide	3.3	U	
72-43-5	Methoxychlor	4.9	~~JP~~ J	CCL
8001-35-2	Toxaphene	160	U	
12674-11-2	Aroclor-1016	46	U	
11104-28-2	Aroclor-1221	65	U	
11141-16-5	Aroclor-1232	33	U	
53469-21-9	Aroclor-1242	33	U	
12672-29-6	Aroclor-1248	33	U	
11097-69-1	Aroclor-1254	33	U	
11096-82-5	Aroclor-1260	33	U	
53494-70-5	Endrin Ketone	9.7	~~P~~ J	~~JC~~ SSH
5103-74-2	gamma-Chlordane	1.9	~~J~~ J	SSH
5103-71-9	alpha-Chlordane	1.1	~~JP~~ J	~~JC~~ SSH

JAC 73010

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FORM I PEST

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1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SS06-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-08

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 31 decanted: (Y/N) N Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/30/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	~~2.5~~	~~U~~
319-85-7	beta-BHC	1.9	P
319-84-6	alpha-BHC	2.3	JP
319-86-8	delta-BHC	2.5	U
58-89-9	gamma-BHC (Lindane)	2.3	J
72-54-8	4,4'-DDD	4.8	U
72-55-9	4,4'-DDE	1.5	J
50-29-3	4,4'-DDT	4.8	U
60-57-1	Dieldrin	4.8	U
959-98-8	Endosulfan I	2.5	U
33213-65-9	Endosulfan II	4.8	U
1031-07-8	Endosulfan sulfate	7.1	P
72-20-8	Endrin	4.8	U
7421-93-4	Endrin Aldehyde	0.87	JP
76-44-8	Heptachlor	0.77	JP
1024-57-3	Heptachlor Epoxide	0.30	JP
72-43-5	Methoxychlor	25	U
8001-35-2	Toxaphene	120	U
12674-11-2	Aroclor-1016	35	U
11104-28-2	Aroclor-1221	49	U
11141-16-5	Aroclor-1232	25	U
53469-21-9	Aroclor-1242	25	U
12672-29-6	Aroclor-1248	25	U
11097-69-1	Aroclor-1254	25	U
11096-82-5	Aroclor-1260	25	U
53494-70-5	Endrin Ketone	4.2	JP
5103-74-2	gamma-Chlordane	0.88	JP
5103-71-9	alpha-Chlordane	~~2.5~~	~~U~~

exclude RE

FORM I PEST

JPC 7/27/10

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1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SS06-10ARE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-08RE1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 31 decanted: (Y/N) N Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/02/10

Injection Volume: 1.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
309-00-2	Aldrin	2.0	J	
319-85-7	beta-BHC	2.5	~~U~~ UJ	CCL
319-84-6	alpha-BHC	3.1	~~JP~~ J	CCL
319-86-8	delta-BHC	4.9	~~U~~ UJ	CCL
58-89-9	gamma-BHC (Lindane)	1.8	~~JP~~ J	2C
72-54-8	4,4'-DDD	1.2	~~JP~~ NJ	Q
72-55-9	4,4'-DDE	1.8	~~JP~~ NJ	
50-29-3	4,4'-DDT	3.7	~~JP~~ J	
60-57-1	Dieldrin	9.6	U	
959-98-8	Endosulfan I	4.9	U	
33213-65-9	Endosulfan II	1.9	J	
1031-07-8	Endosulfan sulfate	25		
72-20-8	Endrin	9.6	U	
7421-93-4	Endrin Aldehyde	9.6	U	
76-44-8	Heptachlor	1.4	~~JP~~ J	CCH
1024-57-3	Heptachlor Epoxide	4.9	U	
72-43-5	Methoxychlor	49	~~U~~ UJ	CCL
8001-35-2	Toxaphene	240	U	
12674-11-2	Aroclor-1016	70	U	
11104-28-2	Aroclor-1221	99	U	
11141-16-5	Aroclor-1232	49	U	
53469-21-9	Aroclor-1242	49	U	
12672-29-6	Aroclor-1248	49	U	
11097-69-1	Aroclor-1254	49	U	
11096-82-5	Aroclor-1260	49	U	
53494-70-5	Endrin Ketone	3.2	~~JP~~ J	2C
5103-74-2	gamma-Chlordane	0.96	~~JP~~	
5103-71-9	alpha-Chlordane	0.61	~~JP~~	

JAC 7/2/10

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1R69-SB04-06-07-10A JBC 12/10

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 22 decanted: (Y/N) N Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/30/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	~~2.2~~	~~U~~ exclude RE
319-85-7	beta-BHC	1.1	U
319-84-6	alpha-BHC	2.2	U
319-86-8	delta-BHC	2.2	U
58-89-9	gamma-BHC (Lindane)	2.2	U
72-54-8	4,4'-DDD	4.2	U
72-55-9	4,4'-DDE	4.2	U
50-29-3	4,4'-DDT	4.2	U
60-57-1	Dieldrin	4.2	U
959-98-8	Endosulfan I	2.2	U
33213-65-9	Endosulfan II	4.2	U
1031-07-8	Endosulfan sulfate	4.2	U
72-20-8	Endrin	4.2	U
7421-93-4	Endrin Aldehyde	4.2	U
76-44-8	Heptachlor	2.2	U
1024-57-3	Heptachlor Epoxide	2.2	U
72-43-5	Methoxychlor	22	U
8001-35-2	Toxaphene	110	U
12674-11-2	Aroclor-1016	31	U
11104-28-2	Aroclor-1221	44	U
11141-16-5	Aroclor-1232	22	U
53469-21-9	Aroclor-1242	22	U
12672-29-6	Aroclor-1248	22	U
11097-69-1	Aroclor-1254	22	U
11096-82-5	Aroclor-1260	22	U
53494-70-5	Endrin Ketone	4.2	U
5103-74-2	gamma-Chlordane	2.2	U
5103-71-9	alpha-Chlordane	~~2.2~~	~~U~~

FORM I PEST

JBC 12/10

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1R9 - SB04-06-07RE-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-09RE1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 22 decanted: (Y/N) N Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/02/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	2.2	U
319-85-7	beta-BHC	1.1	~~U~~ UJ CCL
319-84-6	alpha-BHC	2.2	~~U~~ UJ CCL
319-86-8	delta-BHC	2.2	~~U~~ UJ CCL
58-89-9	gamma-BHC (Lindane)	2.2	U
72-54-8	4,4'-DDD	4.2	~~U~~ UJ CCL
72-55-9	4,4'-DDE	4.2	~~U~~ UJ CCL
50-29-3	4,4'-DDT	4.2	~~U~~ R CCL
60-57-1	Dieldrin	4.2	U
959-98-8	Endosulfan I	2.2	U
33213-65-9	Endosulfan II	4.2	U
1031-07-8	Endosulfan sulfate	0.81	~~JP~~ J CC
72-20-8	Endrin	4.2	U
7421-93-4	Endrin Aldehyde	4.2	U
76-44-8	Heptachlor	0.45	~~J~~ J CCH
1024-57-3	Heptachlor Epoxide	2.2	U
72-43-5	Methoxychlor	22	~~U~~ UJ CCL
8001-35-2	Toxaphene	110	U
12674-11-2	Aroclor-1016	31	U
11104-28-2	Aroclor-1221	44	U
11141-16-5	Aroclor-1232	22	U
53469-21-9	Aroclor-1242	22	U
12672-29-6	Aroclor-1248	22	U
11097-69-1	Aroclor-1254	22	U
11096-82-5	Aroclor-1260	22	U
53494-70-5	Endrin Ketone	4.2	U
5103-74-2	gamma-Chlordane	2.2	U
5103-71-9	alpha-Chlordane	2.2	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1R59-SB05-06-07-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 31 decanted: (Y/N) N Date Received: _____

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/31/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	~~2.5~~	~~U~~
319-85-7	beta-BHC	1.2	U
319-84-6	alpha-BHC	2.5	U
319-86-8	delta-BHC	2.5	U
58-89-9	gamma-BHC (Lindane)	2.5	U
72-54-8	4,4'-DDD	4.8	U
72-55-9	4,4'-DDE	4.8	U
50-29-3	4,4'-DDT	4.8	U
60-57-1	Dieldrin	4.8	U
959-98-8	Endosulfan I	2.5	U
33213-65-9	Endosulfan II	4.8	U
1031-07-8	Endosulfan sulfate	4.8	U
72-20-8	Endrin	4.8	U
7421-93-4	Endrin Aldehyde	4.8	U
76-44-8	Heptachlor	2.5	U
1024-57-3	Heptachlor Epoxide	2.5	U
72-43-5	Methoxychlor	25	U
8001-35-2	Toxaphene	120	U
12674-11-2	Aroclor-1016	35	U
11104-28-2	Aroclor-1221	49	U
11141-16-5	Aroclor-1232	25	U
53469-21-9	Aroclor-1242	25	U
12672-29-6	Aroclor-1248	25	U
11097-69-1	Aroclor-1254	25	U
11096-82-5	Aroclor-1260	25	U
53494-70-5	Endrin Ketone	4.8	U
5103-74-2	gamma-Chlordane	2.5	U
5103-71-9	alpha-Chlordane	~~2.5~~	~~U~~

exclude RE

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1RE9-SB05-06-07RE-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-10RE1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 31 decanted: (Y/N) N Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/02/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
309-00-2	Aldrin	2.5	U	
319-85-7	beta-BHC	1.2	~~U~~ UJ	CCL
319-84-6	alpha-BHC	2.5	~~U~~ UJ	CCL
319-86-8	delta-BHC	2.5	~~U~~ UJ	CCL
58-89-9	gamma-BHC (Lindane)	2.5	U	
72-54-8	4,4'-DDD	4.8	~~U~~ UJ	CCL
72-55-9	4,4'-DDE	4.8	~~U~~ UJ	CCL
50-29-3	4,4'-DDT	4.8	~~U~~ R	OT
60-57-1	Dieldrin	4.8	U	
959-98-8	Endosulfan I	2.5	U	
33213-65-9	Endosulfan II	4.8	U	
1031-07-8	Endosulfan sulfate	4.8	U	
72-20-8	Endrin	4.8	U	
7421-93-4	Endrin Aldehyde	4.8	U	
76-44-8	Heptachlor	0.57	~~J~~ J	CCH
1024-57-3	Heptachlor Epoxide	2.5	U	
72-43-5	Methoxychlor	25	~~U~~ UJ	CCL
8001-35-2	Toxaphene	120	U	
12674-11-2	Aroclor-1016	35	U	
11104-28-2	Aroclor-1221	49	U	
11141-16-5	Aroclor-1232	25	U	
53469-21-9	Aroclor-1242	25	U	
12672-29-6	Aroclor-1248	25	U	
11097-69-1	Aroclor-1254	25	U	
11096-82-5	Aroclor-1260	25	U	
53494-70-5	Endrin Ketone	4.8	U	
5103-74-2	gamma-Chlordane	2.5	U	
5103-71-9	alpha-Chlordane	0.64	J	

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1RB1- SB06-06-07 -10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-11

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 23 decanted: (Y/N) N Date Received: _____

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/31/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	~~2.2~~	~~U~~
319-85-7	beta-BHC	0.61	JP
319-84-6	alpha-BHC	2.2	U
319-86-8	delta-BHC	2.2	U
58-89-9	gamma-BHC (Lindane)	2.2	U
72-54-8	4,4'-DDD	4.3	U
72-55-9	4,4'-DDE	4.3	U
50-29-3	4,4'-DDT	4.3	U
60-57-1	Dieldrin	4.3	U
959-98-8	Endosulfan I	2.2	U
33213-65-9	Endosulfan II	4.3	U
1031-07-8	Endosulfan sulfate	4.3	U
72-20-8	Endrin	4.3	U
7421-93-4	Endrin Aldehyde	4.3	U
76-44-8	Heptachlor	2.2	U
1024-57-3	Heptachlor Epoxide	2.2	U
72-43-5	Methoxychlor	22	U
8001-35-2	Toxaphene	110	U
12674-11-2	Aroclor-1016	31	U
11104-28-2	Aroclor-1221	44	U
11141-16-5	Aroclor-1232	22	U
53469-21-9	Aroclor-1242	22	U
12672-29-6	Aroclor-1248	22	U
11097-69-1	Aroclor-1254	22	U
11096-82-5	Aroclor-1260	22	U
53494-70-5	Endrin Ketone	4.3	U
5103-74-2	gamma-Chlordane	2.2	U
5103-71-9	alpha-Chlordane	~~2.2~~	~~U~~

exclude RE

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB06-06-07RE-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-11RE1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 23 decanted: (Y/N) N Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/03/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	2.2	U
319-85-7	beta-BHC	0.77	~~JP~~ J CCL
319-84-6	alpha-BHC	2.2	~~U~~ UJ CCL
319-86-8	delta-BHC	2.2	~~U~~ UJ CCL
58-89-9	gamma-BHC (Lindane)	2.2	U
72-54-8	4,4'-DDD	0.44	~~JP~~ ~~NJ~~ ~~OJ~~ J CCL
72-55-9	4,4'-DDE	4.3	~~U~~ UJ CCL
50-29-3	4,4'-DDT	4.3	~~U~~ ~~UNJ~~ ~~UJ~~ CCL
60-57-1	Dieldrin	4.3	U
959-98-8	Endosulfan I	2.2	U
33213-65-9	Endosulfan II	4.3	U
1031-07-8	Endosulfan sulfate	4.3	U
72-20-8	Endrin	4.3	U
7421-93-4	Endrin Aldehyde	4.3	U
76-44-8	Heptachlor	2.2	U
1024-57-3	Heptachlor Epoxide	2.2	U
72-43-5	Methoxychlor	22	~~U~~ ~~UJ~~ P CCL
8001-35-2	Toxaphene	110	U
12674-11-2	Aroclor-1016	31	U
11104-28-2	Aroclor-1221	44	U
11141-16-5	Aroclor-1232	22	U
53469-21-9	Aroclor-1242	22	U
12672-29-6	Aroclor-1248	22	U
11097-69-1	Aroclor-1254	22	U
11096-82-5	Aroclor-1260	22	U
53494-70-5	Endrin Ketone	4.3	U
5103-74-2	gamma-Chlordane	2.2	U
5103-71-9	alpha-Chlordane	2.2	U

X2 corr JAC 73010

X1 corr JAC 73010

JAC 73010

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

(RS) - SB01-01-02 -10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-12

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 20 decanted: (Y/N) N Date Received: _____

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/31/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	~~2.1~~	~~U~~
319-85-7	beta-BHC	1.1	U
319-84-6	alpha-BHC	2.1	U
319-86-8	delta-BHC	2.1	U
58-89-9	gamma-BHC (Lindane)	2.1	U
72-54-8	4,4'-DDD	4.1	U
72-55-9	4,4'-DDE	3.0	J
50-29-3	4,4'-DDT	1.6	J
60-57-1	Dieldrin	4.1	U
959-98-8	Endosulfan I	2.1	U
33213-65-9	Endosulfan II	4.1	U
1031-07-8	Endosulfan sulfate	4.1	U
72-20-8	Endrin	4.1	U
7421-93-4	Endrin Aldehyde	4.1	U
76-44-8	Heptachlor	0.22	JP
1024-57-3	Heptachlor Epoxide	2.1	U
72-43-5	Methoxychlor	21	U
8001-35-2	Toxaphene	100	U
12674-11-2	Aroclor-1016	30	U
11104-28-2	Aroclor-1221	43	U
11141-16-5	Aroclor-1232	21	U
53469-21-9	Aroclor-1242	21	U
12672-29-6	Aroclor-1248	21	U
11097-69-1	Aroclor-1254	21	U
11096-82-5	Aroclor-1260	21	U
53494-70-5	Endrin Ketone	4.1	U
5103-74-2	gamma-Chlordane	2.1	U
5103-71-9	alpha-Chlordane	~~1.9~~	~~J~~

exclude RE

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

(RE) - SB01-01-02RE - 10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-12RE1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 20 decanted: (Y/N) N Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/03/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
309-00-2	Aldrin	2.1	U	
319-85-7	beta-BHC	0.45	~~JP~~ J	CCL
319-84-6	alpha-BHC	2.1	~~U~~ UJ	CCL
319-86-8	delta-BHC	2.1	~~U~~ UJ	CCL
58-89-9	gamma-BHC (Lindane)	2.1	U	
72-54-8	4,4'-DDD	4.1	~~U~~ UJ	CCL
72-55-9	4,4'-DDE	4.2	J	CCL
50-29-3	4,4'-DDT	2.4	~~J~~ J	CCL
60-57-1	Dieldrin	4.1	U	
959-98-8	Endosulfan I	0.22	~~JP~~ J	CCH
33213-65-9	Endosulfan II	4.1	U	
1031-07-8	Endosulfan sulfate	4.1	U	
72-20-8	Endrin	1.1	J	
7421-93-4	Endrin Aldehyde	4.1	U	
76-44-8	Heptachlor	0.55	~~JP~~ J	CCH
1024-57-3	Heptachlor Epoxide	2.1	U	
72-43-5	Methoxychlor	21	~~U~~ ~~UJ~~ R	CCL
8001-35-2	Toxaphene	100	U	
12674-11-2	Aroclor-1016	30	U	
11104-28-2	Aroclor-1221	43	U	
11141-16-5	Aroclor-1232	21	U	
53469-21-9	Aroclor-1242	21	U	
12672-29-6	Aroclor-1248	21	U	
11097-69-1	Aroclor-1254	21	U	
11096-82-5	Aroclor-1260	21	U	
53494-70-5	Endrin Ketone	4.1	U	
5103-74-2	gamma-Chlordane	2.1	U	
5103-71-9	alpha-Chlordane	2.4	~~P~~ J	JC

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JAC 73010

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1RB9 - SB01D-01-02-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-13

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 16 decanted: (Y/N) N Date Received: _____

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/31/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	~~2.0~~	~~U~~
319-85-7	beta-BHC	1.0	U
319-84-6	alpha-BHC	2.0	U
319-86-8	delta-BHC	2.0	U
58-89-9	gamma-BHC (Lindane)	2.0	U
72-54-8	4,4'-DDD	3.9	U
72-55-9	4,4'-DDE	4.6	
50-29-3	4,4'-DDT	3.4	J
60-57-1	Dieldrin	3.9	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	3.9	U
1031-07-8	Endosulfan sulfate	3.9	U
72-20-8	Endrin	3.9	U
7421-93-4	Endrin Aldehyde	3.9	U
76-44-8	Heptachlor	2.0	U
1024-57-3	Heptachlor Epoxide	2.0	U
72-43-5	Methoxychlor	20	U
8001-35-2	Toxaphene	99	U
12674-11-2	Aroclor-1016	29	U
11104-28-2	Aroclor-1221	40	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	20	U
53494-70-5	Endrin Ketone	3.9	U
5103-74-2	gamma-Chlordane	2.0	U
5103-71-9	alpha-Chlordane	~~1.4~~	~~J~~

exclude RE

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SB01D-01-02RE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-13RE1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 16 decanted: (Y/N) N Date Received: 03/12/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/03/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	2.0	U
319-85-7	beta-BHC	1.0	~~U~~ UJ
319-84-6	alpha-BHC	2.0	~~U~~ UJ
319-86-8	delta-BHC	2.0	~~U~~ UJ
58-89-9	gamma-BHC (Lindane)	2.0	U
72-54-8	4,4'-DDD	3.9	~~U~~ UJ
72-55-9	4,4'-DDE	6.0	J
50-29-3	4,4'-DDT	4.5	J
60-57-1	Dieldrin	3.9	U
959-98-8	Endosulfan I	0.20	~~JP~~ J
33213-65-9	Endosulfan II	3.9	U
1031-07-8	Endosulfan sulfate	3.9	U
72-20-8	Endrin	0.72	~~JP~~ J
7421-93-4	Endrin Aldehyde	3.9	U
76-44-8	Heptachlor	0.45	~~JP~~ J
1024-57-3	Heptachlor Epoxide	2.0	U
72-43-5	Methoxychlor	20	~~U~~ R
8001-35-2	Toxaphene	99	U
12674-11-2	Aroclor-1016	29	U
11104-28-2	Aroclor-1221	40	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	20	U
53494-70-5	Endrin Ketone	3.9	U
5103-74-2	gamma-Chlordane	2.0	U
5103-71-9	alpha-Chlordane	1.8	J

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SD01-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-14

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 77 decanted: (Y/N) N Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/02/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	2.3	~~JP~~ J SSH
319-85-7	beta-BHC	2.3	~~JP~~ J SSH
319-84-6	alpha-BHC	7.4	U
319-86-8	delta-BHC	3.6	~~JP~~ J SSH
58-89-9	gamma-BHC (Lindane)	7.4	U
72-54-8	4,4'-DDD	13	~~J~~ J SSH
72-55-9	4,4'-DDE	7.8	~~JP~~
50-29-3	4,4'-DDT	5.5	~~J~~
60-57-1	Dieldrin	2.7	~~J~~
959-98-8	Endosulfan I	13	~~P~~
33213-65-9	Endosulfan II	14	U
1031-07-8	Endosulfan sulfate	10	~~JP~~ J SSH
72-20-8	Endrin	14	U
7421-93-4	Endrin Aldehyde	14	U
76-44-8	Heptachlor	6.0	~~JP~~ J SSH
1024-57-3	Heptachlor Epoxide	3.7	~~JP~~ J SSH
72-43-5	Methoxychlor	74	U
8001-35-2	Toxaphene	360	U
12674-11-2	Aroclor-1016	100	U
11104-28-2	Aroclor-1221	150	U
11141-16-5	Aroclor-1232	74	U
53469-21-9	Aroclor-1242	74	U
12672-29-6	Aroclor-1248	74	U
11097-69-1	Aroclor-1254	74	U
11096-82-5	Aroclor-1260	74	U
53494-70-5	Endrin Ketone	7.4	~~JP~~ J SSH
5103-74-2	gamma-Chlordane	9.1	~~P~~ J SSH
5103-71-9	alpha-Chlordane	7.4	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SD01D -10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-15

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 76 decanted: (Y/N) N Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/31/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	~~1.4~~	~~JP~~ exclude RE
319-85-7	beta-BHC	8.1	
319-84-6	alpha-BHC	7.1	U
319-86-8	delta-BHC	0.88	JP
58-89-9	gamma-BHC (Lindane)	7.1	U
72-54-8	4,4'-DDD	14	U
72-55-9	4,4'-DDE	9.7	JP
50-29-3	4,4'-DDT	14	U
60-57-1	Dieldrin	14	U
959-98-8	Endosulfan I	7.1	U
33213-65-9	Endosulfan II	14	U
1031-07-8	Endosulfan sulfate	6.2	JP
72-20-8	Endrin	14	U
7421-93-4	Endrin Aldehyde	14	U
76-44-8	Heptachlor	5.1	JP
1024-57-3	Heptachlor Epoxide	1.4	J
72-43-5	Methoxychlor	71	U
8001-35-2	Toxaphene	350	U
12674-11-2	Aroclor-1016	100	U
11104-28-2	Aroclor-1221	140	U
11141-16-5	Aroclor-1232	71	U
53469-21-9	Aroclor-1242	71	U
12672-29-6	Aroclor-1248	71	U
11097-69-1	Aroclor-1254	71	U
11096-82-5	Aroclor-1260	71	U
53494-70-5	Endrin Ketone	10	J
5103-74-2	gamma-Chlordane	2.0	JP
5103-71-9	alpha-Chlordane	~~1.0~~	~~JP~~

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SD01DRE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-15RE1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 76 decanted: (Y/N) N Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/02/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	2.2	~~JP~~ J
319-85-7	beta-BHC	3.5	U
319-84-6	alpha-BHC	7.1	U
319-86-8	delta-BHC	6.7	~~J~~ J
58-89-9	gamma-BHC (Lindane)	7.1	U
72-54-8	4,4'-DDD	4.0	~~JP~~ NJ
72-55-9	4,4'-DDE	9.2	~~J~~ NJ
50-29-3	4,4'-DDT	14	~~U~~ R
60-57-1	Dieldrin	1.8	~~JP~~ J
959-98-8	Endosulfan I	6.6	~~JP~~ J
33213-65-9	Endosulfan II	14	U
1031-07-8	Endosulfan sulfate	8.8	~~JP~~ J
72-20-8	Endrin	14	U
7421-93-4	Endrin Aldehyde	4.7	~~JP~~ J
76-44-8	Heptachlor	5.0	~~JP~~
1024-57-3	Heptachlor Epoxide	2.1	~~JP~~
72-43-5	Methoxychlor	71	~~U~~ UJ
8001-35-2	Toxaphene	350	U
12674-11-2	Aroclor-1016	100	U
11104-28-2	Aroclor-1221	140	U
11141-16-5	Aroclor-1232	71	U
53469-21-9	Aroclor-1242	71	U
12672-29-6	Aroclor-1248	71	U
11097-69-1	Aroclor-1254	71	U
11096-82-5	Aroclor-1260	71	U
53494-70-5	Endrin Ketone	4.9	~~JP~~ J
5103-74-2	gamma-Chlordane	2.5	~~JP~~
5103-71-9	alpha-Chlordane	6.0	~~JP~~

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MR02-IR69-SS02- 0A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-16

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 17 decanted: (Y/N) N Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/31/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	~~0.41~~	~~JP~~
319-85-7	beta-BHC	0.62	JP
319-84-6	alpha-BHC	0.50	JP
319-86-8	delta-BHC	0.47	JP
58-89-9	gamma-BHC (Lindane)	2.0	U
72-54-8	4,4'-DDD	1.6	JP
72-55-9	4,4'-DDE	40	E
50-29-3	4,4'-DDT	16	
60-57-1	Dieldrin	4.0	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	1.0	J
1031-07-8	Endosulfan sulfate	7.5	P
72-20-8	Endrin	4.0	U
7421-93-4	Endrin Aldehyde	0.51	JP
76-44-8	Heptachlor	0.33	JP
1024-57-3	Heptachlor Epoxide	2.0	U
72-43-5	Methoxychlor	5.0	J
8001-35-2	Toxaphene	100	U
12674-11-2	Aroclor-1016	29	U
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	20	U
53494-70-5	Endrin Ketone	20	
5103-74-2	gamma-Chlordane	2.0	U
5103-71-9	alpha-Chlordane	~~1.3~~	~~JP~~

exclude PE

FORM I PEST

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1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MR02-IR6
9-SS02RE -10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-16RE1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 17 decanted: (Y/N) N Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/02/10

Injection Volume: 1.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	10	U
319-85-7	beta-BHC	2.0	~~JP~~ J 2C
319-84-6	alpha-BHC	10	U
319-86-8	delta-BHC	2.1	~~JP~~ J CCL
58-89-9	gamma-BHC (Lindane)	10	U
72-54-8	4,4'-DDD	20	U
72-55-9	4,4'-DDE	56	NJ OT
50-29-3	4,4'-DDT	24	J OT
60-57-1	Dieldrin	20	U
959-98-8	Endosulfan I	10	U
33213-65-9	Endosulfan II	20	U
1031-07-8	Endosulfan sulfate	12	J
72-20-8	Endrin	20	U
7421-93-4	Endrin Aldehyde	20	U
76-44-8	Heptachlor	1.5	~~JP~~ J 2C
1024-57-3	Heptachlor Epoxide	10	U
72-43-5	Methoxychlor	100	~~U~~ UJ CCL
8001-35-2	Toxaphene	500	U
12674-11-2	Aroclor-1016	140	U
11104-28-2	Aroclor-1221	200	U
11141-16-5	Aroclor-1232	100	U
53469-21-9	Aroclor-1242	100	U
12672-29-6	Aroclor-1248	100	U
11097-69-1	Aroclor-1254	100	U
11096-82-5	Aroclor-1260	100	U
53494-70-5	Endrin Ketone	11	~~JP~~ J 2C
5103-74-2	gamma-Chlordane	2.1	~~JP~~ J 2C
5103-71-9	alpha-Chlordane	10	J

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MR02-IR69-SS04-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-17

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 22 decanted: (Y/N) N Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/31/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	~~0.75~~	~~JP~~ exclude RE
319-85-7	beta-BHC	1.1	U
319-84-6	alpha-BHC	3.4	P
319-86-8	delta-BHC	2.2	U
58-89-9	gamma-BHC (Lindane)	2.2	U
72-54-8	4,4'-DDD	2.6	J
72-55-9	4,4'-DDE	1.8	JP
50-29-3	4,4'-DDT	4.1	JP
60-57-1	Dieldrin	0.99	J
959-98-8	Endosulfan I	0.96	J
33213-65-9	Endosulfan II	4.2	U
1031-07-8	Endosulfan sulfate	47	E
72-20-8	Endrin	4.2	U
7421-93-4	Endrin Aldehyde	4.7	
76-44-8	Heptachlor	0.34	JP
1024-57-3	Heptachlor Epoxide	2.2	U
72-43-5	Methoxychlor	22	U
8001-35-2	Toxaphene	110	U
12674-11-2	Aroclor-1016	31	U
11104-28-2	Aroclor-1221	44	U
11141-16-5	Aroclor-1232	22	U
53469-21-9	Aroclor-1242	22	U
12672-29-6	Aroclor-1248	22	U
11097-69-1	Aroclor-1254	22	U
11096-82-5	Aroclor-1260	22	U
53494-70-5	Endrin Ketone	34	P
5103-74-2	gamma-Chlordane	1.2	JP
5103-71-9	alpha-Chlordane	~~0.35~~	~~JP~~

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MR02-IR6
9-SS04RE -10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-17RE1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 22 decanted: (Y/N) N Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/02/10

Injection Volume: 1.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	11	U
319-85-7	beta-BHC	5.5	U
319-84-6	alpha-BHC	11	U
319-86-8	delta-BHC	11	~~U~~ UJ CCL
58-89-9	gamma-BHC (Lindane)	1.4	~~JP~~ J 2C
72-54-8	4,4'-DDD	21	U
72-55-9	4,4'-DDE	2.5	~~JP~~ NJ OT
50-29-3	4,4'-DDT	4.6	~~JP~~ J OT
60-57-1	Dieldrin	21	U
959-98-8	Endosulfan I	1.5	~~JP~~ J CCH
33213-65-9	Endosulfan II	21	U
1031-07-8	Endosulfan sulfate	43	~~P~~ J 2C
72-20-8	Endrin	21	U
7421-93-4	Endrin Aldehyde	21	U
76-44-8	Heptachlor	11	U
1024-57-3	Heptachlor Epoxide	11	U
72-43-5	Methoxychlor	110	~~U~~ UJ CCL
8001-35-2	Toxaphene	530	U
12674-11-2	Aroclor-1016	150	U
11104-28-2	Aroclor-1221	220	U
11141-16-5	Aroclor-1232	110	U
53469-21-9	Aroclor-1242	110	U
12672-29-6	Aroclor-1248	110	U
11097-69-1	Aroclor-1254	110	U
11096-82-5	Aroclor-1260	110	U
53494-70-5	Endrin Ketone	9.0	~~JP~~ J 2C
5103-74-2	gamma-Chlordane	3.9	J
5103-71-9	alpha-Chlordane	11	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MR02-IR69-SS05-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-18

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 16 decanted: (Y/N) N Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/31/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	~~2.0~~	~~U~~ exclude RE
319-85-7	beta-BHC	1.0	U
319-84-6	alpha-BHC	0.52	JP
319-86-8	delta-BHC	0.58	U
58-89-9	gamma-BHC (Lindane)	2.0	U
72-54-8	4,4'-DDD	3.9	U
72-55-9	4,4'-DDE	18	
50-29-3	4,4'-DDT	9.2	
60-57-1	Dieldrin	3.9	U
959-98-8	Endosulfan I	2.0	U
33213-65-9	Endosulfan II	3.9	U
1031-07-8	Endosulfan sulfate	3.9	U
72-20-8	Endrin	3.9	U
7421-93-4	Endrin Aldehyde	0.74	JP
76-44-8	Heptachlor	0.38	JP
1024-57-3	Heptachlor Epoxide	0.25	JP
72-43-5	Methoxychlor	20	U
8001-35-2	Toxaphene	99	U
12674-11-2	Aroclor-1016	29	U
11104-28-2	Aroclor-1221	40	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	20	U
53494-70-5	Endrin Ketone	2.6	JP
5103-74-2	gamma-Chlordane	2.0	U
5103-71-9	alpha-Chlordane	0.67	JP

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MR02-IR6
9-SS05RE-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-18RE1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 16 decanted: (Y/N) N Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/02/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	0.22	~~JP~~ J
319-85-7	beta-BHC	~~0.12~~ 1.0	~~JP~~
319-84-6	alpha-BHC	0.58	~~JP~~
319-86-8	delta-BHC	0.98	J
58-89-9	gamma-BHC (Lindane)	2.0	U
72-54-8	4,4'-DDD	1.9	J NJ
72-55-9	4,4'-DDE	22	NJ
50-29-3	4,4'-DDT	15	J
60-57-1	Dieldrin	3.9	U
959-98-8	Endosulfan I	0.27	~~JP~~ J
33213-65-9	Endosulfan II	1.2	~~JP~~ J
1031-07-8	Endosulfan sulfate	3.8	~~JP~~ J
72-20-8	Endrin	0.87	J
7421-93-4	Endrin Aldehyde	2.2	J
76-44-8	Heptachlor	2.0	U
1024-57-3	Heptachlor Epoxide	2.0	U
72-43-5	Methoxychlor	20 1.8	~~JP~~ J
8001-35-2	Toxaphene	99	U
12674-11-2	Aroclor-1016	29	U
11104-28-2	Aroclor-1221	40	U
11141-16-5	Aroclor-1232	20	U
53469-21-9	Aroclor-1242	20	U
12672-29-6	Aroclor-1248	20	U
11097-69-1	Aroclor-1254	20	U
11096-82-5	Aroclor-1260	20	U
53494-70-5	Endrin Ketone	2.5	~~JP~~ J
5103-74-2	gamma-Chlordane	2.2	~~P~~
5103-71-9	alpha-Chlordane	1.2	~~JP~~

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MR02-IR69-SS06-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-19

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 20 decanted: (Y/N) N Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/31/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	~~0.53~~	~~J~~ exclude RE
319-85-7	beta-BHC	1.1	U
319-84-6	alpha-BHC	0.68	JP
319-86-8	delta-BHC	2.1	U
58-89-9	gamma-BHC (Lindane)	2.1	U
72-54-8	4,4'-DDD	0.46	JP
72-55-9	4,4'-DDE	2.6	JP
50-29-3	4,4'-DDT	2.2	JP
60-57-1	Dieldrin	2.2	J
959-98-8	Endosulfan I	0.70	JP
33213-65-9	Endosulfan II	4.1	U
1031-07-8	Endosulfan sulfate	6.6	P
72-20-8	Endrin	4.1	U
7421-93-4	Endrin Aldehyde	0.94	JP
76-44-8	Heptachlor	0.22	JP
1024-57-3	Heptachlor Epoxide	1.3	JP
72-43-5	Methoxychlor	21	U
8001-35-2	Toxaphene	100	U
12674-11-2	Aroclor-1016	30	U
11104-28-2	Aroclor-1221	43	U
11141-16-5	Aroclor-1232	21	U
53469-21-9	Aroclor-1242	21	U
12672-29-6	Aroclor-1248	21	U
11097-69-1	Aroclor-1254	21	U
11096-82-5	Aroclor-1260	21	U
53494-70-5	Endrin Ketone	5.0	P
5103-74-2	gamma-Chlordane	2.1	U
5103-71-9	alpha-Chlordane	1.1	JP

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MR02-IR6
9-SS06RE-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-19RE1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 20 decanted: (Y/N) N Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/02/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	1.0	~~J~~ J SSH
319-85-7	beta-BHC	1.1	U
319-84-6	alpha-BHC	3.1	J SSH
319-86-8	delta-BHC	1.2	~~JP~~ J CCL
58-89-9	gamma-BHC (Lindane)	1.6	~~J~~ J SSH
72-54-8	4,4'-DDD	2.0	~~J~~ NJ OT
72-55-9	4,4'-DDE	2.9	~~JP~~ NJ
50-29-3	4,4'-DDT	3.3	~~J~~ J
60-57-1	Dieldrin	4.1	U
959-98-8	Endosulfan I	1.7	~~J~~ J CCH
33213-65-9	Endosulfan II	4.1	U
1031-07-8	Endosulfan sulfate	11	~~P~~ J SSH
72-20-8	Endrin	1.5	~~JP~~
7421-93-4	Endrin Aldehyde	3.1	~~JP~~
76-44-8	Heptachlor	1.1	~~JP~~
1024-57-3	Heptachlor Epoxide	1.6	~~J~~
72-43-5	Methoxychlor	21	~~U~~ UJ CCL
8001-35-2	Toxaphene	100	U
12674-11-2	Aroclor-1016	30	U
11104-28-2	Aroclor-1221	43	U
11141-16-5	Aroclor-1232	21	U
53469-21-9	Aroclor-1242	21	U
12672-29-6	Aroclor-1248	21	U
11097-69-1	Aroclor-1254	21	U
11096-82-5	Aroclor-1260	21	U
53494-70-5	Endrin Ketone	5.2	~~P~~ J SSH
5103-74-2	gamma-Chlordane	2.5	~~P~~
5103-71-9	alpha-Chlordane	2.0	~~JP~~

FORM I PEST

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-SD01 -10A

JLC 72310

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix (soil/water): SOIL Lab Sample ID: 1003103-14

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 23.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	7470			P	
7440-36-0	Antimony	4.1	U		P	
7440-38-2	Arsenic	4.1	U		P	
7440-39-3	Barium	36.5	~~B~~	J	P	
7440-41-7	Beryllium	0.27	~~B~~	J	P	
7440-43-9	Cadmium	2.1	U		P	
7440-70-2	Calcium	3970			P	
7440-47-3	Chromium	8.8			P	
7440-48-4	Cobalt	0.69	~~B~~	J	P	
7440-50-8	Copper	9.5			P	
7439-89-6	Iron	3100			P	
7439-92-1	Lead	12.4			P	
7439-95-4	Magnesium	2070 ~~1560~~	B	U	P	MBL
7439-96-5	Manganese	98.2			P	
7439-97-6	Mercury	0.19			CV	
7440-02-0	Nickel	3.8			P	
7440-09-7	Potassium	2070 ~~572~~	~~B~~ E	UJ	P	MBL
7782-49-2	Selenium	2.1	U		P	
7440-22-4	Silver	2.1	U		P	
7440-23-5	Sodium	2070 ~~1040~~	~~B~~	U	P	MBL
7440-28-0	Thallium	4.1	U		P	
7440-62-2	Vanadium	12.7			P	
7440-66-6	Zinc	14.4		J	P	FO

JLC 72310

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

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SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-SD01D-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix (soil/water): SOIL Lab Sample ID: 1003103-15

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 24.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	6540			P	
7440-36-0	Antimony	3.9	U		P	
7440-38-2	Arsenic	3.9	U		P	
7440-39-3	Barium	32.6	~~B~~	J	P	
7440-41-7	Beryllium	0.21	~~B~~	J	P	
7440-43-9	Cadmium	1.9	U		P	
7440-70-2	Calcium	3830			P	
7440-47-3	Chromium	7.4			P	
7440-48-4	Cobalt	0.38	~~B~~	J	P	
7440-50-8	Copper	7.7			P	
7439-89-6	Iron	2700			P	
7439-92-1	Lead	11.5			P	
7439-95-4	Magnesium	1930 ~~1530~~	~~B~~	U	P	MBL
7439-96-5	Manganese	85.2			P	
7439-97-6	Mercury	0.09	~~B~~	J	CV	
7440-02-0	Nickel	2.9			P	
7440-09-7	Potassium	1930 ~~506~~	~~B~~	~~E~~ UJ	P	MBL
7782-49-2	Selenium	1.9	U		P	
7440-22-4	Silver	1.9	U		P	
7440-23-5	Sodium	1930 ~~912~~	~~B~~	U	P	MBL
7440-28-0	Thallium	3.9	U		P	
7440-62-2	Vanadium	10.9			P	
7440-66-6	Zinc	9.6		J	P	FD

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-SS01-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix (soil/water): SOIL Lab Sample ID: 1003103-03

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 66.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	6200			P	
7440-36-0	Antimony	0.47	B	J	P	
7440-38-2	Arsenic	1.3	B	J	P	
7440-39-3	Barium	29.0	B	J	P	
7440-41-7	Beryllium	0.12	B	J	P	
7440-43-9	Cadmium	0.09	B	J	P	
7440-70-2	Calcium	1030		J	P	FD
7440-47-3	Chromium	8.8			P	
7440-48-4	Cobalt	0.50	B	J	P	
7440-50-8	Copper	4.0			P	
7439-89-6	Iron	4960			P	
7439-92-1	Lead	8.8			P	
7439-95-4	Magnesium	468	B	J	P	
7439-96-5	Manganese	49.3		J	P	FD
7439-97-6	Mercury	0.07		J	CV	FD
7440-02-0	Nickel	1.7			P	
7440-09-7	Potassium	500	B	E J	P	SD
7782-49-2	Selenium	0.86			P	
7440-22-4	Silver	0.76	U		P	
7440-23-5	Sodium	215	B	J	P	
7440-28-0	Thallium	1.5	U		P	
7440-62-2	Vanadium	12.1			P	
7440-66-6	Zinc	10.4			P	

JDC 7/23/10

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-SS01D-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix (soil/water): SOIL Lab Sample ID: 1003103-04

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 66.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	5700			P	
7440-36-0	Antimony	1.4	U		P	
7440-38-2	Arsenic	0.76	~~B~~	J	P	
7440-39-3	Barium	26.9	~~B~~	J	P	
7440-41-7	Beryllium	0.10	~~B~~	J	P	
7440-43-9	Cadmium	0.07	~~B~~	J	P	
7440-70-2	Calcium	1490		J	P	FD
7440-47-3	Chromium	8.0			P	
7440-48-4	Cobalt	0.44	~~B~~	J	P	
7440-50-8	Copper	4.9			P	
7439-89-6	Iron	4090			P	
7439-92-1	Lead	7.5			P	
7439-95-4	Magnesium	473	~~B~~	J	P	
7439-96-5	Manganese	81.1		J	P	FD
7439-97-6	Mercury	0.18		J	CV	FD
7440-02-0	Nickel	1.5			P	
7440-09-7	Potassium	533	~~B~~	~~E~~ J	P	SD
7782-49-2	Selenium	0.70	U		P	
7440-22-4	Silver	0.70	U		P	
7440-23-5	Sodium	205	~~B~~	J	P	
7440-28-0	Thallium	1.4	U		P	
7440-62-2	Vanadium	10.5			P	
7440-66-6	Zinc	10.2			P	

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-SS03-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix (soil/water): SOIL Lab Sample ID: 1003103-05

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 72.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	230			P	
7440-36-0	Antimony	1.4	U		P	
7440-38-2	Arsenic	1.4	U		P	
7440-39-3	Barium	2.8	~~B~~	J	P	
7440-41-7	Beryllium	0.69	U		P	
7440-43-9	Cadmium	0.69	U		P	
7440-70-2	Calcium	356	~~B~~	J	P	
7440-47-3	Chromium	0.55	~~B~~	J	P	
7440-48-4	Cobalt	0.69	U		P	
7440-50-8	Copper	2.1			P	
7439-89-6	Iron	174			P	
7439-92-1	Lead	2.3			P	
7439-95-4	Magnesium	76.8	~~B~~	J	P	
7439-96-5	Manganese	16.1			P	
7439-97-6	Mercury	0.04	~~B~~	J	CV	
7440-02-0	Nickel	0.69	U		P	
7440-09-7	Potassium	48.0	~~B~~	E J	P	SD
7782-49-2	Selenium	0.69	U		P	
7440-22-4	Silver	0.69	U		P	
7440-23-5	Sodium	162	~~B~~	J	P	
7440-28-0	Thallium	1.4	U		P	
7440-62-2	Vanadium	0.69	~~B~~	J	P	
7440-66-6	Zinc	3.5			P	

JC 12310

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-SS04-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix (soil/water): SOIL Lab Sample ID: 1003103-06

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 74.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1310			P
7440-36-0	Antimony	1.3	U		P
7440-38-2	Arsenic	1.3	U		P
7440-39-3	Barium	10.3	B	J	P
7440-41-7	Beryllium	0.66	U		P
7440-43-9	Cadmium	0.66	U		P
7440-70-2	Calcium	547	B	J	P
7440-47-3	Chromium	1.8			P
7440-48-4	Cobalt	0.66	U		P
7440-50-8	Copper	1.3			P
7439-89-6	Iron	544			P
7439-92-1	Lead	6.8			P
7439-95-4	Magnesium	107	B	J	P
7439-96-5	Manganese	15.6			P
7439-97-6	Mercury	0.08			CV
7440-02-0	Nickel	0.35	B	J	P
7440-09-7	Potassium	107	B E	J	P SD
7782-49-2	Selenium	0.66	U		P
7440-22-4	Silver	0.66	U		P
7440-23-5	Sodium	151	B	J	P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	3.2			P
7440-66-6	Zinc	3.2			P

JC 7/23/10

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-SS05-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix (soil/water): SOIL Lab Sample ID: 1003103-07

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 51.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6390			P
7440-36-0	Antimony	1.9	U		P
7440-38-2	Arsenic	1.9	U		P
7440-39-3	Barium	64.5			P
7440-41-7	Beryllium	0.15	~~B~~	J	P
7440-43-9	Cadmium	0.97	U		P
7440-70-2	Calcium	3860			P
7440-47-3	Chromium	4.4			P
7440-48-4	Cobalt	0.15	~~B~~	J	P
7440-50-8	Copper	3.8			P
7439-89-6	Iron	2160			P
7439-92-1	Lead	15.9			P
7439-95-4	Magnesium	551	~~B~~	J	P
7439-96-5	Manganese	347			P
7439-97-6	Mercury	0.31			CV
7440-02-0	Nickel	2.2			P
7440-09-7	Potassium	238	~~B~~	~~E~~ J	P 5D
7782-49-2	Selenium	0.97	U		P
7440-22-4	Silver	0.97	U		P
7440-23-5	Sodium	262	~~B~~	J	P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	7.1			P
7440-66-6	Zinc	14.3			P

JC 12310

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-SS06-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix (soil/water): SOIL Lab Sample ID: 1003103-08

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 69.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3590			P
7440-36-0	Antimony	1.4	U		P
7440-38-2	Arsenic	1.4	U		P
7440-39-3	Barium	31.0			P
7440-41-7	Beryllium	0.08	B	J	P
7440-43-9	Cadmium	0.70	U		P
7440-70-2	Calcium	1120			P
7440-47-3	Chromium	2.2			P
7440-48-4	Cobalt	0.12	B	J	P
7440-50-8	Copper	2.8			P
7439-89-6	Iron	909			P
7439-92-1	Lead	8.0			P
7439-95-4	Magnesium	248	B	J	P
7439-96-5	Manganese	87.3			P
7439-97-6	Mercury	0.11			CV
7440-02-0	Nickel	1.6			P
7440-09-7	Potassium	164	B	E J	P SD
7782-49-2	Selenium	0.70	U		P
7440-22-4	Silver	0.70	U		P
7440-23-5	Sodium	197	B	J	P
7440-28-0	Thallium	1.4	U		P
7440-62-2	Vanadium	3.3			P
7440-66-6	Zinc	10.6			P

JLC 7/8/10

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MR02-IR69-SS01-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix (soil/water): SOIL Lab Sample ID: 1003103-01

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 76.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3850			P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	1.2	U		P
7440-39-3	Barium	24.4			P
7440-41-7	Beryllium	0.10	~~B~~	J	P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	482	~~B~~	J	P
7440-47-3	Chromium	2.2			P
7440-48-4	Cobalt	0.30	~~B~~	J	P
7440-50-8	Copper	3.0			P
7439-89-6	Iron	1330			P
7439-92-1	Lead	8.3			P
7439-95-4	Magnesium	164	~~B~~	J	P
7439-96-5	Manganese	28.9			P
7439-97-6	Mercury	0.10		J	CV
7440-02-0	Nickel	1.7			P
7440-09-7	Potassium	130	~~B~~	~~E~~ J	P
7782-49-2	Selenium	0.60	U		P
7440-22-4	Silver	0.60	U		P
7440-23-5	Sodium	167	~~B~~	J	P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	4.7			P
7440-66-6	Zinc	10.1			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MR02-IR69-SS01D -10B

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix (soil/water): SOIL Lab Sample ID: 1003103-02

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 77.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3570			P
7440-36-0	Antimony	1.3	U		P
7440-38-2	Arsenic	1.3	U		P
7440-39-3	Barium	33.9			P
7440-41-7	Beryllium	0.14	B	J	P
7440-43-9	Cadmium	0.64	U		P
7440-70-2	Calcium	455	B	J	P
7440-47-3	Chromium	2.0			P
7440-48-4	Cobalt	0.29	B	J	P
7440-50-8	Copper	2.5			P
7439-89-6	Iron	1020			P
7439-92-1	Lead	8.8			P
7439-95-4	Magnesium	159	B	J	P
7439-96-5	Manganese	29.9			P
7439-97-6	Mercury	0.15		J	CV FO
7440-02-0	Nickel	1.6			P
7440-09-7	Potassium	122	B	E J	P SD
7782-49-2	Selenium	0.64	U		P
7440-22-4	Silver	0.64	U		P
7440-23-5	Sodium	125	B	J	P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	3.5			P
7440-66-6	Zinc	10.0			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MR02-IR69-SS02-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix (soil/water): SOIL Lab Sample ID: 1003103-16

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 83.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2870			P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	1.2	U		P
7440-39-3	Barium	15.2	~~B~~	J	P
7440-41-7	Beryllium	0.04	~~B~~	J	P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	315	~~B~~	J	P
7440-47-3	Chromium	2.4			P
7440-48-4	Cobalt	0.60	U		P
7440-50-8	Copper	1.5			P
7439-89-6	Iron	939			P
7439-92-1	Lead	10.3			P
7439-95-4	Magnesium	596 ~~122~~	~~B~~	U	P MBL
7439-96-5	Manganese	58.2			P
7439-97-6	Mercury	0.10			CV
7440-02-0	Nickel	0.77			P
7440-09-7	Potassium	596 ~~93.3~~	~~B~~	~~E~~ UJ	P MBL
7782-49-2	Selenium	0.60	U		P
7440-22-4	Silver	0.60	U		P
7440-23-5	Sodium	596 ~~139~~	~~B~~	U	P MBL
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	3.6			P
7440-66-6	Zinc	9.6			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MR02-IR69-SS04-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix (soil/water): SOIL Lab Sample ID: 1003103-17

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 77.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	1380			P	
7440-36-0	Antimony	1.3	U		P	
7440-38-2	Arsenic	1.3	U		P	
7440-39-3	Barium	8.1	~~B~~	J	P	
7440-41-7	Beryllium	0.64	U		P	
7440-43-9	Cadmium	0.64	U		P	
7440-70-2	Calcium	235	~~B~~	J	P	
7440-47-3	Chromium	1.7			P	
7440-48-4	Cobalt	0.11	~~B~~	J	P	
7440-50-8	Copper	1.7			P	
7439-89-6	Iron	582			P	
7439-92-1	Lead	5.1			P	
7439-95-4	Magnesium	638 ~~101~~	~~B~~	U	P	MBL
7439-96-5	Manganese	14.0			P	
7439-97-6	Mercury	0.14			CV	
7440-02-0	Nickel	0.58	~~B~~	J	P	
7440-09-7	Potassium	638 ~~73.8~~	~~B~~	~~E~~ UJ	P	MBL
7782-49-2	Selenium	0.64	U		P	
7440-22-4	Silver	0.64	U		P	
7440-23-5	Sodium	638 ~~177~~	~~B~~	U	P	MBL
7440-28-0	Thallium	1.3	U		P	
7440-62-2	Vanadium	2.3	~~B~~	J	P	
7440-66-6	Zinc	2.8			P	

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MR02-IR69-SS05-10A MC 2310

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix (soil/water): SOIL Lab Sample ID: 1003103-18

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 84.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	1390			P	
7440-36-0	Antimony	1.1	U		P	
7440-38-2	Arsenic	1.1	U		P	
7440-39-3	Barium	6.7	~~B~~	J	P	
7440-41-7	Beryllium	0.57	U		P	
7440-43-9	Cadmium	0.57	U		P	
7440-70-2	Calcium	296	~~B~~	J	P	
7440-47-3	Chromium	1.3			P	
7440-48-4	Cobalt	0.57	U		P	
7440-50-8	Copper	1.1			P	
7439-89-6	Iron	623			P	
7439-92-1	Lead	3.1			P	
7439-95-4	Magnesium	5600 ~~89.5~~	~~B~~	U	P	MBL
7439-96-5	Manganese	37.0			P	
7439-97-6	Mercury	0.02	~~B~~	J	CV	
7440-02-0	Nickel	0.21	~~B~~	J	P	
7440-09-7	Potassium	5600 ~~61.2~~	~~B~~	~~E~~ UJ	P	MBL
7782-49-2	Selenium	0.57	U		P	
7440-22-4	Silver	0.57	U		P	
7440-23-5	Sodium	5600 ~~115~~	~~B~~	U	P	MBL
7440-28-0	Thallium	1.1	U		P	
7440-62-2	Vanadium	2.0	~~B~~	J	P	
7440-66-6	Zinc	3.1			P	

MC 2310

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MR02-IR69-SS06-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix (soil/water): SOIL Lab Sample ID: 1003103-19

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 79.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1410			P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	1.2	U		P
7440-39-3	Barium	5.4	~~B~~	J	P
7440-41-7	Beryllium	0.59	U		P
7440-43-9	Cadmium	0.59	U		P
7440-70-2	Calcium	378	~~B~~	J	P
7440-47-3	Chromium	1.2			P
7440-48-4	Cobalt	0.59	U		P
7440-50-8	Copper	1.3			P
7439-89-6	Iron	818			P
7439-92-1	Lead	3.4			P
7439-95-4	Magnesium	586 ~~99.7~~	~~B~~	U	P MBL
7439-96-5	Manganese	26.1			P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	0.43	~~B~~	J	P
7440-09-7	Potassium	586 ~~69.7~~	~~B~~ ~~E~~	UJ	P MBL
7782-49-2	Selenium	0.59	U		P
7440-22-4	Silver	0.59	U		P
7440-23-5	Sodium	586 ~~142~~	~~B~~	U	P MBL
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	2.6			P
7440-66-6	Zinc	2.9			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1R69-SB01-01-02-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix (soil/water): SOIL Lab Sample ID: 1003103-12

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 80.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15900			P
7440-36-0	Antimony	0.36	~~B~~	J	P
7440-38-2	Arsenic	3.7			P
7440-39-3	Barium	19.9	~~B~~	J	P
7440-41-7	Beryllium	0.21	~~B~~	J	P
7440-43-9	Cadmium	0.18	~~B~~	J	P
7440-70-2	Calcium	122	~~B~~	J	P
7440-47-3	Chromium	24.1			P
7440-48-4	Cobalt	1.3			P
7440-50-8	Copper	3.4			P
7439-89-6	Iron	13300			P
7439-92-1	Lead	6.8			P
7439-95-4	Magnesium	1080			P
7439-96-5	Manganese	20.3			P
7439-97-6	Mercury	0.15			CV
7440-02-0	Nickel	3.4			P
7440-09-7	Potassium	1160		~~E~~ J	P SD
7782-49-2	Selenium	0.71			P
7440-22-4	Silver	0.57	U		P
7440-23-5	Sodium	571 ~~165~~	~~B~~	4	P FBL
7440-28-0	Thallium	1.1	U		P
7440-62-2	Vanadium	30.4			P
7440-66-6	Zinc	10.9			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1R69- SB01D-01-02 - 10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix (soil/water): SOIL Lab Sample ID: 1003103-13

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 84.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12800			P
7440-36-0	Antimony	1.1	U		P
7440-38-2	Arsenic	2.6			P
7440-39-3	Barium	17.9	~~B~~	J	P
7440-41-7	Beryllium	0.17	~~B~~	J	P
7440-43-9	Cadmium	0.27	~~B~~	J	P
7440-70-2	Calcium	129	~~B~~	J	P
7440-47-3	Chromium	18.1			P
7440-48-4	Cobalt	1.1			P
7440-50-8	Copper	2.8			P
7439-89-6	Iron	10200			P
7439-92-1	Lead	5.6			P
7439-95-4	Magnesium	842			P
7439-96-5	Manganese	18.4			P
7439-97-6	Mercury	0.02	~~B~~	J	CV
7440-02-0	Nickel	3.0			P
7440-09-7	Potassium	883		E J	P SD
7782-49-2	Selenium	0.54	U		P
7440-22-4	Silver	0.54	U		P
7440-23-5	Sodium	~~191~~ 544	~~B~~	U	P FBL
7440-28-0	Thallium	1.1	U		P
7440-62-2	Vanadium	23.0			P
7440-66-6	Zinc	9.1			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IRG9-SB04-06-07-16A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix (soil/water): SOIL Lab Sample ID: 1003103-09

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 77.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	14500			P	
7440-36-0	Antimony	0.42	~~B~~	J	P	
7440-38-2	Arsenic	4.8			P	
7440-39-3	Barium	10.5	~~B~~	J	P	
7440-41-7	Beryllium	0.12	~~B~~	J	P	
7440-43-9	Cadmium	0.15	~~B~~	J	P	
7440-70-2	Calcium	51.4	~~B~~	J	P	
7440-47-3	Chromium	21.0			P	
7440-48-4	Cobalt	0.41	~~B~~	J	P	
7440-50-8	Copper	4.5			P	
7439-89-6	Iron	12200			P	
7439-92-1	Lead	6.3			P	
7439-95-4	Magnesium	594 ~~557~~	~~B~~	U	P	EBL
7439-96-5	Manganese	11.1			P	
7439-97-6	Mercury	0.04	U		CV	
7440-02-0	Nickel	1.1			P	
7440-09-7	Potassium	885		~~E~~ J	P	SD
7782-49-2	Selenium	0.58	~~B~~	J	P	
7440-22-4	Silver	0.59	U		P	
7440-23-5	Sodium	594 ~~141~~	~~B~~	U	P	FBL
7440-28-0	Thallium	1.2	U		P	
7440-62-2	Vanadium	22.6			P	
7440-66-6	Zinc	5.5			P	

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1869-SB05-06-07-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix (soil/water): SOIL Lab Sample ID: 1003103-10

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 69.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	20600			P	
7440-36-0	Antimony	0.47	~~B~~	J	P	
7440-38-2	Arsenic	4.6			P	
7440-39-3	Barium	32.8			P	
7440-41-7	Beryllium	0.29	~~B~~	J	P	
7440-43-9	Cadmium	0.36	~~B~~	J	P	
7440-70-2	Calcium	754			P	
7440-47-3	Chromium	29.6			P	
7440-48-4	Cobalt	1.0			P	
7440-50-8	Copper	5.3			P	
7439-89-6	Iron	13800			P	
7439-92-1	Lead	6.8			P	
7439-95-4	Magnesium	975			P	
7439-96-5	Manganese	17.5			P	
7439-97-6	Mercury	0.03	~~B~~	J	CV	
7440-02-0	Nickel	3.3			P	
7440-09-7	Potassium	1370		E J	P	SD
7782-49-2	Selenium	0.71			P	
7440-22-4	Silver	0.68	U		P	
7440-23-5	Sodium	677 ~~298~~	~~B~~	U	P	FBL
7440-28-0	Thallium	1.4	U		P	
7440-62-2	Vanadium	39.0			P	
7440-66-6	Zinc	10.2			P	

SAC 3/23/10

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

201

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1R69- SB06-06-07 - 10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix (soil/water): SOIL Lab Sample ID: 1003103-11

Level (low/med): LOW Date Received: 3/12/2010

% Solids: 77.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13100			P
7440-36-0	Antimony	0.58	B	J	P
7440-38-2	Arsenic	3.5			P
7440-39-3	Barium	14.9	B	J	P
7440-41-7	Beryllium	0.13	B	J	P
7440-43-9	Cadmium	0.07	B	J	P
7440-70-2	Calcium	38.8	B	J	P
7440-47-3	Chromium	19.6			P
7440-48-4	Cobalt	0.46	B	J	P
7440-50-8	Copper	3.1			P
7439-89-6	Iron	8670			P
7439-92-1	Lead	6.5			P
7439-95-4	Magnesium	622 ~~559~~	~~B~~	U	P
7439-96-5	Manganese	11.8			P
7439-97-6	Mercury	0.08			CV
7440-02-0	Nickel	1.4			P
7440-09-7	Potassium	872		E J	P
7782-49-2	Selenium	0.62	U		P
7440-22-4	Silver	0.62	U		P
7440-23-5	Sodium	622 ~~472~~	~~B~~	U	P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	22.5			P
7440-66-6	Zinc	6.1			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

202

21786

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CHAIN OF CUSTODY

501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Page 1 of 1

Courier
Airbill No.
Sampling Complete? Y or N

Company Name: CH2M Hill	Project Name: CTO-081
Address: 11301 Carmel Commons Blvd Ste 304	Sampling Location: MCB Camp Lej Site 9
City: Charlotte State: NC Zip: 28226	Turnaround time: Standard
Project Contact: Gwen Buckley	Batch QC or Project Specific? If Specific, which Sample ID? Batch
Phone #: 757-671-6292	Are aqueous samples field filtered for metals? Y or N
Sampler's Name	Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	~~H2SO4~~ none	MEOH	Other Na2S2O3	8260B (1 MeOH, 2 Na2S2O3 w/ sulfate, 2 w/ ascorbic acid)	8270C/8270C-SIM (1 Amber)	RSK 175 MEE (2 40ml VOAs, HCl)	3550B/8081A/8082 (2 1L Amber)	TOC (2 40ml VOAs H2SO4)	CNNS-AIK (1-250ml poly, none)	Sulfide (1-500ml poly, Zn acetate, NaOH)	6010B/TAL METALS (1-500ml poly, HNO3)	Dissolved 6010B/METALS (1-500ml poly, filtered)					
1003103-01	MR02-IR69-SS01-10A	3/4/10	1515	Soil	4				X	X	X	X														
-02	~~MR02-IR69-SS01D-10A~~	3/4/10	1520	Soil	4				X	X	X	X														
-03	IR69-SS01-10A	3/4/10	0915	Soil	4				X	X	X	X														
-04	IR69-SS01D-10A	3/4/10	0920	Soil	4				X	X	X	X														
-05	IR69-SS03-10A	3/4/10	1015	Soil	4				X	X	X	X														
-06	IR69-SS04-10A	3/4/10	1040	Soil	4				X	X	X	X														
-07	IR69-SS05-10A	3/4/10	1120	Soil	4				X	X	X	X														
-08	IR69-SS06-10A	3/4/10	1145	Soil	4				X	X	X	X														
1003102-13	IR69-TB-031010	3/10/10	1400	TB	3	X						X														

Sample Unpacked By: Jennifer Doer
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain: ~~See comments~~ [illegible] 3/12/10

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

~~Rec'd following samples in cooler, Not listed on COC:~~
~~SB01-01-02-10A 3/9/10 1330, SB01D-01-02-10A 3/7/10 1330,~~
~~SB01-06-07-10A 3/7/10 1400, SB05-06-07-10A 3/9/10 0830,~~
~~SB06-06-07-10A 3/7/10 1145~~ JD 3/12/10

Relinquished by: [illegible]	Date/Time: 3/10/10 1400	Received by: Jennifer Doer	Date/Time: 3/12/10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 0.1 °C

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer SN0015

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CHAIN OF CUSTODY

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501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Courier
Airbill No.
Sampling Complete? Y or N

Company Name: CH2MHill
Address: 11301 Carmel Commons Blvd-Ste.304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: N Monroe / NWO / CH2MHill

Project Name: CTO-081
Sampling Location: MCB Camley Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID? Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab Sample ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other none	8260B	8270C/8270C-SIM (Pentane) 1-2L	RSK 175 MEE (VOAs, HCl) 2-40ml	3550B/8015A/8082 (Aroclors) 1-2L	TOC 2-40ml VOAs H2SO4	CN/WS-Alk (poly, aqua) 1-250ml	Sulfide (Zinc acet, 6N NaOH) 1-500ml poly	6010B/Total metals (poly, HNO3) 1-500ml poly	6010B/Dissolved metals (poly, HNO3, field filtered)						
1003103-01	MR02-IR69-SS01-10A	3/4/10	1515	Soil	1						X		X		X				X							
-02	MR02-IR69-SS01D-10A	3/4/10	1520	Soil	1						X		X		X				X							
-03	IR69-SS01-10A	3/4/10	0915	Soil	2						X		X		X				X							
-04	IR69-SS01D-10A	3/4/10	0920	Soil	2						X		X		X				X							
-05	IR69-SS03-10A	3/4/10	1015	Soil	2						X		X		X				X							
-06	IR69-SS04-10A	3/4/10	1040	Soil	2						X		X		X				X							
-07	IR69-SS05-10A	3/4/10	1120	Soil	2						X		X		X				X							
-08	IR69-SS06-10A	3/4/10	1145	Soil	2						X		X		X				X							

Sample Unpacked By: Jennifer Doer
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Relinquished by: [illegible]	Date/Time: 3/10/10 1400	Received by: Jennifer Doer	Date/Time: 3/12/10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:
Subcontact? Y or N If yes, where?		Custody Seal(s) intact? Y or N	On Ice? Y or N

Cooler Temp: 0.3 °C

Samples stored 60 days after date report mailed at no extra charge.

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Courier
Airbill No.
Sampling Complete? Y or N

Section A - Client Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Section B - Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch.
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Lab ID (Compuchem use only)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other none	8260B	8270C/8270C-SIM (Amber) 2-40 ml	RSK 175 MEE/VOAS HCl 2-1L	3550B/8081A/8082 (Amber) 2-40 ml VOAs H2SO4	TOC 1-250 ml	CNNS-AIK (poly, none)	Sulfide (Zinc Acetate & NaOH) 1-500 ml poly	6010B/ TAL METALS (poly, HNO3) 1-500 ml poly	6010B/ METALS (Hazardous HNO3)		Lab Use Only				
1003103-09	IR69-SB04-06-07-10A	3/7/10	1600	soil	2						X		X		X				X							
-10	IR69-SB05-06-07-10A	3/7/10	0930	soil	2						X		X		X				X							
-11	IR69-SB06-06-07-10A	3/7/10	1145	soil	2						X		X		X				X							
-12	IR69-SB01-01-02-10A	3/7/10	1330	soil	2						X		X		X				X							
-13	IR69-SB01D-01-02-10A	3/7/10	1330	soil	2						X		X		X				X							

VOC containers rec'd for these in cooler @ 0.1°C
the VOC 8260B were not on any COC
5/12/10

Sample Unpacked By: Jennifer Doer
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Relinquished by: Jeffrey Mitt	Date/Time: 3/10/10 1400	Received by: Jennifer Doer	Date/Time: 3/12/10 1145
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 0.2 °C

Samples stored 60 days after date report mailed at no extra charge.

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Matrix: GW - Ground water, WW - Waste water, SW - Surface water, SO - Soil/Sediment, TB - Trip Blank, RI - Rinsate, WP - Wipe, O - Other

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Courier:
Airbill No.:
Sampling Complete? Y or N

Client Reporting Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camby Ste. 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Contract Lab Use Only	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	Sodium H2SO4 Bisulfate	MEOH	Other none	8260B (GW: 40mL VOA vials, 2 Hydrochloric, Water Soil: VOA vial, cooled to 4°C) 3-40mL VOAs	8270C/8270C-SIM (2-1L Ambers)	RSK 175 MEE (2-40mL VOAs, HCl)	3550B/8081A/8082 (2-1L Ambers)	TOC (2-40mL VOAs, H2SO4)	CNWS-ALK (1-250mL poly, none)	Sulfide (1-500mL poly, Zn Acetate, add NaOH)	TPH (1-500mL poly, HNO3)	6010B/METALS (1-500mL poly, HNO3 Dissolved)	6010B/metals (1-500mL poly, HNO3 Field Filtered)	
1003136-04	IR69-SW01D-10A	3/14/10	1350	SW	3	3						3										
1003102-17	IR69-GW05DW-10A	3/14/10	1220	GW	3	3						3										
-18	IR69-GW05IW-10A	3/14/10	1230	GW	3	3						3										
1003102-14	IR69-GW04-10A	3/14/10	1035	GW	3	3						3										
	IR69-GW04-10A-MS	3/14/10	1035	GW	3	3						3										
	IR69-GW04-10A-SD	3/14/10	1035	GW	3	3						3										
1003108-14	IR69-SD01-10A *	3/14/10	1500	SO	4				2	1	1 (2oz)	4	*one 40ml sodium bisulfate bottle									
-15	IR69-SD01D-10A	3/14/10	1505	SO	4				2	1	1 (4oz)	4										

3/17/10

Laboratory Information

Sample Unpacked By: Jennifer Dyer
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Relinquished by:	Date/Time: 3/17/10 1500	Received by: Jennifer Dyer	Date/Time: 3/17/10 1600
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 0.6 °C

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Courier
Airbill No.
Sampling Complete? Y or N

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd. Ste. 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Jessica M Hightower

Project Name: CTO-081
Sampling Location: MCB Camby Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab Sample ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other none	Total Metals 6010B	SM5310B: TOTAL ORGANIC CARBON	3550B/8000A/8082 2-1L 8oz jar	8270C/8270C-SIM Amber	RSK 175 MEE 2-40 ml VOAs, HCl	3550B/8081A/8082 2-1L Amber	TOC 2-40 ml VOAs H2SO4	CN/S-AIK 1-250 ml poly, None	Sulfide 1-500 ml poly Zn Ac, Cold NaOH	TPH 1-500 ml poly, HNO3 4-oz jar	6010B/metals 1-500 ml poly HNO3	Dissolved Field Filtered	Grain Size Analysis 1 pint 4 oz jar	
1003150-01	IR69-SBMW28DW-20-25-10A	3/15/10	1330	Soil SO	2						2													2	8oz
-02	IR69-SBMW28DW-80-85-10A	3/15/10	1540	Soil SO	3						3													3	4oz
1003103-14	IR69-SD01-10A	3/14/10	1500	SO	3						3	1	1							1					
-15	IR69-SD01D-10A	3/14/10	1505	SO	3						3	1	1							1					
1003150-03	IR69-SBMW26DW-20-25-10A	3/11/10	1015	SO	2						2													2	8oz
-04	IR69-SBMW26DW-55-60-10A	3/11/10	1345	SO	2						2													2	8oz
-05	IR69-SBMW26DW-85-90-10A	3/11/10	1500	SO	2						2													2	8oz

Sample Unpacked By: Jennifer Doer
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Relinquished by:	Date/Time: 3/17/10 1400	Received by: Jennifer Doer	Date/Time: 3/17/10 1600
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 1.4 °C

Samples stored 60 days after date report mailed at no extra charge.

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Courier
Airbill No.
Sampling Complete? Y or N

Company Name: CH2M Hill	Project Name: CTO-081
Address: 11301 Carmel Commons Blvd Ste 304	Sampling Location: MCB Camp Lej Site 69
City: Charlotte State: NC Zip: 28226	Turnaround time: Standard
Project Contact: Steven Buckley	Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Phone #: 757 671 6292	Are aqueous samples field filtered for metals? Y or N
Sampler's Name:	Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Contact ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	Sodium Thio Sulfate	MEOH	Other HNO3 none	8260B (6ml KCl: 3-40ml VOAs, HCl; SO: 2-40ml Dichlorobenzene free, 1-40ml Methanol free)	8270C/8270C-SIM (2-40ml Amber Glass)	RSK 175 MEE (2-40ml VOAs, HCl)	3550B/8082/8082 (2-1L Amber Glass)	TOC (1-250ml, H2SO4)	CNNS-AIK (1-500ml poly, none)	Sulfide (1-500ml poly, ZnAc, NaOH)	TPH (1-500ml poly, HNO3)	6010B METALS (Baseline Dig-500ml poly, HNO3)	6010B Protocol (Field Filtered)					
1003136-06	IR69-TB-031710	3/17/10	1210	TB	3	3						3														
1003103-16	MR02-IR69-SS02-10A	3/13/10	1230	SO	~~4~~ 5				2	1	2	4	1													
-17	MR02-IR69-SS04-10A	3/13/10	1400	SO	~~4~~ 5				2	1	2	4	1													
-18	MR02-IR69-SS05-10A	3/13/10	1445	SO	5				2	1	2	4	1													
-19	MR02-IR69-SS06-10A	3/13/10	1430	SO	5				2	1	2	4	1													
	~~IR69-SB08-01-05-10A~~	~~3/14/10~~	~~dmd~~																							

Sample Unpacked By: Jennifer Doan
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Relinquished by: [illegible]	Date/Time: 3/17/10 1300	Received by: Jennifer Doan	Date/Time: 3/17/10 1600
Relinquished by:	Date/Time:	Received by:	Date/Time:
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 0.1 °C

Samples stored 60 days after date report mailed at no extra charge.

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Sample ID Cross Reference

LAB WO	Project	Sample #	Field ID	Sample Date	Receive Date	DueDate	Chain of Custody ID
1003103	CTO-081 SITE 69/289017.SA.DM/N624	1003103-01	MR02-IR69-SS01	03/04/2010	03/12/2010	04/11/2010	MR02-IR69-SS01-10A
1003103	CTO-081 SITE 69/289017.SA.DM/N624	1003103-02	MR02-IR69-SS01D	03/04/2010	03/12/2010	04/11/2010	MR02-IR69-SS01D-10A
1003103	CTO-081 SITE 69/289017.SA.DM/N624	1003103-03	IR69-SS01-10A	03/04/2010	03/12/2010	04/11/2010	
1003103	CTO-081 SITE 69/289017.SA.DM/N624	1003103-04	IR69-SS01D-10A	03/04/2010	03/12/2010	04/11/2010	
1003103	CTO-081 SITE 69/289017.SA.DM/N624	1003103-05	IR69-SS03-10A	03/04/2010	03/12/2010	04/11/2010	
1003103	CTO-081 SITE 69/289017.SA.DM/N624	1003103-06	IR69-SS04-10A	03/04/2010	03/12/2010	04/11/2010	
1003103	CTO-081 SITE 69/289017.SA.DM/N624	1003103-07	IR69-SS05-10A	03/04/2010	03/12/2010	04/11/2010	
1003103	CTO-081 SITE 69/289017.SA.DM/N624	1003103-08	IR69-SS06-10A	03/04/2010	03/12/2010	04/11/2010	
1003103	CTO-081 SITE 69/289017.SA.DM/N624	1003103-09	SB04-06-07	03/07/2010	03/12/2010	04/11/2010	IR69-SB04-06-07-10A
1003103	CTO-081 SITE 69/289017.SA.DM/N624	1003103-10	SB05-06-07	03/07/2010	03/12/2010	04/11/2010	IR69-SB05-06-07-10A
1003103	CTO-081 SITE 69/289017.SA.DM/N624	1003103-11	SB06-06-07	03/07/2010	03/12/2010	04/11/2010	IR69-SB06-06-07-10A
1003103	CTO-081 SITE 69/289017.SA.DM/N624	1003103-12	SB01-01-02	03/07/2010	03/12/2010	04/11/2010	IR69-SB01-01-02-10A
1003103	CTO-081 SITE 69/289017.SA.DM/N624	1003103-13	SB01D-01-02	03/07/2010	03/12/2010	04/11/2010	IR69-SB01D-01-02-10A
1003103	CTO-081 SITE 69/289017.SA.DM/N624	1003103-14	IR69-SD01	03/14/2010	03/17/2010	04/11/2010	IR69-SD01-10A
1003103	CTO-081 SITE 69/289017.SA.DM/N624	1003103-15	IR69-SD01D	03/14/2010	03/17/2010	04/11/2010	IR69-SD01D-10A
1003103	CTO-081 SITE 69/289017.SA.DM/N624	1003103-16	MR02-IR69-SS02	03/13/2010	03/17/2010	04/11/2010	MR02-IR69-SS02-10A
1003103	CTO-081 SITE 69/289017.SA.DM/N624	1003103-17	MR02-IR69-SS04	03/13/2010	03/17/2010	04/11/2010	MR02-IR69-SS04-10A

LAB WO	Project	Sample #	Field ID	Sample Date	Receive Date	DueDate	Chain of Custody ID
1003103	CTO-081 SITE 69/289017.SA.DM/N624	1003103-18	MR02-IR69-SS05	03/13/2010	03/17/2010	04/11/2010	MR02-IR69-SS05-10A
1003103	CTO-081 SITE 69/289017.SA.DM/N624	1003103-19	MR02-IR69-SS06	03/13/2010	03/17/2010	04/11/2010	MR02-IR69-SS06-10A

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Data Completeness

The data package was received complete and intact. Resubmissions were not required. (SW846 Method 8260B)

Laboratory: CompuChem

Holding Times

Sampling Date: 3/04-14/10
Received Date: 3/12-17/10
Analysis Dates: 3/15-27/10

Cooler Temp: 0.1-1.4°C

All prep and analysis holding time requirements were met.

Calibrations

Mass assignments were verified by the injection of BFB.

The initial and continuing calibrations required qualifications due to high % RSDs and %D values; see attached FormVI and VIIs.

Internal Standards

All criteria met with the exception of the samples listed in the table below, qualifications were applied as stated to the associated compounds.

Sample ID	Non-compliant ISTD	Qualifier	Q-code
IR69-SS05-10A, IR69-SD01-10A IR69-SD01D-10A	1,4-dichlorobenzene-d4	J/UJ	ISL
MR02-IR69-SS05-10A	chlorobenzene-d5	J/UJ	ISL
	1,4-dichlorobenzene-d4	J/R	ISL

Blank Summary

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying criteria.
- Qualification/Action codes where applied as stated in table below:

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Storage, Field, Trip, Instrument	Detects	Not detected	No qualifications
	< CRQL*	< CRQL*	Report CRQL value with a U
		≥ CRQL*	Use professional judgment
	> CRQL*	< CRQL*	Report CRQL value with a U
		≥ CRQL* and < blank concentration	Report the concentration for the sample with a U, or qualify the data as unusable R
		≥ CRQL* and ≥ blank concentration	Use professional judgment
	= CRQL*	< CRQL*	Report CRQL value with a U
		≥ CRQL*	Use professional judgment
	Gross contamination	Detects	Qualify results as unusable R

*2x the CRQL for methylene chloride, 2-butanone and acetone

Method blank contamination was exhibited- qualifications were required. The associated field QC for this data package was: IR69-TB01-031010, IR69-TB01-031310 and IR69-TB01-031710 (no positive results)- trip blanks; IR69-EB01-030410-SS, IR69-EB01-030710-SB, IR69-EB-031310-SS and IR69-EB01-031410-SD-equipment blanks; IR69-FB01-031010, IR69-FB01-030310 and IR69-FB01-031910 - field blank.

Blank Contamination and Qualification Summaries

Blank ID	Compound	Concentration	Reporting Limit
VBLKHM	chloromethane	0.54J ug/Kg	5.0 ug/Kg
	cyclohexane	1.0J	5.0
VBLKHD	methylene chloride	0.81J	5.0
	1,2,4-trichlorobenzene	0.53J	5.0
IR69-TB01-030810	acetone	1.8J ug/L	2.5 ug/L
	cis-1,2-dichloroethene	0.032J	0.5
IR69-TB01-0313810	acetone	1.2J	2.5
IR69-EB01-030410-SS	carbon disulfide	0.022J	0.5
	acetone	6.2	2.5
	methylene chloride	11	0.5
	2-butanone	1.8J	2.5
	chloroform	0.95	0.5
	benzene	0.2J	0.5
	1,2-dichloroethane	0.32J	0.5
	bromodichloromethane	0.08J	0.5
	toluene	0.93	0.5
	chlorobenzene	0.023J	0.5
	ethylbenzene	0.16J	0.5
	o-xylene	0.31J	0.5
	xylene (total)	0.31J	0.5
IR69-EB01-030710-SB	acetone	5.2	2.5
	methylene chloride	8.3	0.5
	chloroform	0.16J	0.5
	toluene	2.6	0.5
	chlorobenzene	0.29J	0.5

IR69-SD01-10A, IR69-SD01D-10A, IR69-SS01-10A, IR69-SS01D-10A, IR69-SS03-10A, IR69-SS05-10A, IR69-SS06-10A, MR02-IR69-SS01D-10A, MR02-IR69-SS04-10A, MR02-IR69-SS05-10A, MR02-IR69-SS06-10A, IR69-SB01-01-02-10A, IR69-SB01D-01-02-10A, IR69-SB05-06-07-10A	toluene	U at RL	EBL
IR69-SS04-10A	o-xylene	U at RL	FBL
MR02-IR69-SS01-10A	toluene	U	FBL
IR69-SB01-01-02-10A, IR69-SB01D-01-02-10A	acetone	U	EBL
IR69-SB04-06-07-10A	acetone	U at RL	EBL

Surrogates

All criteria were met with the exception of the samples listed in the table below, qualifications were applied as stated.

Sample ID	Non-compliant Surrogate	% Rec	QC Limit	Qualifier	Q-Code
MR02-IR69-SS01-10A	toluene-d8	123	85-115	J	SSH
MR02-IR69-SS01D-10A		117			
IR69-SS01D-10A		118			
IR69-SS03-10A		116			
IR69-SS04-10A		123			
IR69-SS05-10A		125			
IR69-SS06-10A		127			
IR69-SB05-06-07-10A		117			
IR69-SD01-10A	toluene-d8	128	85-115	J	SSH
	bromofluorobenzene	151	85-120		
IR69-SDO1D-10A	toluene-d8	126	85-115	J	SSH
	bromofluorobenzene	151	85-120		
MR02-IR69-SS04-10A	toluene-d8	77	85-115	J/UJ	SSL
MR02-IR69-SS05-10A		76			
MR02-IR69-SS06-10A	dibromofluoromethane	57	71-141	J/UJ	SSL
	1,2-dichloroethane-d4	66	70-139		
	toluene-d8	35	85-115		
	bromofluorobenzene	23	85-120		

Laboratory Control Sample

All criteria were met.

Matrix Spike/Spike Duplicate Samples

An MS/MSD was not submitted for this data package.

Field Duplicate Sample

A field duplicate was submitted for samples IR69-SB01-01-02-10A and IR69-SD01-10A; no qualifications were required, see attached sheet.

IR69-EB01-031310-SS	acetone	3.0	2.5
	methylene chloride	0.86	0.5
	2-butanone	1.7J	2.5
	chloroform	1.7	0.5
	toluene	1.1	0.5
IR69-EB01-031410-SD	acetone	6.2	2.5
	methylene chloride	5.1	0.5
	2-butanone	2J	2.5
	chloroform	1.0	0.5
	bromodichloromethane	0.085J	0.5
	toluene	1.2	0.5
IR69-FB01-030310	acetone	4.1	2.5
	methylene chloride	13	0.5
	chloroform	0.31J	0.5
	toluene	4.1	0.5
	chlorobenzene	0.47J	0.5
IR69-FB01-031010	acetone	5.5	2.5
	methylene chloride	10	0.5
	cis-1,2-dichloroethene	0.035	0.5
	2-butanone	1.8J	0.5
	chloroform	0.19J	0.5
	benzene	0.12J	0.5
	toluene	2.6	0.5
	chlorobenzene	0.23J	0.5
	ethylbenzene	0.064J	0.5
	o-xylene	0.062J	0.5
IR69-FB01-031910	acetone	7.8	2.5
	methylene chloride	1.4	0.5
	2-butanone	1.8J	0.5
	chloroform	2.4	0.5
	benzene	0.17J	0.5
	toluene	2.1	0.5
	ethylbenzene	0.076J	0.5
	m,p-xylene	0.16J	0.5
	o-xylene	0.068	0.5
	xylene (total)	0.24	0.5

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Qual Code
IR69-SB06-06-07-10A, IR69-SB01D-01-02-10A	chloromethane	U at RL	MBL
IR69-SB06-06-07-10A, IR69-SB01-01-02-10A, IR69-SB01D-01-02-10A	cyclohexane	U at RL	MBL
IR69-SS01-10A	methylene chloride	U at RL	MBL
IR69-SD01-10A, IR69-SD01D-10A, IR69-SS03-10A, IR69-IR69-SS01-10A, MR02-IR69-SS01D-10A, MR02-IR69-SS04-10A, MR02-IR69-SS05-10A, IR69-SB01D-01-02-10A	2-butanone	U at RL	EBL

Specific Comments:

All sample results were reported within the calibration range of the instruments. Dilutions were required for samples IR69-SS05-10A and MR02-IR69-SS06-10A to obtain results within the calibration range.

Several samples were re-analyzed due to non-compliant surrogate and/or internal standard area recoveries. The initial analysis was used and the re-analysis was excluded for the following samples: MR02-IR69-SS01-10A, MR02-IR69-SS01D-10A, IR69-SS01D-10A, IR69-SS03-10A, IR69-SS04-10A, IR69-SS06-10A, IR69-SB05-06-07-10A, IR69-SS05-10A, IR69-SD01D-10A, MR02-IR69-SS04-10A and MR02-IR69-SS05-10A.

Detection limits were acceptable. Raw data and calculations were verified.

We have limited the supporting documentation, found with these worksheets, to those forms that indicate qualifications were required.

Validator Signature: L Mascenot **Date:** 7/14/10

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab File ID: 0B09006-TUN159 BFB Injection Date: 02/09/10

Instrument ID: 5972HP59 BFB Injection Time: 1622

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.5
75	30.0 - 60.0% of mass 95	51.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	74.7
175	5.0 - 9.0% of mass 174	5.3 (7.1)1
176	95.0 - 101.0% of mass 174	74.7 (99.9)1
177	5.0 - 9.0% of mass 176	5.0 (6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005	0B09006-CAL	0B09006-CAL1R5	02/09/10	1735
02	VSTD010	0B09006-CAL	0B09006-CAL2R5	02/09/10	1802
03	VSTD020	0B09006-CAL	0B09006-CAL359	02/09/10	1830
04	VSTD200	0B09006-CAL	0B09006-CAL659	02/09/10	1858
05	VSTD100	0B09006-CAL	0B09006-CAL559	02/09/10	1925
06	VSTD050	0B09006-CAL	0B09006-CAL459	02/09/10	1953
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FORM V VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: 5972HP59 Calibration Date(s): 02/09/10 02/09/10

Column: SPB-624 ID: 0.32 (mm) Calibration Time(s): 1735 1953

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2	MAX %RSD OR R^2
Dichlorodifluoromethane	AVRG		0.36223956	3.697	15.000
Chloromethane	AVRG		0.24233564	4.243	15.000
Vinyl Chloride	AVRG		0.27149637	5.187	30.000
Bromomethane	AVRG		0.24720750	5.299	15.000
Chloroethane	AVRG		0.14568642	7.720	15.000
Trichlorofluoromethane	AVRG		0.51919338	4.825	15.000
1,1-Dichloroethene	AVRG		0.19066989	6.292	30.000
Carbon disulfide	AVRG		0.62845630	6.091	15.000
1,1,2-trichloro-1,2,2-triflu	AVRG		0.33687776	9.085	15.000
Acetone	AVRG		0.06124325	8.471	15.000
Methylene Chloride	AVRG		0.28684016	7.205	15.000
trans-1,2-Dichloroethene	AVRG		0.24603374	7.392	15.000
Methyl-tert-butyl ether	AVRG		0.75306200	3.957	15.000
1,1-Dichloroethane	AVRG		0.46567981	9.573	15.000
cis-1,2-Dichloroethene	AVRG		0.28650964	6.701	15.000
2-butanone	AVRG		0.08409555	7.749	15.000
Chloroform	AVRG		0.60700085	6.151	30.000
1,1-Trichloroethane	AVRG		0.53404775	5.938	15.000
Carbon Tetrachloride	AVRG		0.44729750	6.204	15.000
Benzene	AVRG		0.92510984	8.481	15.000
1,2-Dichloroethane	AVRG		0.41025724	4.068	15.000
Trichloroethene	AVRG		0.27925571	4.738	15.000
1,2-Dichloropropane	AVRG		0.19378755	18.140	30.000
Bromodichloromethane	AVRG		0.46728535	3.674	15.000
cis-1,3-Dichloropropene	AVRG		0.45653702	4.184	15.000
4-Methyl-2-pentanone	AVRG		0.25907498	5.823	15.000
Toluene	AVRG		0.86512275	6.152	30.000
trans-1,3-Dichloropropene	AVRG		0.57063499	8.293	15.000
1,1,2-Trichloroethane	AVRG		0.28843443	2.430	15.000
Tetrachloroethene	AVRG		0.28957103	7.080	15.000
2-hexanone	AVRG		0.18700542	4.248	15.000
Dibromochloromethane	AVRG		0.41180279	6.267	15.000
1,2-Dibromoethane	AVRG		0.32273442	2.532	15.000
Chlorobenzene	AVRG		0.88099987	5.170	15.000
Ethylbenzene	AVRG		0.45447133	5.704	30.000
Styrene	AVRG		0.96827758	11.328	15.000
Bromoform	AVRG		0.23224965	9.332	15.000
Isopropyl Benzene	AVRG		1.62258312	8.230	15.000
1,1,2,2-Tetrachloroethane	AVRG		0.77080388	3.478	15.000
1,3-Dichlorobenzene	AVRG		1.45668578	6.697	15.000
1,4-Dichlorobenzene	AVRG		1.43122186	4.011	15.000
1,2-Dichlorobenzene	AVRG		1.36567887	4.372	15.000
1,2-Dibromo-3-Chloropropane	AVRG		0.14889516	12.264	15.000
1,2,4-Trichlorobenzene	AVRG		0.94494333	8.266	15.000

FORM VI VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab File ID: 0C15002-TUN159 BFB Injection Date: 03/15/10

Instrument ID: 5972HP59 BFB Injection Time: 0948

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.6
75	30.0 - 60.0% of mass 95	57.5
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	73.6
175	5.0 - 9.0% of mass 174	5.6 (7.6)1
176	95.0 - 101.0% of mass 174	72.7 (98.8)1
177	5.0 - 9.0% of mass 176	4.7 (6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VDSTD050	0C15002-CCV	0C15002-CCV159	03/15/10	1020
02	VBLKHD	0031502-BLK	0031502-BLK159	03/15/10	1118
03	VHDLCS	0031502-BS1	0031502-BS159	03/15/10	1158
04	VHDLCSD	0031502-BSD	0031502-BSD159	03/15/10	1226
05	MR02-IR69-SS01	1003103-01	1003103-0159	03/15/10	1311
06	MR02-IR69-SS01D	1003103-02	1003103-0259	03/15/10	1339
07	IR69-SS01-10A	1003103-03	1003103-0359	03/15/10	1407
08	IR69-SS01D-10A	1003103-04	1003103-0459	03/15/10	1434
09	IR69-SS03-10A	1003103-05	1003103-0559	03/15/10	1502
10	IR69-SS04-10A	1003103-06	1003103-0659	03/15/10	1530
11	IR69-SS05-10A	1003103-07	1003103-0759	03/15/10	1557
12	IR69-SS06-10A	1003103-08	1003103-0859	03/15/10	1625
13	SB04-06-07	1003103-09	1003103-0959	03/15/10	1653
14	SB05-06-07	1003103-10	1003103-1059	03/15/10	1720
15	MR02-IR69-SS01RE	1003103-01R	1003103-01R59	03/15/10	1910
16	MR02-IR69-SS01DRE	1003103-02R	1003103-02R59	03/15/10	1938
17	IR69-SS01D-10ARE	1003103-04R	1003103-04R59	03/15/10	2006
18	IR69-SS03-10ARE	1003103-05R	1003103-05R59	03/15/10	2033
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FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: 5972HP59 Calibration Date: 03/15/10 Time: 1020

Lab File ID: 0C15002-CCV159 Init. Calib. Date(s): 02/09/10 03/10/10

Init. Calib. Times: 1735 2024

GC Column: SPB-624 ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF50 or AMOUNT	CCAL RRF50	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Dichlorodifluoromethane	0.6156600	0.5101066	0.5101066	0.001	-17.14	25.00	AVRG	
Chloromethane	0.3342000	0.2951039	0.2951039	0.1	-11.70	25.00	AVRG	
Vinyl Chloride	0.3693100	0.3295005	0.3295005	0.001	-10.78	20.00	AVRG	
Bromomethane	225.57636	250.00000	0.2775069	0.001	-9.77	25.00	LINR	
Chloroethane	0.1938200	0.1691167	0.1691167	0.001	-12.74	25.00	AVRG	
Trichlorofluoromethane	0.7063900	0.6273334	0.6273334	0.001	-11.19	25.00	AVRG	
1,1-Dichloroethene	0.2428100	0.2474570	0.2474570	0.001	1.91	20.00	AVRG	
Carbon disulfide	0.9397200	0.9676418	0.9676418	0.001	2.97	25.00	AVRG	
1,1,2-trichloro-1,2,2-triflu	0.4288100	0.4213838	0.4213838	0.001	-1.73	25.00	AVRG	
Acetone	0.0506100	0.0620026	0.0620026	0.001	22.51	25.00	AVRG	
Methylene Chloride	0.2837000	0.2966986	0.2966986	0.001	4.58	25.00	AVRG	
trans-1,2-Dichloroethene	0.2569400	0.2685041	0.2685041	0.001	4.50	25.00	AVRG	
Methyl-tert-butyl ether	0.7065700	0.7960720	0.7960720	0.001	12.67	25.00	AVRG	
1-1-Dichloroethane	0.4914900	0.5096020	0.5096020	0.1	3.68	25.00	AVRG	
-1,2-Dichloroethene	0.2715700	0.2859181	0.2859181	0.001	5.28	25.00	AVRG	
- butanone	0.0689000	0.0832257	0.0832257	0.001	20.79	25.00	AVRG	
Chloroform	0.6070200	0.6218921	0.6218921	0.001	2.45	20.00	AVRG	
1,1,1-Trichloroethane	0.5744200	0.5758125	0.5758125	0.001	0.24	25.00	AVRG	
Carbon Tetrachloride	0.5111800	0.5267964	0.5267964	0.001	3.05	25.00	AVRG	
Benzene	0.9130700	0.9333031	0.9333031	0.001	2.22	25.00	AVRG	
1,2-Dichloroethane	0.4286900	0.4373494	0.4373494	0.001	2.02	25.00	AVRG	
Trichloroethene	0.3076300	0.3248626	0.3248626	0.001	5.60	25.00	AVRG	
1,2-Dichloropropane	0.1792300	0.1829189	0.1829189	0.001	2.06	20.00	AVRG	
Bromodichloromethane	0.4553100	0.4914028	0.4914028	0.001	7.93	25.00	AVRG	
cis-1,3-Dichloropropene	0.4380200	0.4816499	0.4816499	0.001	9.96	25.00	AVRG	
4-Methyl-2-pentanone	0.1906100	0.2413891	0.2413891	0.001	26.64	25.00	AVRG	<-
Toluene	0.7436400	0.7624521	0.7624521	0.001	2.53	20.00	AVRG	
trans-1,3-Dichloropropene	0.5098900	0.5311524	0.5311524	0.001	4.17	25.00	AVRG	
1,1,2-Trichloroethane	0.2268600	0.2542812	0.2542812	0.001	12.09	25.00	AVRG	
Tetrachloroethene	0.2983200	0.3086157	0.3086157	0.001	3.45	25.00	AVRG	
2-hexanone	0.1349100	0.1749488	0.1749488	0.001	29.68	25.00	AVRG	<-
Dibromochloromethane	0.3864200	0.4426809	0.4426809	0.001	14.56	25.00	AVRG	
1,2-Dibromoethane	0.2773700	0.3038549	0.3038549	0.001	9.55	25.00	AVRG	
Chlorobenzene	0.7913200	0.8432505	0.8432505	0.3	6.56	25.00	AVRG	
Ethylbenzene	0.4061800	0.4184630	0.4184630	0.001	3.02	20.00	AVRG	
Styrene	0.7685800	0.8435154	0.8435154	0.001	9.75	25.00	AVRG	
Bromoform	0.2065900	0.2452632	0.2452632	0.1	18.72	25.00	AVRG	
Isopropyl Benzene	1.4330000	1.4883808	1.4883808	0.001	3.86	25.00	AVRG	
1,1,2,2-Tetrachloroethane	0.5975900	0.6882750	0.6882750	0.3	15.18	25.00	AVRG	
1,3-Dichlorobenzene	1.3475000	1.4256558	1.4256558	0.001	5.80	25.00	AVRG	
1,4-Dichlorobenzene	1.2747900	1.3918031	1.3918031	0.001	9.18	25.00	AVRG	
1,2-Dichlorobenzene	1.2098700	1.3320112	1.3320112	0.001	10.10	25.00	AVRG	

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: 5972HP59 Calibration Date: 03/15/10 Time: 1020

Lab File ID: 0C15002-CCV159 Init. Calib. Date(s): 02/09/10 03/10/10

Init. Calib. Times: 1735 2024

GC Column: SPB-624 ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF50 or AMOUNT	CCAL RRF50	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
1,2-Dibromo-3-Chloropropane	0.1122500	0.1522119	0.1522119	0.001	35.60	25.00	AVRG	<-
1,2,4-Trichlorobenzene	0.8676600	0.9904615	0.9904615	0.001	14.15	25.00	AVRG	
Xylene (total)	0.5190000	0.5471498	0.5471498	0.001	5.42	25.00	AVRG	
Methyl acetate	0.1408800	0.2136992	0.2136992	0.001	51.69	25.00	AVRG	<-
Cyclohexane	0.3321300	0.3358047	0.3358047	0.001	1.11	25.00	AVRG	
Methylcyclohexane	0.4419000	0.4517524	0.4517524	0.001	2.23	25.00	AVRG	
m,p-Xylene (part of total)	0.5218600	0.5511914	0.5511914	0.001	5.62	25.00	AVRG	
o-Xylene (part of total)	0.5132800	0.5390665	0.5390665	0.001	5.02	25.00	AVRG	
Dibromofluoromethane	0.3235500	0.3407688	0.3407688	0.001	5.32	25.00	AVRG	
1,2-Dichloroethane-d4	0.3581800	0.3759841	0.3759841	0.001	4.97	25.00	AVRG	
Toluene-d8	1.0019100	1.0885518	1.0885518	0.001	8.65	25.00	AVRG	
Bromofluorobenzene	1.0122900	0.9930030	0.9930030	0.001	-1.90	25.00	AVRG	

FORM VII VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab File ID: 0C26007-TUN173 BFB Injection Date: 03/26/10

Instrument ID: 5972HP73 BFB Injection Time: 1007

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.0
75	30.0 - 60.0% of mass 95	43.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	84.8
175	5.0 - 9.0% of mass 174	6.0 (7.0)1
176	95.0 - 101.0% of mass 174	81.8 (96.5)1
177	5.0 - 9.0% of mass 176	5.1 (6.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	0C26007-CCV	0C26007-CCV173	03/26/10	1034
02	VBLKIA	0032605-BLK	0032605-BLK173	03/26/10	1119
03	VIALCS	0032605-BS1	0032605-BS173	03/26/10	1214
04	VIALCSD	0032605-BSD	0032605-BSD173	03/26/10	1242
05	IR69-SD01	1003103-14	1003103-14R73	03/26/10	1728
06	IR69-SD01D	1003103-15	1003103-15R73	03/26/10	1756
07	MR02-IR69-SS04	1003103-17	1003103-1773	03/26/10	1852
08	MR02-IR69-SS05	1003103-18	1003103-1873	03/26/10	1919
09	IR69-SD01DRE	1003103-15R	1003103-15R273	03/26/10	2054
10	MR02-IR69-SS04RE	1003103-17R	1003103-17R73	03/26/10	2122
11	MR02-IR69-SS05RE	1003103-18R	1003103-18R73	03/26/10	2150
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FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: 5972HP73 Calibration Date: 03/26/10 Time: 1034

Lab File ID: 0C26007-CCV173 Init. Calib. Date(s): 03/18/10 03/18/10

Init. Calib. Times: 1156 1415

GC Column: SPB-624 ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF50 or AMOUNT	CCAL RRF50	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Dichlorodifluoromethane	0.4405000	0.6570333	0.6570333	0.001	49.16	25.00	AVRG	<-
Chloromethane	0.4748400	0.5859980	0.5859980	0.1	23.41	25.00	AVRG	
Vinyl Chloride	0.2211400	0.2250699	0.2250699	0.001	1.78	20.00	AVRG	
Bromomethane	0.1093700	0.1046337	0.1046337	0.001	-4.33	25.00	AVRG	
Chloroethane	0.0675000	0.0680242	0.0680242	0.001	0.78	25.00	AVRG	
Trichlorofluoromethane	0.5801700	0.6606997	0.6606997	0.001	13.88	25.00	AVRG	
1,1-Dichloroethene	0.3732000	0.3298691	0.3298691	0.001	-11.61	20.00	AVRG	
Carbon disulfide	1.3949300	1.3315066	1.3315066	0.001	-4.55	25.00	AVRG	
1,1,2-trichloro-1,2,2-triflu	0.5416600	0.5347411	0.5347411	0.001	-1.28	25.00	AVRG	
Acetone	736.15394	625.00000	0.0797636	0.001	17.78	25.00	LINR	
Methylene Chloride	0.4103700	0.3930913	0.3930913	0.001	-4.21	25.00	AVRG	
trans-1,2-Dichloroethene	0.4338300	0.4358721	0.4358721	0.001	0.47	25.00	AVRG	
Methyl-tert-butyl ether	0.6386300	0.5885743	0.5885743	0.001	-7.84	25.00	AVRG	
1-Dichloroethane	0.6647500	0.6744419	0.6744419	0.1	1.46	25.00	AVRG	
-1,2-Dichloroethene	0.4302400	0.4234818	0.4234818	0.001	-1.57	25.00	AVRG	
butanone	0.1096400	0.1269379	0.1269379	0.001	15.78	25.00	AVRG	
Chloroform	0.6540000	0.6707831	0.6707831	0.001	2.57	20.00	AVRG	
1,1,1-Trichloroethane	0.5395600	0.5260259	0.5260259	0.001	-2.51	25.00	AVRG	
Carbon Tetrachloride	0.4684800	0.4880105	0.4880105	0.001	4.17	25.00	AVRG	
Benzene	1.3906500	1.4111932	1.4111932	0.001	1.48	25.00	AVRG	
1,2-Dichloroethane	0.3751000	0.3896963	0.3896963	0.001	3.89	25.00	AVRG	
Trichloroethene	0.4053300	0.3755182	0.3755182	0.001	-7.35	25.00	AVRG	
1,2-Dichloropropane	0.3525300	0.3612882	0.3612882	0.001	2.48	20.00	AVRG	
Bromodichloromethane	0.4391800	0.4409910	0.4409910	0.001	0.41	25.00	AVRG	
cis-1,3-Dichloropropene	0.4995200	0.4914909	0.4914909	0.001	-1.61	25.00	AVRG	
4-Methyl-2-pentanone	0.3395000	0.3760868	0.3760868	0.001	10.78	25.00	AVRG	
Toluene	1.2265700	1.1478768	1.1478768	0.001	-6.42	20.00	AVRG	
trans-1,3-Dichloropropene	0.6595700	0.6611914	0.6611914	0.001	0.24	25.00	AVRG	
1,1,2-Trichloroethane	0.3872000	0.3777945	0.3777945	0.001	-2.43	25.00	AVRG	
Tetrachloroethene	0.4705400	0.4388118	0.4388118	0.001	-6.74	25.00	AVRG	
2-hexanone	0.2481500	0.2880813	0.2880813	0.001	16.09	25.00	AVRG	
Dibromochloromethane	0.4540600	0.4252563	0.4252563	0.001	-6.34	25.00	AVRG	
1,2-Dibromoethane	0.4108100	0.3965706	0.3965706	0.001	-3.47	25.00	AVRG	
Chlorobenzene	1.3641800	1.2926139	1.2926139	0.3	-5.25	25.00	AVRG	
Ethylbenzene	0.7077000	0.6726987	0.6726987	0.001	-4.94	20.00	AVRG	
Styrene	1.3332400	1.2681596	1.2681596	0.001	-4.88	25.00	AVRG	
Bromoform	0.2896600	0.2836776	0.2836776	0.1	-2.06	25.00	AVRG	
Isopropyl Benzene	2.2219300	2.0865047	2.0865047	0.001	-6.09	25.00	AVRG	
1,1,2,2-Tetrachloroethane	0.9945000	1.0064827	1.0064827	0.3	1.20	25.00	AVRG	
1,3-Dichlorobenzene	2.1102600	1.9461811	1.9461811	0.001	-7.78	25.00	AVRG	
1,4-Dichlorobenzene	2.1853200	1.9912757	1.9912757	0.001	-8.88	25.00	AVRG	
1,2-Dichlorobenzene	1.8423000	1.6764484	1.6764484	0.001	-9.00	25.00	AVRG	

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab File ID: 0C25010-TUN159 BFB Injection Date: 03/26/10

Instrument ID: 5972HP59 BFB Injection Time: 2208

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.6
75	30.0 - 60.0% of mass 95	49.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	63.0
175	5.0 - 9.0% of mass 174	4.4 (7.0)1
176	95.0 - 101.0% of mass 174	62.3 (98.8)1
177	5.0 - 9.0% of mass 176	4.2 (6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD200	0C25010-CAL	0C25010-CAL659	03/26/10	2352
02	VSTD100	0C25010-CAL	0C25010-CAL559	03/27/10	0019
03	VSTD050	0C25010-CAL	0C25010-CAL459	03/27/10	0047
04	VSTD005	0C25010-CAL	0C25010-CAL1R5	03/27/10	0114
05	VSTD010	0C25010-CAL	0C25010-CAL2R5	03/27/10	0142
06	VSTD020	0C25010-CAL	0C25010-CAL3R5	03/27/10	0210
07	VBLKSD	0032701-BLK	0032701-BLK159	03/27/10	0403
08	MR02-IR69-SS02	1003103-16	1003103-16D59	03/27/10	0531
09	VSDLCS	0032701-BS1	0032701-BS1R59	03/27/10	0654
10	VSDLCSD	0032701-BSD	0032701-BSD1R5	03/27/10	0722
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FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab File ID: 0C25010-TUN159 BFB Injection Date: 03/26/10

Instrument ID: 5972HP59 BFB Injection Time: 2208

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.6
75	30.0 - 60.0% of mass 95	49.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	63.0
175	5.0 - 9.0% of mass 174	4.4 (7.0)1
176	95.0 - 101.0% of mass 174	62.3 (98.8)1
177	5.0 - 9.0% of mass 176	4.2 (6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD200	0C25010-CAL	0C25010-CAL659	03/26/10	2352
02	VSTD100	0C25010-CAL	0C25010-CAL559	03/27/10	0019
03	VSTD050	0C25010-CAL	0C25010-CAL459	03/27/10	0047
04	VSTD005	0C25010-CAL	0C25010-CAL1R5	03/27/10	0114
05	VSTD010	0C25010-CAL	0C25010-CAL2R5	03/27/10	0142
06	VSTD020	0C25010-CAL	0C25010-CAL3R5	03/27/10	0210
07	VBLKAZ	0032646-BLK	0032646-BLK159	03/27/10	0237
08	VAZLCS	0032646-BS1	0032646-BS159	03/27/10	0305
09	VAZLCSD	0032646-BSD	0032646-BSD159	03/27/10	0333
10	MR02-IR69-SS06	1003103-19	1003103-19R59	03/27/10	0749
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FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: 5972HP59 Calibration Date(s): 03/26/10 03/27/10

Column: SPB-624 ID: 0.32 (mm) Calibration Time(s): 2352 0210

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2	MAX %RSD OR R^2
m,p-Xylene (part of total)	AVRG		0.57669946	9.652	15.000
o-Xylene (part of total)	AVRG		0.60219365	6.854	15.000
Dichlorodifluoromethane	AVRG		0.51820380	5.581	15.000
Chloromethane	AVRG		0.37702126	9.435	15.000
Vinyl Chloride	AVRG		0.25708033	2.483	30.000
Bromomethane	AVRG		0.18161517	8.741	15.000
Chloroethane	AVRG		0.09856814	6.006	15.000
Trichlorofluoromethane	AVRG		0.41858055	6.027	15.000
1,1-Dichloroethene	AVRG		0.22996042	10.056	30.000
Carbon disulfide	AVRG		0.92711824	10.796	15.000
1,1,2-trichloro-1,2,2-triflu	AVRG		0.34725409	10.573	15.000
Acetone	LINR	-0.1340364	16.9087539	0.9996434	0.9900000
Methylene Chloride	AVRG		0.27795817	9.260	15.000
trans-1,2-Dichloroethene	AVRG		0.27486339	10.406	15.000
Methyl-tert-butyl ether	AVRG		0.66675442	8.919	15.000
1,1-Dichloroethane	AVRG		0.52689540	11.559	15.000
cis-1,2-Dichloroethene	AVRG		0.29526595	10.419	15.000
ıtanone	LINR	-0.3069493	12.0596228	0.9986056	0.9900000
oroform	AVRG		0.55651973	9.690	30.000
1,1,1-Trichloroethane	AVRG		0.50015232	10.000	15.000
Carbon Tetrachloride	AVRG		0.45959609	9.360	15.000
Benzene	AVRG		0.96641580	10.977	15.000
1,2-Dichloroethane	AVRG		0.37297372	7.737	15.000
Trichloroethene	AVRG		0.27987520	6.383	15.000
1,2-Dichloropropane	AVRG		0.24033387	17.162	30.000
Bromodichloromethane	AVRG		0.42066680	8.757	15.000
cis-1,3-Dichloropropene	AVRG		0.44197559	6.792	15.000
4-Methyl-2-pentanone	AVRG		0.31862127	14.078	15.000
Toluene	AVRG		0.83095023	8.785	30.000
trans-1,3-Dichloropropene	AVRG		0.54096801	11.953	15.000
1,1,2-Trichloroethane	AVRG		0.27682038	7.495	15.000
Tetrachloroethene	AVRG		0.28070995	5.820	15.000
2-hexanone	LINR	-0.3623155	5.83188773	0.9981515	0.9900000
Dibromochloromethane	AVRG		0.40174647	5.467	15.000
1,2-Dibromoethane	AVRG		0.31687817	6.128	15.000
Chlorobenzene	AVRG		0.86379619	7.304	15.000
Ethylbenzene	AVRG		1.15339892	9.652	30.000
Styrene	AVRG		0.90182149	9.874	15.000
Bromoform	AVRG		0.23000130	6.434	15.000
Isopropyl Benzene	AVRG		1.57089917	13.378	15.000
1,1,2,2-Tetrachloroethane	AVRG		0.72744854	10.304	15.000
1,3-Dichlorobenzene	AVRG		1.37567382	9.042	15.000
1,4-Dichlorobenzene	AVRG		1.33447595	7.053	15.000
1,2-Dichlorobenzene	AVRG		1.26234240	7.087	15.000

FORM VI VOA

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKHD

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab File ID: 0031502-BLK159_D Lab Sample ID: 0031502-BLK1

Date Analyzed: 03/15/10 Time Analyzed: 1118

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) Y

Instrument ID: 5972HP59

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VHDLCS	0031502-BS1	0031502-BS15	1158
02	VHDLCSD	0031502-BSD1	0031502-BSD1	1226
03	MR02-IR69-SS01	1003103-01	1003103-0159	1311
04	MR02-IR69-SS01D	1003103-02	1003103-0259	1339
05	IR69-SS01-10A	1003103-03	1003103-0359	1407
06	IR69-SS01D-10A	1003103-04	1003103-0459	1434
07	IR69-SS03-10A	1003103-05	1003103-0559	1502
08	IR69-SS04-10A	1003103-06	1003103-0659	1530
09	IR69-SS05-10A	1003103-07	1003103-0759	1557
10	IR69-SS06-10A	1003103-08	1003103-0859	1625
11	SB04-06-07	1003103-09	1003103-0959	1653
12	SB05-06-07	1003103-10	1003103-1059	1720
13	MR02-IR69-SS01RE	1003103-01RE1	1003103-01R5	1910
14	MR02-IR69-SS01DRE	1003103-02RE1	1003103-02R5	1938
15	IR69-SS01D-10ARE	1003103-04RE1	1003103-04R5	2006
16	IR69-SS03-10ARE	1003103-05RE1	1003103-05R5	2033
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COMMENTS: methylene chloride 0.81J ug/Kg
1,2,4-trichlorobenzene 0.53J

page 1 of 1

FORM IV VOA

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKHM

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab File ID: 0031816-BLK1R273 Lab Sample ID: 0031816-BLK1

Date Analyzed: 03/18/10 Time Analyzed: 1708

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) Y

Instrument ID: 5972HP73

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VHMLCS	0031816-BS1	0031816-BS17	1830
02	VHMLCSD	0031816-BSD1	0031816-BSD1	1925
03	IR69-SS04-10ARE	1003103-06RE1	1003103-06R7	2032
04	IR69-SS06-10ARE	1003103-08RE1	1003103-08R7	2100
05	SB05-06-07RE	1003103-10RE1	1003103-10R7	2127
06	SB06-06-07	1003103-11 ✓	1003103-11R7	2155
07	SB01-01-02	1003103-12 ✓	1003103-12R7	2223
08	SB01D-01-02	1003103-13 ✓	1003103-13R7	2251
09	IR69-SS05-10ARE	1003103-07RE1	1003103-07R7	2319
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COMMENTS: Chloromethane 0.54 J ug/Kg
Cyclohexane 1.0 J

FORM IV VOA

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKIA

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab File ID: 0032605-BLK173 Lab Sample ID: 0032605-BLK1

Date Analyzed: 03/26/10 Time Analyzed: 1119

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) Y

Instrument ID: 5972HP73

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VIALCS	0032605-BS1	0032605-BS17	1214
02	VIALCSD	0032605-BSD1	0032605-BSD1	1242
03	IR69-SD01	1003103-14	1003103-14R7	1728
04	IR69-SD01D	1003103-15	1003103-15R7	1756
05	MR02-IR69-SS04	1003103-17	1003103-1773	1852
06	MR02-IR69-SS05	1003103-18	1003103-1873	1919
07	IR69-SD01DRE	1003103-15RE1	1003103-15R2	2054
08	MR02-IR69-SS04RE	1003103-17RE1	1003103-17R7	2122
09	MR02-IR69-SS05RE	1003103-18RE1	1003103-18R7	2150
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COMMENTS:

Methylene Chl 1.0J ug/kg
1,4-dichlorobenzene 0.33J
1,2,4-trichlorobenzene 0.78J

FORM IV VOA

no qual

228

FORM 2
SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Level: (low/med) LOW

	CLIENT SAMPLE NO.	SMC1 (DBF) #	SMC2 (DCE) #	SMC3 (TOL) #	SMC4 (BFB) #	TOT OUT	
01	VBLKHD	108	105	108	95	0	
02	VHDLCS	107	104	113	96	0	
03	VHDLCSD	104	104	113	97	0	
04	MR02-IR69-SS01	114	119	123*	114	1	
05	MR02-IR69-SS01D	112	123	117*	112	1	
06	IR69-SS01-10A	113	117	113	104	0	
07	IR69-SS01D-10A	111	117	118*	104	1	
08	IR69-SS03-10A	108	124	116*	105	1	
09	IR69-SS04-10A	115	129	123*	117	1	
10	IR69-SS05-10A	102	121	125*	105	1	
11	IR69-SS06-10A	108	121	127*	117	1	
12	SB04-06-07	112	128	102	110	0	
13	SB05-06-07	100	110	117*	109	1	
14	MR02-IR69-SS01RE	101	116	129*	126*	2	*
15	MR02-IR69-SS01DRE	102	116	123*	117	1	*
16	IR69-SS01D-10ARE	102	116	122*	119	1	*
17	IR69-SS03-10ARE	102	115	118*	111	1	*
18	VBLKHM	86	91	90	92	0	
19	VHMLCS	100	102	101	101	0	
20	VHMLCSD	101	102	106	108	0	
21	IR69-SS04-10ARE	99	111	101	108	0	
22	IR69-SS06-10ARE	103	103	140*	126*	2	*
23	SB05-06-07RE	82	82	85	84*	1	*
24	SB06-06-07	96	102	101	99	0	
25	SB01-01-02	93	97	103	100	0	
26	SB01D-01-02	93	100	100	95	0	
27	IR69-SS05-10ARE	98	104	125*	107	1	*
28	VBLKIA	90	96	88	87	0	

		QC LIMITS
SMC1 (DBF)	= Dibromofluoromethane	(71-141)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(70-139)
SMC3 (TOL)	= Toluene-d8	(85-115)
SMC4 (BFB)	= Bromofluorobenzene	(85-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

* not used in favor of initial analysis

FORM 2
SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Level: (low/med) LOW

	CLIENT SAMPLE NO.	SMC1 (DBF) #	SMC2 (DCE) #	SMC3 (TOL) #	SMC4 (BFB) #	TOT OUT	
01	VIALCS	114	118	112	104	0	
02	VIALCSD	107	111	108	102	0	
03	IR69-SD01	103	100	128*	151*	2	J
04	IR69-SD01D	102	100	126*	151*	2	J
05	MR02-IR69-SS04	87	91	90	77*	1	J/UJ
06	MR02-IR69-SS05	102	109	93	76*	1	
07	IR69-SD01DRE	106	105	127*	133*	2	
08	MR02-IR69-SS04RE	92	102	79*	57*	2	*
09	MR02-IR69-SS05RE	74	119	37*	67*	2	*
10	VBLKAZ	103	100	104	106	0	
11	VAZLCS	100	102	96	95	0	
12	VAZLCSD	99	99	96	99	0	
13	MR02-IR69-SS06	57*	66*	35*	23*	4	J/UJ
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		QC LIMITS
SMC1 (DBF)	= Dibromofluoromethane	(71-141)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(70-139)
SMC3 (TOL)	= Toluene-d8	(85-115)
SMC4 (BFB)	= Bromofluorobenzene	(85-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

* not used in favor of analysis

FORM 2
SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Level: (low/med) MED

	CLIENT SAMPLE NO.	SMC1 (DBF) #	SMC2 (DCE) #	SMC3 (TOL) #	SMC4 (BFB) #	TOT OUT
01	VBLKSD	101	101	104	104	0
02	MR02-IR69-SS02	101	99	102	104	0
03	VSDLCS	97	98	99	100	0
04	VSDLCSD	99	97	99	100	0
05	VBLKID	104	110	103	107	0
06	VIDLCS	100	99	102	102	0
07	MR02-IR69-SS06DL	109	113	106	112	0
08						
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27						
28						

		QC LIMITS
SMC1 (DBF)	= Dibromofluoromethane	(71-141)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(70-139)
SMC3 (TOL)	= Toluene-d8	(85-115)
SMC4 (BFB)	= Bromofluorobenzene	(85-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab File ID (Standard): 0C15002-CCV159 Date Analyzed: 03/15/10

Instrument ID: 5972HP59 Time Analyzed: 1020

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) Y

		IS1(FBZ) AREA #	RT #	IS2(CBZ) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	655908	10.88	498228	13.02	259684	14.56
	UPPER LIMIT	1311816	11.38	996456	13.52	519368	15.06
	LOWER LIMIT	327954	10.38	249114	12.52	129842	14.06
	CLIENT SAMPLE NO.						
01	VBLKHD	670225	10.87	513603	13.02	268454	14.56
02	VHDLCS	607305	10.87	450663	13.02	239444	14.56
03	VHDLCSD	572616	10.87	430839	13.02	227682	14.55
04	MR02-IR69-SS01	614753	10.87	407096	13.02	151030	14.56
05	MR02-IR69-SS01D	604584	10.88	423511	13.02	176815	14.56
06	IR69-SS01-10A	568540	10.88	432518	13.02	213100	14.55
07	IR69-SS01D-10A	605915	10.87	434700	13.02	204814	14.56
08	IR69-SS03-10A	556413	10.88	393681	13.02	190926	14.56
09	IR69-SS04-10A	576684	10.88	385504	13.02	153746	14.56
10	IR69-SS05-10A	383503	10.88	280705	13.03	111456*	14.56
11	IR69-SS06-10A	554254	10.88	439204	13.03	175199	14.56
12	SB04-06-07	601081	10.88	512471	13.03	234892	14.57
13	SB05-06-07	732826	10.88	507981	13.03	232362	14.56
14	MR02-IR69-SS01RE	625222	10.88	390939	13.02	142201	14.55
15	MR02-IR69-SS01DR	604714	10.87	398027	13.02	161133	14.55
16	IR69-SS01D-10ARE	607725	10.88	420908	13.01	176495	14.55
17	IR69-SS03-10ARE	562628	10.87	393271	13.02	167340	14.55
18							
19							
20							

IS1 (FBZ) = Fluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab File ID (Standard): 0C18003-CAL373 Date Analyzed: 03/18/10

Instrument ID: 5972HP73 Time Analyzed: 1156

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

		IS1(FBZ) AREA #	RT #	IS2(CBZ) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	1021547	11.27	695787	13.48	359560	15.10
	UPPER LIMIT	2043094	11.77	1391574	13.98	719120	15.60
	LOWER LIMIT	510773	10.77	347893	12.98	179780	14.60
	CLIENT SAMPLE NO.						
01	VBLKHM	1101361	11.27	715255	13.48	355889	15.10
02	VHMLCS	1112694	11.28	776237	13.49	397031	15.10
03	VHMLCSD	1090046	11.28	743621	13.48	385559	15.11
04	IR69-SS04-10ARE	213520*	11.28	113356*	13.48	32203*	15.11
05	IR69-SS06-10ARE	809006	11.28	326619*	13.48	91074*	15.10
06	SB05-06-07RE	1112439	11.27	725535	13.48	371170	15.10
07	SB06-06-07	986772	11.28	613090	13.48	308436	15.11
08	SB01-01-02	813601	11.28	475030	13.48	201373	15.10
09	SB01D-01-02	835215	11.27	499776	13.48	213714	15.10
10	IR69-SS05-10ARE	790157	11.27	346644*	13.48	122176*	15.10
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (FBZ) = Fluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab File ID (Standard): 0C26007-CCV173 Date Analyzed: 03/26/10

Instrument ID: 5972HP73 Time Analyzed: 1034

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) Y

		IS1(FBZ) AREA #	RT #	IS2(CBZ) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	924597	11.52	701638	13.70	376076	15.31
	UPPER LIMIT	1849194	12.02	1403276	14.20	752152	15.81
	LOWER LIMIT	462299	11.02	350819	13.20	188038	14.81
	CLIENT SAMPLE NO.						
01	VBLKIA	961869	11.51	664109	13.68	324898	15.30
02	VIALCS	791441	11.52	604630	13.69	323401	15.30
03	VIALCSD	817967	11.51	616627	13.69	339525	15.30
04	IR69-SD01	762063	11.50	376514	13.67	96521*	15.29
05	IR69-SD01D	803352	11.49	406428	13.68	105597*	15.28
06	MR02-IR69-SS04	1006406	11.49	614443	13.67	300226	15.28
07	MR02-IR69-SS05	463483	11.49	228092*	13.67	58259*	15.28
08	IR69-SD01DRE	769195	11.49	383953	13.66	92100*	15.27
09	MR02-IR69-SS04RE	222200*	11.48	117064*	13.67	38702*	15.27
10	MR02-IR69-SS05RE	15696*	11.48	23342*	13.66	6873*	15.27
11							
12							
13							
14							
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16							
17							
18							
19							
20							

IS1 (FBZ) = Fluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

page 1 of 1

FORM VIII VOA

* not used in favor of initial analysis

FIELD DUPLICATE SAMPLE SUMMARY

Sample ID: IR69-SD01-10A
Duplicate Sample ID: IR69-SD01D-10A

Water: RPD>75%
Soil: RPD>100%

Compound	Sample Conc.	Dup. Sample Conc.	%RPD
acetone	540	290	60
cois-1,2-dichloroethene	51	27	62
methyl acetate	95	57	50
			#DIV/0!
			#DIV/0!
			#DIV/0!
			#DIV/0!
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			#DIV/0!
			#DIV/0!

COMMENTS: No qualifications

* result below the CRQL

FIELD DUPLICATE SAMPLE SUMMARY

Sample ID: IR69-SB01-01-02-10A
Duplicate Sample ID: IR69-SB01D-01-02-10A

Water: RPD>75%
Soil: RPD>100%

Compound	Sample Conc.	Dup. Sample Conc.	%RPD
acetone	19	26	31
			#DIV/0!
			#DIV/0!
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			#DIV/0!

COMMENTS: No qualifications

* result below the CRQL

Initial Calibration Date: 3/26/2010

RRF and %RSD Calculations:

Compound Name: vinyl chloride
Lab Value: 0.2520

Area of Compound	838626
Area of Internal STD	832104
Conc. of Internal STD	250
Conc. of Compound	1000
Calculated RRF	0.252

Compound Name: styrene
Lab Value: 9.9

RRF of STD 1	0.9616
RRF of STD 2	0.9615
RRF of STD 3	0.9463
RRF of STD 4	0.9396
RRF of STD 5	0.8673
RRF of STD 6	0.7347
Calculated % RSD	9.87

Continuing Calibration File ID: 3/29/2010

RRF and %D Calculations:

Compound Name: methylene chloride
Lab Value: 0.250

Area of Compound	251206
Area of Internal STD	1004697
Conc. of Internal STD	125
Conc. of Compound	125
Calculated RRF	0.250

Compound Name: toluene
Lab Value: 5.4

Average RRF	0.831
Calibration Check RRF	0.786
Calculated % D	5.4

SAMPLE CALCULATION

Sample ID: IR69-SD01D-10A
Standard ID: 3/26/2010
Compound: acetone
Concnetration: 23 ug/Kg

	Water (ug/L)	Soil (ug/Kg)	Soil ug/Kg)
Area of Compound		9285	
Area of Internal STD		803352	
Conc. of Internal (ng)	125	250	
RRF of Compound		0.10964	
Dilution Factor	1	1	
Weight of Sample	NA	4.79	
Volume of Sample	25	NA	
% Moisture	NA	0.24	
Aliquot of sample	NA	NA	
Concentration	#DIV/0!	22.92	#DIV/0!

	RT of Internal STD	RT of Compound	RRT
Sample	11.492	10.410	0.906
Standard	11.522	10.440	0.906

CompuChem

A division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1003103
PROTOCOL: SW-846
REVISED

SAMPLE IDENTIFICATIONS:

MR02-IR69-SS01	**MR02-IR69-SS01D**	**IR69-SS01-10A**	**IR69-SS01D-10A**
IR69-SS03-10A	**IR69-SS04-10A**	**IR69-SS05-10A**	**IR69-SS06-10A**
SB04-06-07	**SB05-06-07**	**SB06-06-07**	**SB01-01-02**
SB01D-01-02	**IR69-SD01**	**IR69-SD01D**	**MR02-IR69-SS02**
MR02-IR69-SS04	**MR69-IR69-SS05**	**MR02-IR69-SS06**	

The 19 soil samples listed above were received intact, properly refrigerated between 0.1°C and 1.4°C, with proper documentation, in sealed shipping containers, on March 12 through 17, 2010. Soil samples were received from field/client in closed, pre-preserved VOA vials (sodium bisulfate/MeOH). All samples listed above were scheduled for the requested analyses of the volatile, semivolatile and pesticide/PCB fractions. SW-846, 3rd Edition, Update 3, Method 8260B was used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices for SDG 1003103 are included in the sample data sections.

Analysis holding time requirements were in the initial analysis of all of these samples. In the analysis of MR02-IR69-SS06, the on-column amount exceeded the instrument's analytical range as defined by the highest concentration level of the Initial Calibration. The sample was reanalyzed, outside of holding times, using a smaller aliquot of raw sample to bring the on-column amount into range. We have reported both analyses of sample MR02-IR69-SS06. The percent moisture values of these samples ranged from 16 to 77. There were volatile Project/Target Compound List (TCL) analytes identified above the Contract Required Quantitation Limit (CRQL) in eighteen of these nineteen samples. The system monitoring compounds met recovery criteria in the analyses of the samples that are not mentioned below. The internal standards met response and retention time criteria in the analyses of the samples that are not mentioned below.

In the initial analyses of MR02-IR69-SS06, the on-column amounts of some target compounds exceeded the instrument's analytical range as defined by the highest concentration level of the Initial Calibration. The samples were reanalyzed using smaller aliquots of raw sample to bring the on-column amounts into range. We have reported both analyses of sample MR02-IR69-SS06. Due to the results of a screen, sample MR02-IR69-SS02 was initially analyzed using a dilution of raw sample. The screen Reconstructed Ion Chromatogram (RIC) is included in the sample data package immediately following the RIC for the sample's reportable run.

In the initial analysis of MR02-IR69-SS01, MR02-IR69-SS01D, IR69-SS01D-10A, IR69-SS03-10A, IR69-SS04-10A, IR69-SS06-10A, SB05-06-07, IR69-SD01, IR69-SD01D, MR02-IR69-SS04 and MR02-IR-SS05, the recovery of the System Monitoring Compounds failed quality control criteria. Also, the response of the internal standards failed quality control criteria for IR69-SS04-10A, IR69-SS05-10A, IR69-SD01, IR69-SD01D and MR2-IR69-SS05. The samples were reanalyzed, except for IR69-SD01 for which there was only one low level vial, and the SMCs again failed recovery criteria and the internal standards again failed response criteria except for in IR69-SS04-10A. We have attributed the failing SMC recoveries to the particular matrix and inhomogeneity of the samples. In the reanalysis of MR02-IR69-SS04, the response of the internal standards failed quality control criteria. Therefore we have reported both analyses of MR02-IR69-SS01, MR02-

IR69-SS01D, IR69-SS01D-10A, IR69-SS03-10A, IR69-SS04-10A, IR69-SS05-10A, IR69-SS06-10A, SB05-06-07, IR69-SD01D, MR02-IR69-SS04 and MR02-IR-SS05.

All Bromofluorobenzene (BFB) abundance criteria were met for tunes associated to this SDG. All QC criteria were met for all initial and continuing calibration standards associated to this SDG. Manual integrations were performed on one or more of the process files associated with this SDG including, 0B09006-CAL1R59, VHDLCSD, 0C25010-CAL1R59 and 0C25010-CAL1R59. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG. The associated method blanks met all quality control criteria. The associated Laboratory Control Samples (LCS/LCSD) met overall accuracy criteria. However, VAZLCSD was bias low for 1,1-Dichloromethane, VIALCS/VIALCSD were bias high for dichlorodifluoromethane and Chloromethane, and VSDLCS/VSDLCSD were bias low for 1,1-Dichloroethene and 1,1-Dichloroethene and 1,1,2-Trichloro-1,2,2-trifluoromethane. No matrix spike/matrix spike duplicate (MS/MSD) samples were requested for the volatile fraction with this SDG.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Quentisha L. Forrester
Analyst II
April 13, 2010

Data Completeness

The data package was received complete and intact. Resubmissions were not required. (SW846 Method 8270C) *All field sample and QC blank IDs were missing the first four (IR69) and/or the last four (-10A) characters. The characters were added to the Form 1s in the DV reports by the data validator.*

Laboratory: CompuChem

Holding Times

Sampling Date: 3/04-14/10
Received Date: 3/12-17/10
Extraction Date: 3/18, 2410
Analysis Dates: 3/29-04/01/10
Cooler Temp: 0.1-1.4°C

All prep and analysis holding time requirements were met.

Calibrations

Mass assignments were verified by the injection of DFTPP.

The continuing calibrations required qualifications due to high %D values; see attached Form VIIs.

Internal Standards

All criteria met with the exception of the samples listed in the table below, qualifications were applied as stated.

Sample ID	Non-compliant ISTD	Qualifier	Qualifier Code
IR69-SS06-10A, IR69-SS03-10A, MR02-IR69-SS01-10ARE, MR02-IR69-SS06-10ARE	crysene-d12	J	ISH
IR69-SD01-10A, IR69-SD01D-10ARE	phenanthrene-d10	J	ISH
MR02-IR69-SS04-10A	acenaphthene-d10 phenanthrene-d10	J	ISH

Blank Summary

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying criteria.
- Qualification/Action codes where applied as stated in table below:

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Field	Detects	Not detected	No qualifications
	< CRQL*	< CRQL*	Report CRQL value with a U
		≥ CRQL*	Use professional judgment
	> CRQL*	< CRQL*	Report CRQL value with a U
		≥ CRQL* and < blank concentration	Report the concentration for the sample with a U, or qualify the data as unusable R
		≥ CRQL* and ≥ blank concentration	Use professional judgment
	= CRQL*	< CRQL*	Report CRQL value with a U
		≥ CRQL*	Use professional judgment
	Gross contamination	Detects	Qualify results as unusable R

*5x the CRQL for bis(2-ethylhexyl)phthalate

Method blank contamination was exhibited- qualifications were required. The associated field QC for this data package was: IR69-EB01-030410-SS (no positive results), IR69-EB01-030710-SB (no positive results), IR69-EB-031310-SS and IR69-EB01-031410-SD-equipment blanks; IR69-FB01-031010, IR69-FB01-030310 and IR69-FB01-031910 (no positive results) - field blank.

Blank Contamination and Qualification Summaries

Blank ID	Compound	Concentration	Reporting Limit
VBLKPB-SIM	naphthalene	0.92J ug/Kg	8.3 ug/Kg
IR69-EB01-031310-SS-SIM	naphthalene	0.065J ug/L	0.20 ug/L
IR69-EB01-031410-SD-SIM	naphthalene	0.062J	0.21
IR69-FB01-030310	bis(2-ethylhexyl)phthalate	6.5	5.0
	di-n-octylphthalate	1.8J	5.0
IR69-FB01-031010-SIM	naphthalene	0.063J	0.20

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Qual Code
PAH SIM; IR69-SD01-10A, MR02-IR69-SS02-0A, MR02-IR69-SS04-10A, MR02-IR69-SS05-10A, MR02-IR69-SS06-10A, IR69-SD01D-10ARE	naphthalene	U at RL	MBL
IR69-SS01D-10A, IR69-SS03-10A,IR69-SS04-10A, IR69-SS06-10A, MR02-IR69-SS01D-10A	bis(2-ethylhexyl)phthalate	U at RL	FBL
IR69-SS01D-10A,	di-n-octylphthalate	U at RL	FBL

Surrogates

All criteria were met with the exception of sample IR69-SS06-10a which exhibited low recoveries for 2-fluorophenol at 25% (QC limit 33-110%) and phenol-d5 at 32% (QC limit 38-110%); therefore all acid fraction compounds were qualified as estimated (J/UJ), qualifier code: SSL. The sample was re-analyzed however non-compliant surrogate recoveries were also exhibited with one result below 10% recovery and therefore the samples was excluded.

Laboratory Control Sample

No qualifications were required.

Matrix Spike/Spike Duplicate Samples

An MS/MSD was not submitted for this data package.

Field Duplicate Sample

A field duplicate was submitted for sample MR02-IR69-SS01-10A, IR69-SS01-10A, IR69-SB01-01-02-10A and IR69-SD01-10A, no qualifications required.

Specific Comments:

All sample results were reported within the calibration range of the instruments. The following samples were re-analyzed due to non-compliant internal standard area recoveries and were excluded in favor of the initial analysis or re-analysis: IR69-SS06-10ARE, MR02-IR69-SS01-10A, IR69-SS03-10ARE, MR02-IR69-SS06-10A, IR69-SD01-10ARE, IR69-SD01D-10A and MR02-IR69-SS04-10ARE.

Detection limits were acceptable. Raw data and calculations were verified.

We have limited the supporting documentation, found with these worksheets, to those forms that indicate qualifications were required.

Validator Signature: L Masciotta **Date:** 7/21/10

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab File ID: 0C29009-TUN1C70 DFTPP Injection Date: 03/31/10

Instrument ID: 5972HP70 DFTPP Injection Time: 0240

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	42.4
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	57.6
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 75.0% of mass 198	46.4
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	22.4
365	Greater than 0.75% of mass 198	3.00
441	Present, but less than mass 443	14.1
442	40.0 - 110.0% of mass 198	88.8
443	15.0 - 24.0% of mass 442	16.8 (18.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050NS	0C29009-CCV1	0C29009-CCV1C7	03/31/10	0306
02	~~MR02-IR69-SS01~~ OK	1003103-01	1003103-01C70	03/31/10	0903
03	MR02-IR69-SS01D	1003103-02	1003103-02C70	03/31/10	0954
04	IR69-SS01-10A	1003103-03	1003103-03C70	03/31/10	1044
05	IR69-SS01D-10A	1003103-04	1003103-04C70	03/31/10	1134
06	IR69-SS03-10A	1003103-05	1003103-05C70	03/31/10	1224
07	IR69-SS04-10A	1003103-06	1003103-06C70	03/31/10	1314
08	IR69-SS05-10A	1003103-07	1003103-07C70	03/31/10	1404
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: 5972HP70 Calibration Date: 03/31/10 Time: 0306

Lab File ID: 0C29009-CCV1C7 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1501 1820

GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzaldehyde	0.8340000	0.6908175	0.01	-17.17	50.00	AVRG
Phenol	1.3110000	1.3975813	0.01	6.60	20.00	AVRG
Bis(2-chloroethyl)ether	1.0880000	1.1747328	0.01	7.97	50.00	AVRG
2-Chlorophenol	1.0800000	1.1793842	0.01	9.20	50.00	AVRG
2-Methylphenol	0.9860000	1.0761594	0.01	9.14	50.00	AVRG
2,2'-oxybis(1-Chloropropane)	1.7770000	1.9690340	0.01	10.81	50.00	AVRG
Acetophenone	1.6440000	1.9601241	0.01	19.23	50.00	AVRG
4-Methylphenol	1.0780000	1.1759129	0.01	9.08	50.00	AVRG
N-Nitroso-di-N-propylamine	0.9210000	1.0956810	0.05	18.97	50.00	AVRG
Hexachloroethane	0.6820000	0.8037628	0.01	17.85	50.00	AVRG
Nitrobenzene	0.3740000	0.4061537	0.01	8.60	50.00	AVRG
Isophorone	0.6830000	0.7755631	0.01	13.55	50.00	AVRG
2-Nitrophenol	0.1880000	0.2088777	0.01	11.10	20.00	AVRG
4-Dimethylphenol	0.2260000	0.2364890	0.01	4.64	50.00	AVRG
3(2-chloroethoxy)methane	0.3960000	0.4404040	0.01	11.21	50.00	AVRG
2,4-Dichlorophenol	0.2560000	0.2807404	0.01	9.66	20.00	AVRG
Naphthalene	0.8750000	0.9818316	0.01	12.21	50.00	AVRG
4-Chloroaniline	0.3490000	0.3911805	0.01	12.09	50.00	AVRG
Hexachlorobutadiene	0.1980000	0.2353894	0.01	18.88	20.00	AVRG
Caprolactam	0.0620000	0.0687243	0.01	10.84	50.00	AVRG
4-Chloro-3-methylphenol	0.2970000	0.3304374	0.01	11.26	20.00	AVRG
2-Methylnaphthalene	0.5320000	0.5984802	0.01	12.50	50.00	AVRG
Hexachlorocyclopentadiene	0.4430000	0.4858411	0.05	9.67	50.00	AVRG
2,4,6-Trichlorophenol	0.3660000	0.3741308	0.01	2.22	20.00	AVRG
2,4,5-Trichlorophenol	0.3820000	0.4317395	0.01	13.02	50.00	AVRG
1,1'-Biphenyl	1.2390000	1.3243617	0.01	6.89	50.00	AVRG
2-Chloronaphthalene	1.0350000	1.1324891	0.01	9.42	50.00	AVRG
2-Nitroaniline	0.4070000	0.4358528	0.01	7.09	50.00	AVRG
Dimethylphthalate	1.3010000	1.4392556	0.01	10.63	50.00	AVRG
2,6-Dinitrotoluene	0.3140000	0.3618645	0.01	15.24	50.00	AVRG
Acenaphthylene	1.6650000	1.8575169	0.01	11.56	50.00	AVRG
3-Nitroaniline	0.3570000	0.3934193	0.01	10.20	50.00	AVRG
Acenaphthene	0.9400000	1.0243717	0.01	8.98	20.00	AVRG
2,4-Dinitrophenol	0.2350000	0.2564995	0.05	9.15	50.00	AVRG
4-Nitrophenol	0.2320000	0.2224507	0.05	-4.12	50.00	AVRG
2,4-Dinitrotoluene	0.4310000	0.4821788	0.01	11.87	50.00	AVRG
Dibenzofuran	1.4690000	1.6271497	0.01	10.76	50.00	AVRG
Diethylphthalate	1.4290000	1.5990030	0.01	11.90	50.00	AVRG
4-Chlorophenyl-phenylether	0.5720000	0.6414000	0.01	12.13	50.00	AVRG
Fluorene	1.1560000	1.2954665	0.01	12.06	50.00	AVRG
4-Nitroaniline	0.3390000	0.3720966	0.01	9.76	50.00	AVRG
4,6-Dinitro-2-methylphenol	0.1760000	0.2167720	0.01	23.16	50.00	AVRG

FORM VII SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab File ID: 0D01002-TUN1A70 DFTPP Injection Date: 04/01/10

Instrument ID: 5972HP70 DFTPP Injection Time: 0858

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	40.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	57.9
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 75.0% of mass 198	45.6
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	22.3
365	Greater than 0.75% of mass 198	3.52
441	Present, but less than mass 443	14.2
442	40.0 - 110.0% of mass 198	84.7
443	15.0 - 24.0% of mass 442	15.9 (18.8)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050NU	0D01002-CCV1	0D01002-CCV1A7	04/01/10	0920
02	~~IR69-SS06-10ARE~~	1003103-08J	1003103-08JA70	04/01/10	1012
03	SB06-06-07	1003103-11J	1003103-11JA70	04/01/10	1102
04	IR69-SD01	1003103-14	1003103-14A70	04/01/10	1242
05	MR02-IR69-SS02	1003103-16	1003103-16A70	04/01/10	1422
06	MR02-IR69-SS04	1003103-17	1003103-17A70	04/01/10	1511
07	MR02-IR69-SS05	1003103-18	1003103-18A70	04/01/10	1601
08	MR02-IR69-SS06	1003103-19	1003103-19A70	04/01/10	1651
09					
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22					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

ab Name: COMPUCHEM Contract: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: 5972HP70 Calibration Date: 04/01/10 Time: 0920

Lab File ID: 0D01002-CCV1A7 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1501 1820

GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
N-Nitrosodiphenylamine	0.4960000	0.5515358	0.01	11.20	20.00	AVRG
4-Bromophenyl-phenylether	0.1950000	0.2448864	0.01	25.58	50.00	AVRG
Hexachlorobenzene	0.2480000	0.2641182	0.01	6.50	50.00	AVRG
Atrazine	0.1990000	0.1937911	0.01	-2.62	50.00	AVRG
Pentachlorophenol	0.1610000	0.1502855	0.05	-6.65	20.00	AVRG
Phenanthrene	0.8790000	0.9072621	0.01	3.22	50.00	AVRG
Anthracene	0.8770000	0.9232253	0.01	5.27	50.00	AVRG
Carbazole	0.8600000	0.9490799	0.01	10.36	50.00	AVRG
Di-n-butylphthalate	1.3630000	1.4451547	0.01	6.03	50.00	AVRG
Fluoranthene	1.0220000	1.1670541	0.01	14.19	20.00	AVRG
Pyrene	0.9450000	0.9562703	0.01	1.19	50.00	AVRG
Butylbenzylphthalate	0.5940000	0.5858101	0.01	-1.38	50.00	AVRG
3,3'-Dichlorobenzidine	0.2850000	0.3074804	0.01	7.89	50.00	AVRG
s(2-ethylhexyl)Phthalate	0.8340000	0.8115144	0.01	-2.70	50.00	AVRG
ızo(a)anthracene	0.9020000	0.9580046	0.01	6.21	50.00	AVRG
Chrysene	0.8450000	0.8966946	0.01	6.12	50.00	AVRG
Di-n-octylphthalate	1.4240000	1.2871972	0.01	-9.61	20.00	AVRG
Benzo(b)fluoranthene	1.0060000	0.9441161	0.01	-6.15	50.00	AVRG
Benzo(k)fluoranthene	0.9530000	0.9747325	0.01	2.28	50.00	AVRG
Benzo(a)pyrene	0.8940000	0.9027826	0.01	0.98	20.00	AVRG
Indeno(1,2,3-cd)pyrene	0.8520000	0.9083888	0.01	6.62	50.00	AVRG
Dibenzo(a,h)anthracene	0.8340000	0.9110137	0.01	9.23	50.00	AVRG
Benzo(g,h,i)perylene	0.8520000	0.9438141	0.01	10.78	50.00	AVRG
2-Fluorophenol	1.0350000	1.1579299	0.01	11.88	50.00	AVRG
Phenol-d5	1.4070000	1.5388850	0.01	9.37	50.00	AVRG
Nitrobenzene-d5	0.3840000	0.3848990	0.01	0.23	50.00	AVRG
2-Fluorobiphenyl	1.1620000	1.1274738	0.01	-2.97	50.00	AVRG
2,4,6-Tribromophenol	0.2870000	0.2948522	0.01	2.74	50.00	AVRG
Terphenyl-d14	0.5850000	0.5686634	0.01	-2.79	50.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab File ID: 0D01010-TUN1C70 DFTPP Injection Date: 04/02/10

Instrument ID: 5972HP70 DFTPP Injection Time: 0600

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 80.0% of mass 198	38.8	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	56.9	
70	Less than 2.0% of mass 69	0.2	(0.4)1
127	25.0 - 75.0% of mass 198	46.1	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	7.2	
275	10.0 - 30.0% of mass 198	21.8	
365	Greater than 0.75% of mass 198	3.36	
441	Present, but less than mass 443	14.3	
442	40.0 - 110.0% of mass 198	87.8	
443	15.0 - 24.0% of mass 442	16.7	(19.0)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050NV	0D01010-CCV1	0D01010-CCV1C7	04/02/10	0622
02	IR69-SD01D	1003103-15	1003103-15J2C7	04/02/10	0712
03					
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: 5972HP70 Calibration Date: 04/02/10 Time: 0622

Lab File ID: 0D01010-CCV1C7 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1501 1820

GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
N-Nitrosodiphenylamine	0.4960000	0.5400888	0.01	8.89	20.00	AVRG
4-Bromophenyl-phenylether	0.1950000	0.2589741	0.01	32.81	50.00	AVRG
Hexachlorobenzene	0.2480000	0.2620971	0.01	5.68	50.00	AVRG
Atrazine	0.1990000	0.1516983	0.01	-23.77	50.00	AVRG
Pentachlorophenol	0.1610000	0.1327116	0.05	-17.57	20.00	AVRG
Phenanthrene	0.8790000	0.8851971	0.01	0.70	50.00	AVRG
Anthracene	0.8770000	0.8904202	0.01	1.53	50.00	AVRG
Carbazole	0.8600000	0.9006620	0.01	4.73	50.00	AVRG
Di-n-butylphthalate	1.3630000	1.4803169	0.01	8.61	50.00	AVRG
Fluoranthene	1.0220000	1.1454253	0.01	12.08	20.00	AVRG
Pyrene	0.9450000	0.9138817	0.01	-3.29	50.00	AVRG
Butylbenzylphthalate	0.5940000	0.5872010	0.01	-1.14	50.00	AVRG
3,3'-Dichlorobenzidine	0.2850000	0.2535237	0.01	-11.04	50.00	AVRG
s(2-ethylhexyl)Phthalate	0.8340000	0.8415953	0.01	0.91	50.00	AVRG
nzo(a)anthracene	0.9020000	0.8933726	0.01	-0.96	50.00	AVRG
Chrysene	0.8450000	0.8255974	0.01	-2.30	50.00	AVRG
Di-n-octylphthalate	1.4240000	1.5332942	0.01	7.68	20.00	AVRG
Benzo(b)fluoranthene	1.0060000	0.9927958	0.01	-1.31	50.00	AVRG
Benzo(k)fluoranthene	0.9530000	0.9435620	0.01	-0.99	50.00	AVRG
Benzo(a)pyrene	0.8940000	0.8741161	0.01	-2.22	20.00	AVRG
Indeno(1,2,3-cd)pyrene	0.8520000	0.8258027	0.01	-3.07	50.00	AVRG
Dibenzo(a,h)anthracene	0.8340000	0.8069086	0.01	-3.25	50.00	AVRG
Benzo(g,h,i)perylene	0.8520000	0.8394635	0.01	-1.47	50.00	AVRG
2-Fluorophenol	1.0350000	1.1034716	0.01	6.62	50.00	AVRG
Phenol-d5	1.4070000	1.5861776	0.01	12.73	50.00	AVRG
Nitrobenzene-d5	0.3840000	0.3755095	0.01	-2.21	50.00	AVRG
2-Fluorobiphenyl	1.1620000	1.0004910	0.01	-13.90	50.00	AVRG
2,4,6-Tribromophenol	0.2870000	0.3237944	0.01	12.82	50.00	AVRG
Terphenyl-d14	0.5850000	0.5619782	0.01	-3.94	50.00	AVRG

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab File ID (Standard): 0C29007-CCV1A60 Date Analyzed: 03/29/10

Instrument ID: 5972HP60 Time Analyzed: 1211

		IS1(CRY) AREA #	RT #	IS2(PRY) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	63753	28.74	53235	32.61	32316	8.42
	UPPER LIMIT	127506	29.24	106470	33.11	64632	8.92
	LOWER LIMIT	31877	28.24	26617	32.11	16158	7.92
	CLIENT SAMPLE NO.						
01	SB04-06-07	82077	28.74	67760	32.61	41955	8.43
02	SB05-06-07	81793	28.74	67732	32.61	41511	8.43
03	SB06-06-07	82272	28.74	68851	32.62	44254	8.43
04	SB01-01-02	79057	28.74	66541	32.62	39638	8.43
05	SB01D-01-02	68166	28.74	57708	32.62	36723	8.43
06	IR69-SS06-10A	281893*	28.79	J 47102	32.71	16979	8.44
07	MR02-IR69-SS01 *	240669*	28.78	50389	32.69	14151*	8.44
08	MR02-IR69-SS01D	63001	28.78	47316	32.68	22501	8.44
09	IR69-SS01D-10A	61646	28.79	49010	32.69	22830	8.44
10	IR69-SS03-10A	208722*	28.80	J 49560	32.73	41866	8.43
11	IR69-SS04-10A	101522	28.79	49243	32.71	37785	8.44
12	IR69-SS05-10A	69702	28.79	53465	32.68	20485	8.45
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (CRY) = Chrysene-d12
IS2 (PRY) = Perylene-d12
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

* Sample not used in favor of RE

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab File ID (Standard): 0C29007-CCV1A60 Date Analyzed: 03/29/10

Instrument ID: 5972HP60 Time Analyzed: 1211

		IS4 (NPT) AREA #	RT #	IS5 (ANT) AREA #	RT #	IS6 (PHN) AREA #	RT #
	12 HOUR STD	100720	11.76	47988	16.80	80312	21.03
	UPPER LIMIT	201440	12.26	95976	17.30	160624	21.53
	LOWER LIMIT	50360	11.26	23994	16.30	40156	20.53
	CLIENT SAMPLE NO.						
01	SB04-06-07	131282	11.76	54590	16.80	104147	21.03
02	SB05-06-07	128568	11.76	54356	16.80	98439	21.03
03	SB06-06-07	139631	11.78	58113	16.80	98938	21.03
04	SB01-01-02	125846	11.78	55426	16.80	98892	21.03
05	SB01D-01-02	114382	11.78	49901	16.80	85909	21.03
06	IR69-SS06-10A	82771	11.78	46437	16.82	75139	21.04
07	MR02-IR69-SS01 *	49842*	11.78	53025	16.82	85522	21.04
08	MR02-IR69-SS01D	99236	11.78	49819	16.82	81430	21.04
09	IR69-SS01D-10A	62338	11.80	52178	16.82	90976	21.04
10	IR69-SS03-10A	114243	11.78	56493	16.82	92931	21.04
11	IR69-SS04-10A	99402	11.78	54113	16.82	88074	21.06
12	IR69-SS05-10A	73216	11.79	59020	16.82	102192	21.06
13							
14							
15							
16							
17							
18							
19							
20							

IS4 (NPT) = Naphthalene-d8
IS5 (ANT) = Acenaphthene-d10
IS6 (PHN) = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

page 1 of 1

FORM VIII SV

* sample not used in favor of RE

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab File ID (Standard): 0C30001-CCV1C60 Date Analyzed: 03/30/10

Instrument ID: 5972HP60 Time Analyzed: 0339

		IS1(CRY) AREA #	RT #	IS2(PRY) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	32340	28.73	33824	32.60	13549	8.39
	UPPER LIMIT	64680	29.23	67648	33.10	27098	8.89
	LOWER LIMIT	16170	28.23	16912	32.10	6775	7.89
	CLIENT SAMPLE NO.						
01	MR02-IR69-SS01RE	69116*	28.75	40254	32.66	24066	8.42
02	IR69-SS01-10A	64496	28.75	47184	32.66	22457	8.42
03	IR69-SS03-10ARE	374539*	28.78	45582	32.69	33791*	8.43
04	IR69-SS06-10ARE	126001*	28.78	29410	32.69	19425	8.42
05	IR69-SD01	58369	28.76	43175	32.66	15679	8.42
06	IR69-SD01D	60140	28.77	42856	32.67	14956	8.42
07	MR02-IR69-SS02	57848	28.78	38482	32.68	21870	8.42
08	MR02-IR69-SS04	63840	28.79	34286	32.70	15382	8.42
09	MR02-IR69-SS05	46815	28.78	30558	32.67	16809	8.42
10	MR02-IR69-SS06	111500*	28.80	27703	32.73	28088*	8.42
11	IR69-SD01RE	69550*	28.79	39452	32.71	18819	8.43
12	IR69-SD01DRE	56002	28.79	30337	32.70	17625	8.42
13	MR02-IR69-SS04RE	60652	28.83	28515	32.73	21852	8.43
14							
15							
16							
17							
18							
19							
20							

IS1 (CRY) = Chrysene-d12
IS2 (PRY) = Perylene-d12
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

page 1 of 1

FORM VIII SV

* sample not used

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab File ID (Standard): 0C30001-CCV1C60 Date Analyzed: 03/30/10

Instrument ID: 5972HP60 Time Analyzed: 0339

		IS4(NPT) AREA #	RT #	IS5(ANT) AREA #	RT #	IS6(PHN) AREA #	RT #
	12 HOUR STD	43046	11.75	20824	16.80	35060	21.01
	UPPER LIMIT	86092	12.25	41648	17.30	70120	21.51
	LOWER LIMIT	21523	11.25	10412	16.30	17530	20.51
	CLIENT SAMPLE NO.						
01	MR02-IR69-SS01RE	73583	11.76	36092	16.80	59306	21.03
02	IR69-SS01-10A	69978	11.76	35903	16.80	63930	21.03
03	IR69-SS03-10ARE	112641*	11.76	52447*	16.80	86999*	21.03
04	IR69-SS06-10ARE	62645	11.78	32587	16.80	59542	21.03
05	IR69-SD01	60919	11.78	40051	16.82	71332*	21.04
06	IR69-SD01D	47639	11.78	43555*	16.82	78612*	21.04
07	MR02-IR69-SS02	72774	11.76	39060	16.82	66807	21.04
08	MR02-IR69-SS04	55439	11.78	41812*	16.82	76464*	21.04
09	MR02-IR69-SS05	57267	11.78	30347	16.82	59510	21.04
10	MR02-IR69-SS06	94422*	11.78	48341*	16.82	92741*	21.06
11	IR69-SD01RE	79001	11.78	57198*	16.82	100831*	21.06
12	IR69-SD01DRE	68175	11.78	37843	16.82	73538*	21.06
13	MR02-IR69-SS04RE	70105	11.80	42505*	16.84	83829*	21.07
14							
15							
16							
17							
18							
19							
20							

IS4 (NPT) = Naphthalene-d8
IS5 (ANT) = Acenaphthene-d10
IS6 (PHN) = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

page 1 of 1

FORM VIII SV

* sample not used

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab File ID (Standard): 0D01004-CCV1A60 Date Analyzed: 04/01/10

Instrument ID: 5972HP60 Time Analyzed: 1212

		IS1(CRY) AREA #	RT #	IS2(PRY) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	57158	28.63	55899	32.49	22855	8.30
	UPPER LIMIT	114316	29.13	111798	32.99	45710	8.80
	LOWER LIMIT	28579	28.13	27949	31.99	11427	7.80
	CLIENT SAMPLE NO.						
01	MR02-IR69-SS06RE	141703*	28.67	66098	32.61	41012	8.33
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (CRY) = Chrysene-d12
IS2 (PRY) = Perylene-d12
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab File ID (Standard): 0D01004-CCV1A60 Date Analyzed: 04/01/10

Instrument ID: 5972HP60 Time Analyzed: 1212

		IS4(NPT) AREA #	RT #	IS5(ANT) AREA #	RT #	IS6(PHN) AREA #	RT #
	12 HOUR STD	72603	11.67	35315	16.70	59456	20.91
	UPPER LIMIT	145206	12.17	70630	17.20	118912	21.41
	LOWER LIMIT	36301	11.17	17657	16.20	29728	20.41
	CLIENT SAMPLE NO.						
01	MR02-IR69-SS06RE	122221	11.68	60090	16.70	106995	20.94
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 (NPT) = Naphthalene-d8
IS5 (ANT) = Acenaphthene-d10
IS6 (PHN) = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO

SBLKPB

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab File ID: 0032414-BLK1C60 Lab Sample ID: 0032414-BLK1

Instrument ID: 5972HP60 Date Extracted: 03/24/10

Matrix: (soil/water) SOIL Date Analyzed: 03/29/10

Level:(low/med) LOW Time Analyzed: 0705

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	SPCLCS	0032414-BS2	0032414-BS2C	03/29/10
02	SPCLCSD	0032414-BSD2	0032414-BSD2	03/29/10
RL 03	IR69-SD01	1003103-14	1003103-14C6	03/30/10
04	IR69-SD01D	1003103-15	1003103-15C6	03/30/10
RL 05	MR02-IR69-SS02	1003103-16	1003103-16C6	03/30/10
RL 06	MR02-IR69-SS04	1003103-17	1003103-17C6	03/30/10
RL 07	MR02-IR69-SS05	1003103-18	1003103-18C6	03/30/10
RL 08	MR02-IR69-SS06	1003103-19	1003103-19C6	03/30/10
09	IR69-SD01RE	1003103-14	1003103-14JC	03/30/10
RL 10	IR69-SD01DRE	1003103-15	1003103-15JC	03/30/10
11	MR02-IR69-SS04RE	1003103-17	1003103-17JC	03/30/10
12	MR02-IR69-SS06RE	1003103-19	1003103-19JA	04/01/10
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

naphthalene 0.92J ug/kg (8.3)

FORM IV SV

FORM 2
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Level: (low/med) LOW

	CLIENT SAMPLE NO.	S1 (2FP) #	S2 (PHL) #	S3 (NBZ) #	S4 (FBP) #	S5 (TBP) #	S6 (TPH) #	S7 #	S8 #	TOT OUT	
01	SBLKOC	72	78	74	67	83	97			0	
02	SOCLCS	76	70	73	73	98	97			0	
03	SOCLCSD	78	74	74	77	104	101			0	
04	MR02-IR69-SS01	42	58	61	70	93	84			0	
05	MR02-IR69-SS01D	46	64	63	65	81	83			0	
06	IR69-SS01-10A	70	66	66	62	79	78			0	
07	IR69-SS01D-10A	65	68	61	63	99	96			0	
08	IR69-SS03-10A	82	81	75	71	98	98			0	
09	IR69-SS04-10A	75	60	68	68	83	89			0	
10	IR69-SS05-10A	72	69	63	62	90	86			0	
11	SBLKPB	65	63	63	61	63	92			0	
12	SPBLCS	74	66	66	60	89	84			0	
13	SPBLCSD	70	64	65	59	89	96			0	
14	IR69-SS06-10A	25*	32*	47	76	82	90			2	I/J used
15	SB04-06-07	73	62	69	59	83	86			0	
16	SB05-06-07	63	58	59	53	79	82			0	
17	SB01-01-02	65	62	63	55	81	84			0	
18	SB01D-01-02	64	61	61	56	84	87			0	
19	IR69-SS06-10ARE	7*	17*	24*	84	92	98			3	not used
20	SB06-06-07	70	67	64	59	82	84			0	
21	IR69-SD01	50	69	68	76	93	93			0	
22	MR02-IR69-SS02	74	85	72	73	97	99			0	
23	MR02-IR69-SS04	71	83	67	74	98	104			0	
24	MR02-IR69-SS05	51	84	73	76	95	96			0	
25	MR02-IR69-SS06	60	78	78	78	93	104			0	
26	IR69-SD01D	35	79	62	69	102	105			0	
27											
28											

		QC LIMITS
S1 (2FP)	= 2-Fluorophenol	(33-110)
S2 (PHL)	= Phenol-d5	(38-110)
S3 (NBZ)	= Nitrobenzene-d5	(28-110)
S4 (FBP)	= 2-Fluorobiphenyl	(39-112)
S5 (TBP)	= 2,4,6-Tribromophenol	(34-150)
S6 (TPH)	= Terphenyl-d14	(51-119)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

Initial Calibration Date: 3/16/2010

RRF and %RSD Calculations:

Compound Name: phenol
Lab Value: 1.426

Area of Compound	301398
Area of Internal STD	422640
Conc. of Internal STD	40
Conc. of Compound	20
Calculated RRF	1.426

Compound Name: 2-methylphenol
Lab Value: 11.1

RRF of STD 1	1.055
RRF of STD 2	1.049
RRF of STD 3	0.906
RRF of STD 4	1.084
RRF of STD 5	0.834
Calculated % RSD	11.10

Continuing Calibration File ID: 4/2/2010

RRF and %D Calculations:

Compound Name: benzo(k)fluoranthene
Lab Value: 0.944

Area of Compound	2104654
Area of Internal STD	1784433
Conc. of Internal STD	40
Conc. of Compound	50
Calculated RRF	0.944

Compound Name: indeno(1,2,3-cd)pyrene
Lab Value: 3.1

Average RRF	0.852
Calibration Check RRF	0.8258027
Calculated % D	3.07

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SDG NARRATIVE
SDG # 1003103
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS:

MR02-IR69-SS01, MR02-IR69-SS01D, IR69-SS01-10A, IR69-SS01D-10A, IR69-SS03-10A, IR69-SS04-10A, IR69-SS05-10A, IR69-SS06-10A, SB04-06-07, SB05-06-07, SB06-06-07, SB01-01-02, SB01D-01-02, IR69-SD01, IR69-SD01D, MR02-IR69-SS02, MR02-IR69-SS04, MR02-IR69-SS05, and MR02-IR69-SS06

The nineteen (19) soil samples listed above were scheduled for the requested analysis of the semivolatile fraction.

For sample receiving information, please refer to SW-846 8260B SDG Narrative.

SW-846, 3rd Edition, Update 3, Sonication extraction (Method 3550B), Method 8270C, and Selected Ion Monitoring (SIM) were used to prepare and analyze this sample, with the exceptions and/or additions requested by the client. This portion of the narrative deals with the semivolatile fraction only.

The percent moisture value for these samples ranged from 16 to 77.

Semivolatile

Extraction and analysis holding time requirements were met for these samples.

There was bis(2-ethylhexyl)Phthalate semivolatile project analyte identified above the Contract Required Quantitation Limit (CRQL) in sample SB05-06-07.

Manual integrations were performed on one or more of the process files associated with this SDG. Please see the detailed Manual Integration Summary report that is located behind this SDG narrative. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.

All decafluorotriphenylphosphine (DFTPP) abundance criteria were met for tunes associated to this SDG. Tailing factor criteria were met for pentachlorophenol and benzidine. The breakdown criterion was met for DDT. These three compounds have been added to the DFTPP solution and analyzed together.

Mass assignments were verified by the injections of perfluorotributylamine for the SIM analysis.

All QC criteria were met for all initial and continuing calibration standards associated to this SDG.

All of the surrogates met recovery and retention time criteria in the analyses of these samples, with the exception of sample IR69-SS06-10A. In the initial analysis of the sample IR69-SS06-10A, the recoveries of the surrogates, 2-Fluorophenol and Phenol-d_5, failed quality control criteria. The sample was re-analyzed. In the re-analysis, the recoveries of the surrogates 2-Fluorophenol, Phenol-d_5, and Nitrobenzene-d_5 failed quality control criteria. We have attributed the failing surrogate recoveries to the particular matrix of the sample. Therefore we have reported both analyses of this sample.

FIELD DUPLICATE SAMPLE SUMMARY

Sample ID: IR69-SD01-10A
Duplicate Sample ID: IR69-SD01D-10A

Water: RPD>50%
Soil: RPD>75%

Compound	Sample Conc.	Dup. Sample Conc.	%RPD
acenaphthene			#DIV/0!
anthracene			#DIV/0!
benzo(a)anthracene			#DIV/0!
benzo(a)pyrene	32	37	14
benzo(b)fluoranthene			#DIV/0!
benzo(g,h,i)perylene			#DIV/0!
benzo(k)fluoranthene			#DIV/0!
carbazole			#DIV/0!
chrysene			#DIV/0!
dibenz(a,h)anthracene			#DIV/0!
fluoranthene			#DIV/0!
indeno			#DIV/0!
phenanthrene			#DIV/0!
pyrene			#DIV/0!

* one or both values below CRQL

COMMENTS: No qualifications required.

All of the internal standards met response and retention time criteria in the analyses of these samples, with the exception of samples MR02-IR69-SS01, MR02-IR69-SS04, MR02-IR69-SS06, IR69-SD01, IR69-SD01D, IR69-SS03-10A, and IR69-SS06-10A in the SIM analysis. In the initial analyses of these samples, the responses of the internal standards Chrysene-d12, 1,4-Dichlorobenzene-d4, Naphthalene-d8, and/or Acenaphthene-d10 failed quality control criteria. These samples were re-analyzed and one or more internal standards again failed response criteria. We have attributed the failing internal standard responses to the particular matrix of the sample. Therefore we have reported both analyses of these samples.

The associated method blanks met all quality control criteria.

No matrix spike/matrix spike duplicate (MS/MSD) samples were requested for the semivolatile fraction for this SDG.

With six exceptions, the associated Laboratory Control Samples (SOCLCS/SOCLCSD), prepared and analyzed along with these sample, met all accuracy and precision criteria for the full scan analysis. The recoveries of the spike compounds Caprolactam in the SOCLCS, Caprolactam, Benzaldehyde, and 4-Chloroaniline in the SOCLCSD, and the RPDs of Benzaldehyde and 4-Chloroaniline in the SOCLCS/SOCLSD were flagged as outliers. All remaining recoveries and Relative Percent Differences (RPDs) precision criteria were met in the comparison of the duplicate laboratory control samples.

With two exceptions, the associated Laboratory Control Samples (SPBLCS/SPBLCSD), prepared and analyzed along with these sample, met all accuracy and precision criteria for the full scan analysis . The recovery of the spike compound Caprolactam was flagged as an outlier in both the SPBLCS and SPBLCSD. All remaining recoveries and Relative Percent Differences (RPDs) precision criteria were met in the comparison of the duplicate laboratory control samples.

With four exceptions, the associated Laboratory Control Samples (SPCLCS/SPCLCSD), prepared and analyzed along with these sample, met all accuracy and precision criteria for the SV SIM analysis. The recoveries of the spike compounds Benzo(b)fluoranthene and Benzo(k)fluoranthene were flagged as outliers in both the SPCLCS and SPCLCSD. All remaining recoveries and Relative Percent Differences (RPDs) precision criteria were met in the comparison of the duplicate laboratory control samples.

An uncertainty of these test results may be estimated from the recovery of the surrogates added to the sample prior to sample preparation or from the recovery of spiked compound(s) in the associated laboratory control sample. Further information is available upon request.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

S A Parikh

Saroj A. Parikh
Data Reviewer
April 26, 2010

Holding Times

Sampling Date: 3/4, 3/7, 3/13, 3/14
Received Date: 3/12, 3/17
Extraction Date: 3/18
Analysis Dates: 330, 3/31, 4/2-4/3

All extraction and analysis holding times were met for the samples in this SDG. No qualifications were required. Sample receipt data is in order. Cooler temperature was within acceptable range.

Calibrations

Initial calibrations were performed according to the method with a five-point curve for the single component pesticides, toxaphene, chlordane and the PCB target compounds 1016 & 1660. Single points were included for the other Aroclors. Calibration factors were calculated. %RSDs were within QC limits. Continuing calibration standards were analyzed per the SW-846 methods requested. All PEM breakdown criteria were not met. Some continuing calibration criteria were outside QC limits for target compounds in associated standards in both the initial run of the samples and the RE run. The initial run of the samples was excluded in favor of the RE run so all qualifications were based on the RE run. Information from the initial run is included in the worksheets for reference as needed. Column resolution was acceptable. The correct analytical sequence was run. All required instrument blanks were analyzed. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Any compound detected in the sample, and the associated blank, must be qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than five (5) times the blank concentration.
- Sample weight, volume or dilution factor must be taken into consideration when applying the 5X criteria.
- Apply the same data validation guidelines to any associated rinse and field blanks and all associated samples.
- Qualification/Action codes:
-

No Action -	The sample result is greater than the RL and greater than five times (5X) the blank value.
U at RL-	The sample result is less than the RL when the blank contamination level is less than the RL.

No contamination that resulted in qualification of the data was noted in the associated method or instrument blanks or the submitted field QC blanks.

SURROGATE RECOVERIES

DCB was recovered high in three samples – positive results were qualified as estimated J.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

There was no MS/MSD in this SDG.

LABORATORY CONTROL SAMPLES

The submitted LCS samples exhibited acceptable recoveries. No qualifications were required.

FIELD DUPLICATE SAMPLE SUMMARY

Please note that results aren't assessed for field duplicate reproducibility unless both results are above the compound reporting limit.

Sample ID: **MR02-IR69-SS01-10A DL** **Duplicate ID:** **MR02-IR69-SS01D-10A DL**

Compound	Sample Conc.	Duplicate Conc.	RPD
4,4'-DDE	73	73	0%
4,4'-DDT	36	39	8%

Comments: No qualifications were required

Sample ID: **IR69-SS01-10A DL** **Duplicate ID:** **IR69-SS01D-10A DL**

Compound	Sample Conc.	Duplicate Conc.	RPD
4,4'-DDE	99	110	11%
4,4'-DDT	45	56	22%

Comments: No qualifications were required

Sample ID: **IR69-SB01-01-02-10A RE** **Duplicate ID:** **IR69-SB01D-01-02-10A RE**

Compound	Sample Conc.	Duplicate Conc.	RPD
4,4'-DDE	4.2	6	35%
4,4'-DDT			#DIV/0!

Comments: No qualifications were required

Sample ID: **IR69-SD01-10A** **Duplicate ID:** **IR69-SD01D-10A RE**

Compound	Sample Conc.	Duplicate Conc.	RPD
4,4'-DDE			#DIV/0!
4,4'-DDT			#DIV/0!

Comments: No qualifications were required

SAMPLE RESULT VERIFICATION

Calculations were verified. All P flagged results were qualified as estimated J (column quantitation %Ds >40.)

The calibration standards associated with the original analyses exhibited extreme response decreases as the sequence progressed. The samples were taken through a GPC clean-up procedure in an attempt to minimize the matrix effects. The calibrations surrounding the RE analyses were improved although qualifications were required. It is the professional judgment of the validator that the results reported from the RE analyses provide a more accurate assessment of the identity and concentration of compounds present. Therefore, all original analyses results are excluded in favor of the results reported from the RE analyses with a qualifier code of RE.

Reviewer JACleveland **Date:** 7/28/10

Initial Calibration Date: 4/1/2010

RRF and %RSD Calculations:

Compound Name: 4,4'-DDT in Level 2 on CLPEST
Lab Value: 426700.0000

Area of Compound	8534
Conc. of Compound	0.02
Calculated RRF	426700.0000

Compound Name: 4,4'-DDT
Lab Value: 12.7

RRF of STD 1	472400.0000
RRF of STD 2	426700.0000
RRF of STD 3	393125.0000
RRF of STD 4	366737.5000
RRF of STD 5	342793.7500
RRF of STD 6	
Calculated % RSD	12.72

Continuing Calibration File ID: 082AINDC3AL

RRF and %D Calculations:

Compound Name: 4,4'-DDE
Lab Value: 51850.00000

Area of compound	2074
Conc. Of compound	0.04
Calculated CF	51850.000

Compound Name: 4,4'-DDE
Lab Value: -88.9

Avg. CF from ICAL	465088.75000
CF of CCV	51850.00000
Calculated % D	88.9

SAMPLE CALCULATION

Sample ID: IR69-SS03-10ARE
Standard ID: ICAL curve 4/1/10
Compound: endosulfan sulfate
Concnetration: 30P ug/Kg

	Water (ug/L)	Soil (ug/Kg)
Area of Compound		23289
Calibration Factor of Compound		359638
Dilution Factor		2
Weight/Volume of Sample		30
Final Volume extract		5000
% Moisture	NA	0.73
conversion factor	1	1
Concentration	#DIV/0!	29.56931

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SDG NARRATIVE
SDG # 1003103
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS: IR69-SD01, IR69-SD01D, IR69-SS01-10A, IR69-SS01D-10A, IR69-SS03-10A, IR69-SS04-10A, IR69-SS05-10A, IR69-SS06-10A, MR02-IR69-SS01, MR02-IR69-SS01D, MR02-IR69-SS02, MR02-IR69-SS04, MR02-IR69-SS05, MR02-IR69-SS06, SB01-01-02, SB01D-01-02, SB04-06-07, SB05-060-7, SB06-06-07

The nineteen samples listed above were received intact, refrigerated between 0.1 and 1.4°C, with proper documentation, in sealed shipping containers, on March 12th and 17th, 2010. The samples were scheduled for the requested analysis of the Pesticide/PCB fraction. SW-846, 3rd Edition, Update 3, Method 8081B and 8082A were used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section and all pertinent Laboratory notices for SDG # 1003103 are included in the sample data sections.

Pesticide/PCB

Extraction and analysis holding time requirements were met for the samples. The SDG was further processed through GPC cleanup due to the matrix of the samples. Due to failing continuing calibrations, multiple samples were analyzed twice. The second analysis was reported with a "RE" suffix.

Target analytes confirmed above the reporting limits in samples, with the exceptions of IR69-SD01DRE, SB01-01-02, SB04-06-07, SB04-06-07RE, SB05-06-07, SB05-06-07RE, SB06-06-07, and SB06-06-07RE. Samples MR02-IR69-SS02RE, MR02-IR69-SS04RE, MR02-IR69-SS01, MR02-IR69-SS01D, IR69-SS01-10A, IR69-SS01D-10A, IR69-SS03-10ARE, IR69-SS04-10ARE, and IR69-SS06-10ARE were analyzed and reported at a dilution due to target analytes that exceeded the calibration range.

All QC criteria were met for all initial and continuing calibration standards associated to this SDG. The exceptions to the continuing calibrations are AR16603ZX, AR16603ZZ, AR16003AB, AR16603AH, AR16603AJ, AR16603AL, INDC3ZX, INDC3ZZ, INDC3AB, INDC3AH, INDC3AJ, INDC3AL, and PEMAH.

All surrogate recoveries were with the method specified limits, with exceptions in samples MR02-IR69-SS01D, IR69-SS01D-10A, IR69-SS04-10A, IR69-SS05-10A, SB04-06-07, SB05-06-07, MR02-IR69-SS04, MR02-IR69-SS05, PBLKDP, PDPLCS, PDPLCSD, PEPLCS, PEPLCSD, IR69-SD01, IR69-SD01DRE, MR02-IR69-SS05RE, MR02-IR69-SS06RE, and IR69-SS05-10ARE.

The method blank associated with the samples met all quality control criteria.

Per client's request, duplicate matrix spikes were not performed with this SDG. The Laboratory Control Samples (LCS/LCSD) prepared and analyzed with the samples met recovery and precision criteria, with the exceptions in PDPLCSD, PPDLCS, and PPDLCSD.

An uncertainty of these test results may be estimated from the recovery of the surrogates added to the sample prior to sample preparation or from the recovery of spiked compound(s) in the associated laboratory control sample. Further information is available upon request.

I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on CD has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Teresa Amentt Jennings

Teresa Amentt Jennings
GC/HPLC Data Reviewer
April 9, 2010

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC84 Calibration Date: 03/31/10 Time: 0259

Lab File ID: 158ZAR16603ZX Init. Calib. Date(s): 03/26/10 03/26/10

Init. Calib. Times: 1650 1845

GC Column: CLPEST ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aroclor-1016	7984.5000	8565.0000	0.01	7.27	20.00	AVRG	
(2)	15051.500	14142.500	0.01	-6.04	20.00	AVRG	
(3)	22160.000	20052.500	0.01	-9.51	20.00	AVRG	
(4)	9865.5000	10922.500	0.01	10.71	20.00	AVRG	
(5)	10436.250	8130.0000	0.01	-22.10	20.00	AVRG	<-
Aroclor-1260	24447.500	20817.500	0.01	-14.85	20.00	AVRG	
(2)	48661.500	23100.000	0.01	-52.53	20.00	AVRG	<-
(3)	33474.500	25737.500	0.01	-23.11	20.00	AVRG	<-
(4)	28554.375	16760.000	0.01	-41.30	20.00	AVRG	<-
(5)	62749.625	60200.000	0.01	-4.06	20.00	AVRG	
Decachlorobiphenyl	438116.25	386965.00	0.01	-11.68	20.00	AVRG	
Tetrachloro-m-Xylene	477212.50	490777.50	0.01	2.84	20.00	AVRG	

NOT USED

1R69-SS03-10A
SS04
SS05
SS06
SB04-06-07
SB05-06-07
SB06-06-07
SB01-01-02
SB01D-01-02

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC85 Calibration Date: 03/31/10 Time: 0259

Lab File ID: 158ZAR16603ZX Init. Calib. Date(s): 03/26/10 03/26/10

Init. Calib. Times: 1650 1845

GC Column: CLPEST2 ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aroclor-1016	6257.6250	5735.0000	0.01	-8.35	20.00	AVRG	
(2)	17547.750	18415.000	0.01	4.94	20.00	AVRG	
(3)	6879.1250	4770.0000	0.01	-30.66	20.00	AVRG	<-
(4)	8216.5000	6367.5000	0.01	-22.50	20.00	AVRG	<-
(5)	7713.0000	6912.5000	0.01	-10.38	20.00	AVRG	
Aroclor-1260	19219.500	14785.000	0.01	-23.07	20.00	AVRG	<-
(2)	32790.125	29550.000	0.01	-9.88	20.00	AVRG	
(3)	25611.250	21767.500	0.01	-15.01	20.00	AVRG	
(4)	21470.875	17340.000	0.01	-19.24	20.00	AVRG	
(5)	50670.500	44960.000	0.01	-11.27	20.00	AVRG	
Decachlorobiphenyl	333221.25	282535.00	0.01	-15.21	20.00	AVRG	
Tetrachloro-m-Xylene	375220.00	371425.00	0.01	-1.01	20.00	AVRG	

NOT USED

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC84 Calibration Date: 03/31/10 Time: 0328

Lab File ID: 159ZINDC3ZX Init. Calib. Date(s): 03/26/10 03/26/10

Init. Calib. Times: 1327 1523

GC Column: CLPEST ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	626935.00	599100.00	0.01	-4.44	20.00	AVRG	
alpha-BHC	741325.00	689682.50	0.01	-6.97	20.00	AVRG	
beta-BHC	281350.00	236050.00	0.01	-16.10	20.00	AVRG	
delta-BHC	637042.50	526700.00	0.01	-17.32	20.00	AVRG	
gamma-BHC (Lindane)	702795.00	666400.00	0.01	-5.18	20.00	AVRG	
4,4'-DDD	400071.25	255835.00	0.01	-36.05	20.00	AVRG	<-
4,4'-DDE	524102.50	205950.00	0.01	-60.70	20.00	AVRG	<-
4,4'-DDT	474682.50	371775.00	0.01	-21.68	20.00	AVRG	<-
Dieldrin	524232.50	491375.00	0.01	-6.27	20.00	AVRG	
Endosulfan I	564232.50	1091300.0	0.01	93.41	20.00	AVRG	<-
Endosulfan II	466490.00	465425.00	0.01	-0.23	20.00	AVRG	
Endosulfan sulfate	418243.75	354950.00	0.01	-15.13	20.00	AVRG	
Endrin	454198.75	431300.00	0.01	-5.04	20.00	AVRG	
ndrin Aldehyde	367055.00	354025.00	0.01	-3.55	20.00	AVRG	
eptachlor	678352.50	649550.00	0.01	-4.24	20.00	AVRG	
Heptachlor Epoxide	610815.00	558100.00	0.01	-8.63	20.00	AVRG	
Methoxychlor	200641.25	156365.00	0.01	-22.07	20.00	AVRG	<-
Endrin Ketone	491800.00	418125.00	0.01	-14.98	20.00	AVRG	
gamma-Chlordane	606652.50	553700.00	0.01	-8.73	20.00	AVRG	
alpha-Chlordane	532337.50	482050.00	0.01	-9.45	20.00	AVRG	
Decachlorobiphenyl	438116.25	400225.00	0.01	-8.65	20.00	AVRG	
Tetrachloro-m-Xylene	477212.50	482800.00	0.01	1.17	20.00	AVRG	

NOT USED

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC85 Calibration Date: 03/31/10 Time: 0328

Lab File ID: 159ZINDC3ZX Init. Calib. Date(s): 03/26/10 03/26/10

Init. Calib. Times: 1327 1523

GC Column: CLPEST2 ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	464590.00	440855.00	0.01	-5.11	20.00	AVRG	
beta-BHC	226347.50	176865.00	0.01	-21.86	20.00	AVRG	<-
alpha-BHC	548885.00	511345.00	0.01	-6.84	20.00	AVRG	
delta-BHC	488632.50	345890.00	0.01	-29.21	20.00	AVRG	<-
gamma-BHC (Lindane)	529482.50	488612.50	0.01	-7.72	20.00	AVRG	
4,4'-DDD	301326.25	160123.75	0.01	-46.86	20.00	AVRG	<-
4,4'-DDE	417048.75	361365.00	0.01	-13.35	20.00	AVRG	
4,4'-DDT	348881.25	244942.50	0.01	-29.79	20.00	AVRG	<-
Dieldrin	396185.00	386245.00	0.01	-2.51	20.00	AVRG	
Endosulfan I	417220.00	383332.50	0.01	-8.12	20.00	AVRG	
Endosulfan II	350855.00	399440.00	0.01	13.85	20.00	AVRG	
Endosulfan sulfate	316508.75	264635.00	0.01	-16.39 OK	20.00	AVRG	
Endrin	342151.25	329450.00	0.01	-3.71	20.00	AVRG	
Endrin Aldehyde	274266.25	249475.00	0.01	-9.04	20.00	AVRG	
Heptachlor	486620.00	507120.00	0.01	4.21	20.00	AVRG	
Heptachlor Epoxide	448050.00	417470.00	0.01	-6.82	20.00	AVRG	
Methoxychlor	154943.50	103262.00	0.01	-33.36	20.00	AVRG	<-
Endrin Ketone	371421.25	302602.50	0.01	-18.53	20.00	AVRG	
gamma-Chlordane	449722.50	409522.50	0.01	-8.94	20.00	AVRG	
alpha-Chlordane	390790.00	355910.00	0.01	-8.92	20.00	AVRG	
Decachlorobiphenyl	333221.25	282262.50	0.01	-15.29	20.00	AVRG	
Tetrachloro-m-Xylene	375220.00	363295.00	0.01	-3.18	20.00	AVRG	

NOT USED

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC84 Calibration Date: 03/31/10 Time: 0943

Lab File ID: 172ZAR16603ZZ Init. Calib. Date(s): 03/26/10 03/26/10

Init. Calib. Times: 1650 1845

GC Column: CLPEST ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aroclor-1016	7984.5000	8257.5000	0.01	3.42	20.00	AVRG	
(2)	15051.500	13842.500	0.01	-8.03	20.00	AVRG	
(3)	22160.000	16902.500	0.01	-23.72	20.00	AVRG	<-
(4)	9865.5000	8360.0000	0.01	-15.26	20.00	AVRG	
(5)	10436.250	6462.5000	0.01	-38.08	20.00	AVRG	<-
Aroclor-1260	24447.500	17217.500	0.01	-29.57	20.00	AVRG	<-
(2)	48661.500	42485.000	0.01	-12.69	20.00	AVRG	
(3)	33474.500	23572.500	0.01	-29.58	20.00	AVRG	<-
(4)	28554.375	16177.500	0.01	-43.34	20.00	AVRG	<-
(5)	62749.625	50550.000	0.01	-19.44	20.00	AVRG	
Decachlorobiphenyl	438116.25	325317.50	0.01	-25.75	20.00	AVRG	<-
Tetrachloro-m-Xylene	477212.50	475517.50	0.01	-0.36	20.00	AVRG	

NOT USED

R69-SD010-10A
MB02-1R69-SS02-10A
SS04
SS05
SS06

FORM VII PEST

271

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC85 Calibration Date: 03/31/10 Time: 0943

Lab File ID: 172ZAR16603ZZ Init. Calib. Date(s): 03/26/10 03/26/10

Init. Calib. Times: 1650 1845

GC Column: CLPEST2 ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aroclor-1016	6257.6250	5485.0000	0.01	-12.35	20.00	AVRG	
(2)	17547.750	15382.500	0.01	-12.34	20.00	AVRG	
(3)	6879.1250	3917.5000	0.01	-43.05	20.00	AVRG	<-
(4)	8216.5000	5360.0000	0.01	-34.76	20.00	AVRG	<-
(5)	7713.0000	5130.0000	0.01	-33.49	20.00	AVRG	<-
Aroclor-1260	19219.500	12405.000	0.01	-35.46	20.00	AVRG	<-
(2)	32790.125	24110.000	0.01	-26.47	20.00	AVRG	<-
(3)	25611.250	19157.500	0.01	-25.20	20.00	AVRG	<-
(4)	21470.875	15525.000	0.01	-27.69	20.00	AVRG	<-
(5)	50670.500	36892.500	0.01	-27.19	20.00	AVRG	<-
Decachlorobiphenyl	333221.25	239225.00	0.01	-28.21	20.00	AVRG	<-
Tetrachloro-m-Xylene	375220.00	341950.00	0.01	-8.87	20.00	AVRG	

NOT USED

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC84 Calibration Date: 03/31/10 Time: 1012

Lab File ID: 173ZINDC3ZZ Init. Calib. Date(s): 03/26/10 03/26/10

Init. Calib. Times: 1327 1523

GC Column: CLPEST ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	626935.00	570280.00	0.01	-9.04	20.00	AVRG	
alpha-BHC	741325.00	703665.00	0.01	-5.08	20.00	AVRG	
beta-BHC	281350.00	197130.00	0.01	-29.93	20.00	AVRG	<-
delta-BHC	637042.50	499302.50	0.01	-21.62	20.00	AVRG	<-
gamma-BHC (Lindane)	702795.00	622667.50	0.01	-11.40	20.00	AVRG	
4,4'-DDD	400071.25	424855.00	0.01	6.19	20.00	AVRG	
4,4'-DDE	524102.50	84302.500	0.01	-83.91	20.00	AVRG	<-
4,4'-DDT	474682.50	48646.250	0.01	-89.75	20.00	AVRG	<-
Dieldrin	524232.50	455362.50	0.01	-13.14	20.00	AVRG	
Endosulfan I	564232.50	1209352.5	0.01	114.34	20.00	AVRG	<-
Endosulfan II	466490.00	442696.25	0.01	-5.10	20.00	AVRG	
Endosulfan sulfate	418243.75	286935.00	0.01	-31.40	20.00	AVRG	<-
Endrin	454198.75	385498.75	0.01	-15.12	20.00	AVRG	
Endrin Aldehyde	367055.00	280815.00	0.01	-23.50	20.00	AVRG	<-
Heptachlor	678352.50	611112.50	0.01	-9.91	20.00	AVRG	
Heptachlor Epoxide	610815.00	497547.50	0.01	-18.54	20.00	AVRG	
Methoxychlor	200641.25	2100.7500	0.01	-98.95	20.00	AVRG	<-
Endrin Ketone	491800.00	333075.00	0.01	-32.27	20.00	AVRG	<-
gamma-Chlordane	606652.50	499185.00	0.01	-17.71	20.00	AVRG	
alpha-Chlordane	532337.50	427167.50	0.01	-19.76	20.00	AVRG	
Decachlorobiphenyl	438116.25	345406.25	0.01	-21.16	20.00	AVRG	<-
Tetrachloro-m-Xylene	477212.50	495510.00	0.01	3.83	20.00	AVRG	

NOT USED

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC85 Calibration Date: 03/31/10 Time: 1012

Lab File ID: 173ZINDC3ZZ Init. Calib. Date(s): 03/26/10 03/26/10

Init. Calib. Times: 1327 1523

GC Column: CLPEST2 ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	464590.00	410800.00	0.01	-11.58	20.00	AVRG	
beta-BHC	226347.50	153950.00	0.01	-31.98	20.00	AVRG	<-
alpha-BHC	548885.00	484350.00	0.01	-11.76	20.00	AVRG	
delta-BHC	488632.50	249200.00	0.01	-49.00	20.00	AVRG	<-
gamma-BHC (Lindane)	529482.50	443400.00	0.01	-16.26	20.00	AVRG	
4,4'-DDD	301326.25		0.01	-100.00	20.00	AVRG	<-
4,4'-DDE	417048.75	315725.00	0.01	-24.30	20.00	AVRG	<-
4,4'-DDT	348881.25	14650.000	0.01	-95.80	20.00	AVRG	<-
Dieldrin	396185.00	353950.00	0.01	-10.66	20.00	AVRG	
Endosulfan I	417220.00	352050.00	0.01	-15.62	20.00	AVRG	
Endosulfan II	350855.00	379800.00	0.01	8.25	20.00	AVRG	
Endosulfan sulfate	316508.75	200525.00	0.01	-36.64	20.00	AVRG	<-
Endrin	342151.25	283300.00	0.01	-17.20	20.00	AVRG	
ndrin Aldehyde	274266.25	187450.00	0.01	-31.65	20.00	AVRG	<-
ptachlor	486620.00	518350.00	0.01	6.52	20.00	AVRG	
Heptachlor Epoxide	448050.00	372100.00	0.01	-16.95	20.00	AVRG	
Methoxychlor	154943.50	13285.000	0.01	-91.42	20.00	AVRG	<-
Endrin Ketone	371421.25	222500.00	0.01	-40.09	20.00	AVRG	<-
gamma-Chlordane	449722.50	359750.00	0.01	-20.01	20.00	AVRG	<-
alpha-Chlordane	390790.00	307600.00	0.01	-21.29	20.00	AVRG	<-
Decachlorobiphenyl	333221.25	248175.00	0.01	-25.52	20.00	AVRG	<-
Tetrachloro-m-Xylene	375220.00	350600.00	0.01	-6.56	20.00	AVRG	

NOT USED

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC84 Calibration Date: 03/31/10 Time: 1628

Lab File ID: 186ZAR16603AB Init. Calib. Date(s): 03/26/10 03/26/10

Init. Calib. Times: 1650 1845

GC Column: CLPEST ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aroclor-1016	7984.5000	8090.0000	0.01	1.32	20.00	AVRG	
(2)	15051.500	10697.500	0.01	-28.93	20.00	AVRG	<-
(3)	22160.000	9180.0000	0.01	-58.57	20.00	AVRG	<-
(4)	9865.5000	6657.5000	0.01	-32.52	20.00	AVRG	<-
(5)	10436.250	1387.5000	0.01	-86.70	20.00	AVRG	<-
Aroclor-1260	24447.500		0.01	-100.00	20.00	AVRG	<-
(2)	48661.500		0.01	-100.00	20.00	AVRG	<-
(3)	33474.500		0.01	-100.00	20.00	AVRG	<-
(4)	28554.375		0.01	-100.00	20.00	AVRG	<-
(5)	62749.625		0.01	-100.00	20.00	AVRG	<-
Decachlorobiphenyl	438116.25	341737.50	0.01	-22.00	20.00	AVRG	<-
Tetrachloro-m-Xylene	477212.50	450725.00	0.01	-5.55	20.00	AVRG	

~~SB06-06-07 RE~~
~~SB01-01-02~~
~~SS01D-01-02~~
CLOSER

X3COM
QAC
72710

NOT USED

1R69-SD01D-10A
MR02-1R69-SS02-10A
SS04
SS05
SS06

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC85 Calibration Date: 03/31/10 Time: 1628

Lab File ID: 186ZAR16603AB Init. Calib. Date(s): 03/26/10 03/26/10

Init. Calib. Times: 1650 1845

GC Column: CLPEST2 ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aroclor-1016	6257.6250	4235.0000	0.01	-32.32	20.00	AVRG	<-
(2)	17547.750	2177.5000	0.01	-87.59	20.00	AVRG	<-
(3)	6879.1250	690.00000	0.01	-89.97	20.00	AVRG	<-
(4)	8216.5000	1627.5000	0.01	-80.19	20.00	AVRG	<-
(5)	7713.0000	1122.5000	0.01	-85.45	20.00	AVRG	<-
Aroclor-1260	19219.500		0.01	-100.00	20.00	AVRG	<-
(2)	32790.125	1315.0000	0.01	-95.99	20.00	AVRG	<-
(3)	25611.250	22115.000	0.01	-13.65	20.00	AVRG	
(4)	21470.875		0.01	-100.00	20.00	AVRG	<-
(5)	50670.500	3250.0000	0.01	-93.59	20.00	AVRG	<-
Decachlorobiphenyl	333221.25	255412.50	0.01	-23.35	20.00	AVRG	<-
Tetrachloro-m-Xylene	375220.00	322882.50	0.01	-13.95	20.00	AVRG	

NOT USED

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC84 Calibration Date: 03/31/10 Time: 1657

Lab File ID: 187ZINDC3AB Init. Calib. Date(s): 03/26/10 03/26/10

Init. Calib. Times: 1327 1523

GC Column: CLPEST ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	626935.00	577605.00	0.01	-7.87	20.00	AVRG	
alpha-BHC	741325.00	661367.50	0.01	-10.78	20.00	AVRG	
beta-BHC	281350.00	48735.000	0.01	-82.68	20.00	AVRG	<-
delta-BHC	637042.50	43750.000	0.01	-93.13	20.00	AVRG	<-
gamma-BHC (Lindane)	702795.00	527750.00	0.01	-24.91	20.00	AVRG	<-
4,4'-DDD	400071.25	15136.250	0.01	-96.22	20.00	AVRG	<-
4,4'-DDE	524102.50	2527.5000	0.01	-99.52	20.00	AVRG	<-
4,4'-DDT	474682.50		0.01	-100.00	20.00	AVRG	<-
Dieldrin	524232.50	451658.75	0.01	-13.84	20.00	AVRG	
Endosulfan I	564232.50	1368182.5	0.01	142.48	20.00	AVRG	<-
Endosulfan II	466490.00	475342.50	0.01	1.90	20.00	AVRG	
Endosulfan sulfate	418243.75	248016.25	0.01	-40.70	20.00	AVRG	<-
Endrin	454198.75	368938.75	0.01	-18.77	20.00	AVRG	
Endrin Aldehyde	367055.00	256340.00	0.01	-30.16	20.00	AVRG	<-
Heptachlor	678352.50	603110.00	0.01	-11.09	20.00	AVRG	
Heptachlor Epoxide	610815.00	502630.00	0.01	-17.71	20.00	AVRG	
Methoxychlor	200641.25		0.01	-100.00	20.00	AVRG	<-
Endrin Ketone	491800.00	340861.25	0.01	-30.69	20.00	AVRG	<-
gamma-Chlordane	606652.50	511540.00	0.01	-15.68	20.00	AVRG	
alpha-Chlordane	532337.50	431890.00	0.01	-18.87	20.00	AVRG	
Decachlorobiphenyl	438116.25	841.25000	0.01	-99.81	20.00	AVRG	<-
Tetrachloro-m-Xylene	477212.50	494665.00	0.01	3.66	20.00	AVRG	

NOT USED

FORM VII PEST

277

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC85 Calibration Date: 03/31/10 Time: 1657

Lab File ID: 187ZINDC3AB Init. Calib. Date(s): 03/26/10 03/26/10

Init. Calib. Times: 1327 1523

GC Column: CLPEST2 ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	464590.00	407902.50	0.01	-12.20	20.00	AVRG	
beta-BHC	226347.50	30547.500	0.01	-86.50	20.00	AVRG	<-
alpha-BHC	548885.00	442865.00	0.01	-19.32	20.00	AVRG	
delta-BHC	488632.50	27870.000	0.01	-94.30	20.00	AVRG	<-
gamma-BHC (Lindane)	529482.50	395735.00	0.01	-25.26	20.00	AVRG	<-
4,4'-DDD	301326.25	212925.00	0.01	-29.34	20.00	AVRG	<-
4,4'-DDE	417048.75		0.01	-100.00	20.00	AVRG	<-
4,4'-DDT	348881.25		0.01	-100.00	20.00	AVRG	<-
Dieldrin	396185.00	377986.25	0.01	-4.59	20.00	AVRG	
Endosulfan I	417220.00	344830.00	0.01	-17.35	20.00	AVRG	
Endosulfan II	350855.00	572523.75	0.01	63.18	20.00	AVRG	<-
Endosulfan sulfate	316508.75	176986.25	0.01	-44.08	20.00	AVRG	<-
Endrin	342151.25	266133.75	0.01	-22.22	20.00	AVRG	<-
Endrin Aldehyde	274266.25	168531.25	0.01	-38.55	20.00	AVRG	<-
Heptachlor	486620.00	438462.50	0.01	-9.90	20.00	AVRG	
Heptachlor Epoxide	448050.00	356162.50	0.01	-20.51	20.00	AVRG	<-
Methoxychlor	154943.50	725.25000	0.01	-99.53	20.00	AVRG	<-
Endrin Ketone	371421.25	233848.75	0.01	-37.04	20.00	AVRG	<-
gamma-Chlordane	449722.50	328032.50	0.01	-27.06	20.00	AVRG	<-
alpha-Chlordane	390790.00	284037.50	0.01	-27.32	20.00	AVRG	<-
Decachlorobiphenyl	333221.25	261372.50	0.01	-21.56	20.00	AVRG	<-
Tetrachloro-m-Xylene	375220.00	329602.50	0.01	-12.16	20.00	AVRG	

NOT USED

FORM VII PEST

7F

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

GC Column: CLPEST2 ID: 0.32 (mm) Init. Calib. Date(s): 04/01/10 04/02/10

EPA Sample No.(PIBLK): PIBLKAH Date Analyzed :04/02/10

Lab Sample ID (PIBLK): PIBLKAH Time Analyzed :1722

EPA Sample No.(PEM): PEMAH Date Analyzed :04/02/10

Lab Sample ID (PEM): PEMAH Time Analyzed :1849

PEM COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	AREA
4,4'-DDD	15.73	15.59	15.73	1336
4,4'-DDE	14.48	14.35	14.49	448
4,4'-DDT	16.36	16.25	16.39	9178
Endrin	15.40	15.32	15.46	9130
Endrin Aldehyde				
Endrin Ketone	18.32	18.21	18.36	304

4,4'-DDT % breakdown (1): 16.3 Endrin % breakdown (1): 3.22

QC LIMITS:

See next page for assoc. samples

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

FORM VII PEST-1

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC84 Calibration Date: 04/02/10 Time: 1751

Lab File ID: 053AAR16603AH Init. Calib. Date(s): 04/01/10 04/01/10

Init. Calib. Times: 2135 2330

GC Column: CLPEST ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF0.0100 or AMOUNT	CCAL RRF0.0100	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Aroclor-1016	9126.7500	8322.5000	8322.5000	0.01	-8.81	20.00	AVRG
(2)	16266.750	16697.500	16697.500	0.01	2.65	20.00	AVRG
(3)	22321.500	23365.000	23365.000	0.01	4.67	20.00	AVRG
(4)	10187.625	9872.5000	9872.5000	0.01	-3.09	20.00	AVRG
(5)	11206.375	9500.0000	9500.0000	0.01	-15.23	20.00	AVRG
Aroclor-1260	22914.375	21835.000	21835.000	0.01	-4.71	20.00	AVRG
(2)	42526.125	50922.500	50922.500	0.01	19.74	20.00	AVRG
(3)	23808.250	21990.000	21990.000	0.01	-7.64	20.00	AVRG
(4)	50580.750	46390.000	46390.000	0.01	-8.28	20.00	AVRG
(5)	24776.625	19360.000	19360.000	0.01	-21.86	20.00	AVRG <- NQ
Decachlorobiphenyl	0.0406840	0.0400000	314575.00	0.01	-1.71		LINR
Tetrachloro-m-Xylene	502882.50	513700.00	513700.00	0.01	2.15	20.00	AVRG

1R69-SD01D RE
MR02-1R69-SS02
SS04
SS05
SS06
SS01
SS01D
1R69-SS01-10A RE
SB01D
SB03
SB04
SB05
SB04-06-07
SB05
~~SB06-06-07~~
~~SB01-01-02~~
~~SB01D-01-02~~

X3 Corr. 280
JAC
72710

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC85 Calibration Date: 04/02/10 Time: 1751

Lab File ID: 053AAR16603AH Init. Calib. Date(s): 04/01/10 04/01/10

Init. Calib. Times: 2135 2330

GC Column: CLPEST2 ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aroclor-1016	7464.7500	7187.5000	0.01	-3.71	20.00	AVRG	
(2)	20677.875	20587.500	0.01	-0.44	20.00	AVRG	
(3)	12853.375	10442.500	0.01	-18.76	20.00	AVRG	
(4)	8790.8750	7187.5000	0.01	-18.24	20.00	AVRG	
(5)	10129.750	7492.5000	0.01	-26.03	20.00	AVRG	<-
Aroclor-1260	22080.625	17325.000	0.01	-21.54	20.00	AVRG	<-
(2)	37234.250	36522.500	0.01	-1.91	20.00	AVRG	
(3)	29058.750	26602.500	0.01	-8.45	20.00	AVRG	
(4)	24897.500	30825.000	0.01	23.81	20.00	AVRG	<-
(5)	56241.500	50145.000	0.01	-10.84	20.00	AVRG	
Decachlorobiphenyl	374466.25	341793.75	0.01	-8.72	20.00	AVRG	
Tetrachloro-m-Xylene	439020.00	400390.00	0.01	-8.80	20.00	AVRG	

AVG 13.4

AVG 13.3

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC84 Calibration Date: 04/02/10 Time: 1820

Lab File ID: 054AINDC3AH Init. Calib. Date(s): 04/01/10 04/01/10

Init. Calib. Times: 1812 2008

GC Column: CLPEST ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF0.0100 or AMOUNT	CCAL RRF0.0100	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aldrin	574470.00	594450.00	594450.00	0.01	3.48	20.00	AVRG	
alpha-BHC	700455.00	738850.00	738850.00	0.01	5.48	20.00	AVRG	
beta-BHC	295852.50	251850.00	251850.00	0.01	-14.87	20.00	AVRG	
delta-BHC	634725.00	594100.00	594100.00	0.01	-6.40	20.00	AVRG	
gamma-BHC (Lindane)	676227.50	689450.00	689450.00	0.01	1.96	20.00	AVRG	
4,4'-DDD	349607.50	417000.00	417000.00	0.01	19.28	20.00	AVRG	
4,4'-DDE	465088.75	429975.00	429975.00	0.01	-7.55	20.00	AVRG	
4,4'-DDT	400351.25	285400.00	285400.00	0.01	-28.71	20.00	AVRG	<-J/UJ
Dieldrin	460346.25	470225.00	470225.00	0.01	2.14	20.00	AVRG	
Endosulfan I	500250.00	629750.00	629750.00	0.01	25.89	20.00	AVRG	<-J+
Endosulfan II	405497.50	406225.00	406225.00	0.01	0.18	20.00	AVRG	
Endosulfan sulfate	347042.50	331500.00	331500.00	0.01	-4.48	20.00	AVRG	
Endrin	431858.75	422675.00	422675.00	0.01	-2.13	20.00	AVRG	
Endrin Aldehyde	301297.50	322250.00	322250.00	0.01	6.95	20.00	AVRG	
Heptachlor	636675.00	647800.00	647800.00	0.01	1.75	20.00	AVRG	
Heptachlor Epoxide	544140.00	530200.00	530200.00	0.01	-2.56	20.00	AVRG	
Methoxychlor	163562.00	10870.000	10870.000	0.01	-93.35	20.00	AVRG	<-J/UJ
Endrin Ketone	392343.75	395550.00	395550.00	0.01	-0.82	20.00	AVRG	
gamma-Chlordane	553342.50	530500.00	530500.00	0.01	-4.13	20.00	AVRG	
alpha-Chlordane	476535.00	466350.00	466350.00	0.01	-2.14	20.00	AVRG	
Decachlorobiphenyl	0.0435076	0.0400000	331550.00	0.01	-8.77		LINR	
Tetrachloro-m-Xylene	502882.50	541900.00	541900.00	0.01	7.76	20.00	AVRG	

See previous page (053AAR16603AH CLPEST) for associated samples

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC85 Calibration Date: 04/02/10 Time: 1820

Lab File ID: 054AINDC3AH Init. Calib. Date(s): 04/01/10 04/01/10

Init. Calib. Times: 1812 2008

GC Column: CLPEST2 ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	527887.50	521152.50	0.01	-1.28	20.00	AVRG	
beta-BHC	256570.00	225525.00	0.01	-12.10	20.00	AVRG	
alpha-BHC	595185.00	589035.00	0.01	-1.03	20.00	AVRG	
delta-BHC	543867.50	386837.50	0.01	-28.87	20.00	AVRG	<- JWJ
gamma-BHC (Lindane)	577750.00	562715.00	0.01	-2.60	20.00	AVRG	
4,4'-DDD	333588.75	341891.25	0.01	2.49	20.00	AVRG	
4,4'-DDE	461905.00	460615.00	0.01	-0.28	20.00	AVRG	
4,4'-DDT	400368.75	263990.00	0.01	-34.06	20.00	AVRG	<- JWJ
Dieldrin	456618.75	435337.50	0.01	-4.66	20.00	AVRG	
Endosulfan I	473795.00	484162.50	0.01	2.19	20.00	AVRG	
Endosulfan II	402916.25	420493.75	0.01	4.36	20.00	AVRG	
Endosulfan sulfate	359637.50	377635.00	0.01	5.00	20.00	AVRG	
Endrin	412278.75	385535.00	0.01	-6.49	20.00	AVRG	
ndrin Aldehyde	307781.25	292236.25	0.01	-5.05	20.00	AVRG	
ptachlor	561600.23	629095.00	0.01	12.02	20.00	AVRG	
Heptachlor Epoxide	508862.50	491605.00	0.01	-3.39	20.00	AVRG	
Methoxychlor	172663.00	124347.50	0.01	-27.98	20.00	AVRG	<- JWJ
Endrin Ketone	410382.50	401752.50	0.01	-2.10	20.00	AVRG	
gamma-Chlordane	511715.00	484520.00	0.01	-5.31	20.00	AVRG	
alpha-Chlordane	446262.50	417945.00	0.01	-6.34	20.00	AVRG	
Decachlorobiphenyl	374466.25	367863.75	0.01	-1.76	20.00	AVRG	
Tetrachloro-m-Xylene	439020.00	421610.00	0.01	-3.96	20.00	AVRG	

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC84 Calibration Date: 04/03/10 Time: 0106

Lab File ID: 068AAR16603AJ Init. Calib. Date(s): 04/01/10 04/01/10

Init. Calib. Times: 2135 2330

GC Column: CLPEST ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF0.0100 or AMOUNT	CCAL RRF0.0100	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	9126.7500	7790.0000	7790.0000	0.01	-14.65	20.00	AVRG	
(2)	16266.750	14850.000	14850.000	0.01	-8.71	20.00	AVRG	
(3)	22321.500	20537.500	20537.500	0.01	-7.99	20.00	AVRG	
(4)	10187.625	9325.0000	9325.0000	0.01	-8.47	20.00	AVRG	
(5)	11206.375	7812.5000	7812.5000	0.01	-30.28	20.00	AVRG	<-
Aroclor-1260	22914.375	20947.500	20947.500	0.01	-8.58	20.00	AVRG	
(2)	42526.125	46524.375	46524.375	0.01	9.40	20.00	AVRG	
(3)	23808.250	19835.000	19835.000	0.01	-16.69	20.00	AVRG	
(4)	50580.750	54230.000	54230.000	0.01	-7.21	20.00	AVRG	
(5)	24776.625			0.01	-100.00	20.00	AVRG	<-
Decachlorobiphenyl	0.0430086	0.0400000	343975.00	0.01	-7.52		LINR	
Tetrachloro-m-Xylene	502882.50	521050.00	521050.00	0.01	3.61	20.00	AVRG	

Avg 14%

Avg 28%

NQ

MR02-1R69-SS01-10A RE
SS01D
1R69-SS01-10A
SS01D
SS03
SS04
SS05
SS06.
SB04-06-07-10A
SB05
SB06-06-07
SB01-01-02
SB01D-01-02

FORM VII PEST

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FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC85 Calibration Date: 04/03/10 Time: 0106

Lab File ID: 068AAR16603AJ Init. Calib. Date(s): 04/01/10 04/01/10

Init. Calib. Times: 2135 2330

GC Column: CLPEST2 ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aroclor-1016	7464.7500	6962.5000	0.01	-6.73	20.00	AVRG	AVG 15%
(2)	20677.875	23567.500	0.01	13.97	20.00	AVRG	
(3)	12853.375	12847.500	0.01	-0.04	20.00	AVRG	
(4)	8790.8750	6425.0000	0.01	-26.91	20.00	AVRG	<-
(5)	10129.750	7177.5000	0.01	-29.14	20.00	AVRG	<-
Aroclor-1260	22080.625	23407.500	0.01	-6.01	20.00	AVRG	OK
(2)	37234.250	36827.500	0.01	-1.09	20.00	AVRG	
(3)	29058.750	27690.000	0.01	-4.71	20.00	AVRG	
(4)	24897.500	23192.500	0.01	-6.85	20.00	AVRG	
(5)	56241.500	54882.500	0.01	-2.42	20.00	AVRG	
Decachlorobiphenyl	374466.25	356365.00	0.01	-4.83	20.00	AVRG	
Tetrachloro-m-Xylene	439020.00	413587.50	0.01	-5.79	20.00	AVRG	

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC84 Calibration Date: 04/03/10 Time: 0135

Lab File ID: 069AINDC3AJ Init. Calib. Date(s): 04/01/10 04/01/10

Init. Calib. Times: 1812 2008

GC Column: CLPEST ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF0.0100 or AMOUNT	CCAL RRF0.0100	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aldrin	574470.00	574050.00	574050.00	0.01	-0.07	20.00	AVRG	
alpha-BHC	700455.00	690750.00	690750.00	0.01	-1.38	20.00	AVRG	
beta-BHC	295852.50	196000.00	196000.00	0.01	-33.75	20.00	AVRG	<- J/UJ
delta-BHC	634725.00	309300.00	309300.00	0.01	-51.27	20.00	AVRG	<- J/UJ
gamma-BHC (Lindane)	676227.50	645300.00	645300.00	0.01	-4.57	20.00	AVRG	
4,4'-DDD	349607.50			0.01	-100.00	20.00	AVRG	<- J/RJ
4,4'-DDE	465088.75	71775.000	71775.000	0.01	-84.57	20.00	AVRG	<- J/UJ
4,4'-DDT	400351.25	275025.00	275025.00	0.01	-31.30	20.00	AVRG	<- J/UJ
Dieldrin	460346.25	440075.00	440075.00	0.01	-4.40	20.00	AVRG	
Endosulfan I	500250.00	1290750.0	1290750.0	0.01	158.02	20.00	AVRG	<- J/R J+
Endosulfan II	405497.50	424450.00	424450.00	0.01	-4.67	20.00	AVRG	
Endosulfan sulfate	347042.50	305750.00	305750.00	0.01	-11.90	20.00	AVRG	
Endrin	431858.75	409375.00	409375.00	0.01	-5.21	20.00	AVRG	
Endrin Aldehyde	301297.50	302500.00	302500.00	0.01	0.40	20.00	AVRG	
Heptachlor	636675.00	627800.00	627800.00	0.01	-1.39	20.00	AVRG	
Heptachlor Epoxide	544140.00	510350.00	510350.00	0.01	-6.21	20.00	AVRG	
Methoxychlor	163562.00			0.01	-100.00	20.00	AVRG	<- J/RJ
Endrin Ketone	392343.75	371350.00	371350.00	0.01	-5.35	20.00	AVRG	
gamma-Chlordane	553342.50	502100.00	502100.00	0.01	-9.26	20.00	AVRG	
alpha-Chlordane	476535.00	429850.00	429850.00	0.01	-9.80	20.00	AVRG	
Decachlorobiphenyl	0.0455743	0.0400000	343975.00	0.01	-13.94		LINR	
Tetrachloro-m-Xylene	502882.50	521050.00	521050.00	0.01	3.61	20.00	AVRG	

See previous page (068AAR16603AJ CLPEST) for associated samples

XI CORR JAC 72710

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC85 Calibration Date: 04/03/10 Time: 0135

Lab File ID: 069AINDC3AJ Init. Calib. Date(s): 04/01/10 04/01/10

Init. Calib. Times: 1812 2008

GC Column: CLPEST2 ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	527887.50	512450.00	0.01	-2.92	20.00	AVRG	
beta-BHC	256570.00	183750.00	0.01	-28.38	20.00	AVRG	<- J/UJ
alpha-BHC	595185.00	567950.00	0.01	-4.58	20.00	AVRG	
delta-BHC	543867.50	283250.00	0.01	-47.92	20.00	AVRG	<- J/UJ
gamma-BHC (Lindane)	577750.00	536250.00	0.01	-7.18	20.00	AVRG	
4,4'-DDD	333588.75	368300.00	0.01	10.40	20.00	AVRG	
4,4'-DDE	461905.00	440525.00	0.01	-4.63	20.00	AVRG	
4,4'-DDT	400368.75	219550.00	0.01	-45.16	20.00	AVRG	<- J/UJ
Dieldrin	456618.75	429400.00	0.01	-5.96	20.00	AVRG	
Endosulfan I	473795.00	421950.00	0.01	-10.94	20.00	AVRG	
Endosulfan II	402916.25	429875.00	0.01	6.69	20.00	AVRG	
Endosulfan sulfate	359637.50	300725.00	0.01	-16.38	20.00	AVRG	
Endrin	412278.75	374750.00	0.01	-9.10	20.00	AVRG	
Endrin Aldehyde	307781.25	262750.00	0.01	-14.63	20.00	AVRG	
ptachlor	561600.23	688950.00	0.01	22.68	20.00	AVRG	<- J+
Heptachlor Epoxide	508862.50	476200.00	0.01	-6.42	20.00	AVRG	
Methoxychlor	172663.00	104505.00	0.01	-39.47	20.00	AVRG	<- J/UJ
Endrin Ketone	410382.50	377900.00	0.01	-7.92	20.00	AVRG	
gamma-Chlordane	511715.00	478950.00	0.01	-6.40	20.00	AVRG	
alpha-Chlordane	446262.50	389600.00	0.01	-12.70	20.00	AVRG	
Decachlorobiphenyl	374466.25	369275.00	0.01	-1.39	20.00	AVRG	
Tetrachloro-m-Xylene	439020.00	416450.00	0.01	-5.14	20.00	AVRG	

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC84 Calibration Date: 04/03/10 Time: 0722

Lab File ID: 081AAR16603AL Init. Calib. Date(s): 04/01/10 04/01/10

Init. Calib. Times: 2135 2330

GC Column: CLPEST ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF0.0100 or AMOUNT	CCAL RRF0.0100	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	9126.7500	7469.5000	7469.5000	0.01	-18.16	20.00	AVRG	
(2)	16266.750	15030.625	15030.625	0.01	-7.60	20.00	AVRG	
(3)	22321.500	19192.125	19192.125	0.01	-14.02	20.00	AVRG	AVG 16%
(4)	10187.625	10868.125	10868.125	0.01	6.68	20.00	AVRG	
(5)	11206.375	7231.3750	7231.3750	0.01	-35.47	20.00	AVRG	<-
Aroclor-1260	22914.375	5838.3750	5838.3750	0.01	-74.52	20.00	AVRG	<-
(2)	42526.125	3246.8750	3246.8750	0.01	-92.36	20.00	AVRG	<- AVG 58%
(3)	23808.250	20763.500	20763.500	0.01	-12.79	20.00	AVRG	
(4)	50580.750	56599.500	56599.500	0.01	11.90	20.00	AVRG	
(5)	24776.625			0.01	-100.00	20.00	AVRG	<- NQ
Decachlorobiphenyl	0.0467555	0.0400000	351076.25	0.01	-16.89		LINR	
Tetrachloro-m-Xylene	502882.50	505285.00	505285.00	0.01	0.48	20.00	AVRG	

SB06-06-07 RE
01-01-02
01D-01-02

closer

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC85 Calibration Date: 04/03/10 Time: 0722

Lab File ID: 081AAR16603AL Init. Calib. Date(s): 04/01/10 04/01/10

Init. Calib. Times: 2135 2330

GC Column: CLPEST2 ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aroclor-1016	7464.7500	6604.5000	0.01	-11.52	20.00	AVRG	
(2)	20677.875	19828.875	0.01	-4.10	20.00	AVRG	
(3)	12853.375	8482.1250	0.01	-34.01	20.00	AVRG	<-
(4)	8790.8750	4601.3750	0.01	-47.66	20.00	AVRG	<-
(5)	10129.750	7064.0000	0.01	-30.26	20.00	AVRG	<-
Aroclor-1260	22080.625	24051.250	0.01	8.92	20.00	AVRG	
(2)	37234.250	37449.875	0.01	0.58	20.00	AVRG	
(3)	29058.750	28178.125	0.01	-3.03	20.00	AVRG	
(4)	24897.500	23956.750	0.01	-3.78	20.00	AVRG	
(5)	56241.500	56436.875	0.01	0.35	20.00	AVRG	
Decachlorobiphenyl	374466.25	380445.00	0.01	1.60	20.00	AVRG	
Tetrachloro-m-Xylene	439020.00	403500.00	0.01	-8.09	20.00	AVRG	

Avg -25.5

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC84 Calibration Date: 04/03/10 Time: 0751

Lab File ID: 082AINDC3AL Init. Calib. Date(s): 04/01/10 04/01/10

Init. Calib. Times: 1812 2008

GC Column: CLPEST ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF0.0100 or AMOUNT	CCAL RRF0.0100	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aldrin	574470.00	561500.00	561500.00	0.01	-2.26	20.00	AVRG	
alpha-BHC	700455.00	668700.00	668700.00	0.01	-4.53	20.00	AVRG	
beta-BHC	295852.50	197750.00	197750.00	0.01	-33.16	20.00	AVRG	<- JUJ
delta-BHC	634725.00	297650.00	297650.00	0.01	-53.10	20.00	AVRG	<- JUJ
gamma-BHC (Lindane)	676227.50	615600.00	615600.00	0.01	-8.96	20.00	AVRG	
4,4'-DDD	349607.50	484632.50	484632.50	0.01	38.62	20.00	AVRG	<- JUJ
4,4'-DDE	465088.75	51850.000	51850.000	0.01	-88.85	20.00	AVRG	<-
4,4'-DDT	400351.25	256575.00	256575.00	0.01	-35.91	20.00	AVRG	<- ↓
Dieldrin	460346.25	433650.00	433650.00	0.01	-5.80	20.00	AVRG	
Endosulfan I	500250.00	1337350.0	1337350.0	0.01	167.34	20.00	AVRG	<- JR
Endosulfan II	405497.50	440925.00	440925.00	0.01	-8.74	20.00	AVRG	
Endosulfan sulfate	347042.50	298350.00	298350.00	0.01	-14.03	20.00	AVRG	
Endrin	431858.75	400525.00	400525.00	0.01	-7.26	20.00	AVRG	
Endrin Aldehyde	301297.50	304425.00	304425.00	0.01	1.04	20.00	AVRG	
Heptachlor	636675.00	624700.00	624700.00	0.01	-1.88	20.00	AVRG	
Heptachlor Epoxide	544140.00	509700.00	509700.00	0.01	-6.33	20.00	AVRG	
Methoxychlor	163562.00			0.01	-100.00	20.00	AVRG	<- JR
Endrin Ketone	392343.75	369875.00	369875.00	0.01	-5.73	20.00	AVRG	
gamma-Chlordane	553342.50	500450.00	500450.00	0.01	-9.56	20.00	AVRG	
alpha-Chlordane	476535.00	447350.00	447350.00	0.01	-6.12	20.00	AVRG	
Decachlorobiphenyl	0.0461024	0.0400000	347150.00	0.01	-15.26		LINR	
Tetrachloro-m-Xylene	502882.50	489900.00	489900.00	0.01	-2.58	20.00	AVRG	

QC 7/28/10

See previous page
(081AAR1660 3AL CLPEST)
for associated samples

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Instrument ID: TRACEGC85 Calibration Date: 04/03/10 Time: 0751

Lab File ID: 082AINDC3AL Init. Calib. Date(s): 04/01/10 04/01/10

Init. Calib. Times: 1812 2008

GC Column: CLPEST2 ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	527887.50	508465.00	0.01	-3.68	20.00	AVRG	
beta-BHC	256570.00	161890.00	0.01	-36.90	20.00	AVRG	<- JTUJ
alpha-BHC	595185.00	550920.00	0.01	-7.44	20.00	AVRG	
delta-BHC	543867.50	253977.50	0.01	-53.30	20.00	AVRG	<- JTUJ
gamma-BHC (Lindane)	577750.00	523022.50	0.01	-9.47	20.00	AVRG	
4,4'-DDD	333588.75	374498.75	0.01	12.26	20.00	AVRG	
4,4'-DDE	461905.00		0.01	-100.00	20.00	AVRG	<- JR
4,4'-DDT	400368.75	202882.50	0.01	-49.33	20.00	AVRG	<- JTUJ
Dieldrin	456618.75	440937.50	0.01	-3.43	20.00	AVRG	
Endosulfan I	473795.00	425560.00	0.01	-10.18	20.00	AVRG	
Endosulfan II	402916.25	486776.25	0.01	20.81	20.00	AVRG	<- JTUJ gac 7/8/10
Endosulfan sulfate	359637.50	301453.75	0.01	-16.18	20.00	AVRG	
Endrin	412278.75	377991.25	0.01	-8.32	20.00	AVRG	
ndrin Aldehyde	307781.25	255011.25	0.01	-17.14	20.00	AVRG	
ptachlor	561600.23	612180.00	0.01	9.01	20.00	AVRG	
Heptachlor Epoxide	508862.50	479300.00	0.01	-5.81	20.00	AVRG	
Methoxychlor	172663.00	1120.2500	0.01	-99.35	20.00	AVRG	<- JR
Endrin Ketone	410382.50	373315.00	0.01	-9.03	20.00	AVRG	
gamma-Chlordane	511715.00	458482.50	0.01	-10.40	20.00	AVRG	
alpha-Chlordane	446262.50	396272.50	0.01	-11.20	20.00	AVRG	
Decachlorobiphenyl	374466.25	377080.00	0.01	0.70	20.00	AVRG	
Tetrachloro-m-Xylene	439020.00	402500.00	0.01	-8.32	20.00	AVRG	

FORM VII PEST

2F
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

GC Column(1): CLPEST ID: 0.32 (mm) GC Column(2): CLPEST2 ID: 0.32 (mm)

	EPA SAMPLE NO.	S1 1 %REC #	S1 2 %REC #	TCX 1 %REC #	TCX 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT	
01	PBLKOA	77	79	79	84			0	
02	POALCS	77	81	78	86			0	
03	POBLCS	74	78	89	97			0	
04	POALCSD	78	82	83	94			0	
05	POBLCSD	72	76	71	87			0	
06	MR02-IR69-SS	79	100	75	82			0	
07	MR02-IR69-SS	94	120	98	62*			1	NQ
08	IR69-SS01-10	64	90	83	72			0	
09	IR69-SS01D-1	87	90	85	66*			1	NQ
10	IR69-SS03-10	73	127	120	94			0	
11	IR69-SS04-10	56	64	400 *	121			1	NQ
12	IR69-SS05-10	140 *	172*	110	70			2	J/UJ. not rept
13	IR69-SS06-10	150 *	127	100	132*			2	NQ
14	SB04-06-07	100	91	80	67*			1	
15	SB05-06-07	67	68	80	68*			1	
16	SB06-06-07	68	66	75	74			0	
17	SB01-01-02	71	71	83	75			0	
18	SB01D-01-02	68	68	78	72			0	
19	PBLKPD	73	73	71	70			0	
20	PPDLCS	70	71	76	77			0	
21	PPELCS	73	74	84	91			0	
22	PPDLCSD	73	72	85	85			0	
23	PPELCSD	75	76	78	81			0	
24	IR69-SD01D	120	116	97	70			0	
25	MR02-IR69-SS	70	97	100	91			0	
26	MR02-IR69-SS	90	436*	89	134*			2	NQ
27	MR02-IR69-SS	220 *	93	120	75			1	
28	MR02-IR69-SS	94	80	120	88			0	
29	PBLKDP	150 *	94	81	83			1	NQ
30	PDPLCS	240 *	89	96	92			1	

ADVISORY
QC LIMITS

S1 = Decachlorobiphenyl (55-130)
S2 (TCX) = Tetrachloro-m-Xylene (70-125)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

2F
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

GC Column(1): CLPEST ID: 0.32 (mm) GC Column(2): CLPEST2 ID: 0.32 (mm)

	EPA SAMPLE NO.	S1 1 %REC #	S1 2 %REC #	TCX 1 %REC #	TCX 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT	
01	PDPLCSD	140 *	114	110	126*			2	NQ
02	PEPLCS	160 *	98	98	107			1	↓
03	PEPLCSD	140 *	109	92	108			1	
04	IR69-SD01	270 *	219*	91	80			2	J+
05	IR69-SD01DRE	160 *	119	93	93			1	NQ
06	MR02-IR69-SS	160 D	360D	95	118			0	
07	MR02-IR69-SS	200 D	191D	90	134D			0	
08	MR02-IR69-SS	170 *	104	93	93			1	NQ
09	MR02-IR69-SS	250 *	160*	110	106			2	J+
10	MR02-IR69-SS	84	134D	110	124			0	
11	MR02-IR69-SS	110	108	130 D	102			0	
12	IR69-SS01-10	93	112	110	121			0	
13	IR69-SS01D-1	70	90	110	132D			0	
14	IR69-SS03-10	120	100	150 D	112			0	
15	IR69-SS04-10	74	75	260 D	152D			0	
16	IR69-SS05-10	320 *	269*	93	96			2	J+
17	IR69-SS06-10	290 D	154D	110	124			0	
18	SB04-06-07RE	120	99	110	91			0	
19	SB05-06-07RE	110	96	100	85			0	
20	SB06-06-07RE	110	97	93	90			0	
21	SB01-01-02RE	120	102	100	96			0	
22	SB01D-01-02R	110	96	93	87			0	
23									
24									
25									
26									
27									
28									
29									
30									

ADVISORY
QC LIMITS

S1 = Decachlorobiphenyl (55-130)
S2 (TCX) = Tetrachloro-m-Xylene (70-125)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

MR02-IR6
9-SS01DL

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-01RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
alpha-BHC	1	9.40	9.34	9.48	2.2	
	2	9.20	9.19	9.33	1.4	44.4 J
4,4'-DDE	1	14.30	14.22	14.37	73	
	2	14.43	14.35	14.49	75	2.7
4,4'-DDT	1	16.20	16.13	16.27	36	
	2	16.33	16.25	16.39	37	2.7
Endrin Ketone	1	18.32	18.31	18.45	7.2	
	2	18.31	18.21	18.36	27	115.8 J
alpha-Chlordane	1	14.08	14.04	14.18	3.0	
	2	13.99	13.96	14.10	1.8	50.0 J
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

MR02-IR6
9-SS01DDL

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-02RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
alpha-BHC	1	9.37	9.34	9.48	4.2	
	2	9.20	9.19	9.33	3.3	24.0
4,4'-DDD	1	15.60	15.53	15.67	4.8	
	2	15.66	15.59	15.73	2.7	56.0 J
4,4'-DDE	1	14.30	14.22	14.37	73	
	2	14.43	14.35	14.49	77	5.3
4,4'-DDT	1	16.20	16.13	16.27	44	
	2	16.33	16.25	16.39	39	12.0
Endosulfan sulfate	1	17.73	17.72	17.86	17	
	2	17.17	17.09	17.23	34	66.7 J
Endrin Ketone	1	18.45	18.31	18.45	20	
	2	18.31	18.21	18.36	46	78.8 J
alpha-Chlordane	1	14.08	14.04	14.18	2.5	
	2	13.99	13.96	14.10	2.8	11.3
	1					
	2					

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-SS01-10ADL

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-03RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Aldrin	1	12.12	12.05	12.19	1.8	
	2	11.93	11.89	12.03	2.1	15.4
4,4'-DDE	1	14.30	14.22	14.37	100	
	2	14.43	14.35	14.49	99	1.0
4,4'-DDT	1	16.20	16.13	16.27	45	
	2	16.33	16.25	16.39	48	6.4
Endosulfan sulfate	1	17.82	17.72	17.86	11	
	2	17.17	17.09	17.23	36	106.4 J
Endrin Ketone	1	18.44	18.31	18.45	13	
	2	18.30	18.21	18.36	25	63.2
alpha-Chlordane	1	14.13	14.04	14.18	3.9	
	2	14.00	13.96	14.10	1.5	88.9
	1					
	2					
	1					
	2					

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-SS0
1D-10ADL

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-04RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
4,4'-DDD	1	15.60	15.53	15.67	3.5	
	2	15.67	15.59	15.73	3.9	10.8
4,4'-DDE	1	14.30	14.22	14.37	110	
	2	14.43	14.35	14.49	120	8.7
4,4'-DDT	1	16.20	16.13	16.27	56	
	2	16.33	16.25	16.39	58	3.5
Endosulfan sulfate	1	17.82	17.72	17.86	9.7	
	2	17.17	17.09	17.23	50	135.0 J
Endrin Ketone	1	18.45	18.31	18.45	19	
	2	18.31	18.21	18.36	18	5.4
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-SS03-10ARE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-05RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
delta-BHC	1	10.95	10.82	10.96	0.55	
	2	11.09	11.03	11.17	1.1	66.7 J
4,4'-DDD	1	15.63	15.53	15.67	2.2	
	2	15.67	15.59	15.73	1.4	44.4 J
4,4'-DDE	1	14.30	14.22	14.37	2.0	
	2	14.44	14.35	14.49	2.6	26.1
4,4'-DDT	1	16.20	16.13	16.27	1.9	
	2	16.33	16.25	16.39	1.6	17.1
Endosulfan I	1	14.37	14.35	14.49	2.7	
	2	14.12	14.07	14.21	2.3	16.0
Endosulfan sulfate	1	17.82	17.72	17.86	71	
	2	17.17	17.09	17.23	30	81.2 J
Heptachlor	1	11.41	11.34	11.48	0.52	
	2	11.21	11.14	11.29	0.94	57.5 J
Endrin Ketone	1	18.44	18.31	18.45	6.5	
	2	18.26	18.21	18.36	71	166.4 J

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-SS04-10ARE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-06RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Aldrin	1	12.11	12.05	12.19	0.58	
	2	11.97	11.89	12.03	0.49	16.8
alpha-BHC	1	9.37	9.34	9.48	4.4	
	2	9.21	9.19	9.33	2.8	44.4 J
gamma-BHC (Lindane)	1	10.26	10.16	10.30	10	
	2	10.11	10.09	10.23	8.4	17.4
4,4'-DDE	1	14.30	14.22	14.37	3.8	
	2	14.43	14.35	14.49	47	170.1 J
4,4'-DDT	1	16.18	16.13	16.27	4.4	
	2	16.34	16.25	16.39	1.7	88.5 J
Endosulfan I	1	14.42	14.35	14.49	0.75	
	2	14.17	14.07	14.21	2.2	98.3 J
Endosulfan sulfate	1	17.83	17.72	17.86	29	
	2	17.18	17.09	17.23	8.1	112.7 J
Endrin Aldehyde	1	16.87	16.78	16.92	30	
	2	16.60	16.50	16.64	25	18.2

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-SS04-10ARE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-06RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Methoxychlor	1	17.19	17.14	17.28	41	
	2	17.81	17.71	17.85	11	115.4 J
Endrin Ketone	1	18.44	18.31	18.45	11	
	2	18.27	18.21	18.36	18	48.3 J
gamma-Chlordane	1	13.86	13.74	13.88	5.3	
	2	13.74	13.63	13.77	1.3	121.2 J
alpha-Chlordane	1	14.10	14.04	14.18	4.2	
	2	13.99	13.96	14.10	0.80	136.0 J
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-SS05-10ARE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-07RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Aldrin	1	12.09	12.05	12.19	1.2	
	2	11.92	11.89	12.03	3.6	100.0 J
4,4'-DDD	1	15.58	15.53	15.67	1.9	
	2	15.70	15.59	15.73	3.9	69.0 J
4,4'-DDE	1	14.30	14.22	14.37	1.3	
	2	14.44	14.35	14.49	2.3	55.6 J
4,4'-DDT	1	16.20	16.13	16.27	11	
	2	16.34	16.25	16.39	4.8	78.5 J
Endosulfan sulfate	1	17.82	17.72	17.86	26	
	2	17.18	17.09	17.23	41	44.8 J
Endrin	1	15.41	15.38	15.53	9.4	
	2	15.35	15.32	15.46	3.9	82.7 J
Endrin Aldehyde	1	16.86	16.78	16.92	3.1	
	2	16.61	16.50	16.64	22	150.6 J
Heptachlor	1	11.42	11.34	11.48	1.1	
	2	11.21	11.14	11.29	3.5	104.3 J

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-SS05-10ARE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-07RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Methoxychlor	1	17.20	17.14	17.28	30	
	2	17.81	17.71	17.85	4.9	143.8 J
Endrin Ketone	1	18.44	18.31	18.45	9.7	
	2	18.27	18.21	18.36	19	64.8 J
gamma-Chlordane	1	13.87	13.74	13.88	2.1	
	2	13.73	13.63	13.77	1.9	10.0
alpha-Chlordane	1	14.12	14.04	14.18	8.5	
	2	14.01	13.96	14.10	1.1	154.2 J
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-SS06-10ARE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-08RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD	
Aldrin	1	12.11	12.05	12.19	2.2		
	2	11.93	11.89	12.03	2.0	9.5	
alpha-BHC	1	9.36	9.34	9.48	3.1		
	2	9.21	9.19	9.33	46	174.7	J
gamma-BHC (Lindane)	1	10.25	10.16	10.30	1.8		
	2	10.13	10.09	10.23	4.4	83.9	J
4,4'-DDD	1	15.57	15.53	15.67	1.2		
	2	15.65	15.59	15.73	2.2	58.8	J
4,4'-DDE	1	14.30	14.22	14.37	1.8		
	2	14.43	14.35	14.49	3.9	73.7	J
4,4'-DDT	1	16.20	16.13	16.27	6.4		
	2	16.34	16.25	16.39	3.7	53.5	J
Endosulfan II	1	15.92	15.87	16.01	2.4		
	2	15.81	15.78	15.92	1.9	23.2	
Endosulfan sulfate	1	17.83	17.72	17.86	37		
	2	17.18	17.09	17.23	25	38.7	OK

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-SS06-10ARE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-08RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Heptachlor	1	11.41	11.34	11.48	1.4	
	2	11.21	11.14	11.29	2.2	44.4 J
Endrin Ketone	1	18.44	18.31	18.45	3.2	
	2	18.27	18.21	18.36	41	171.0 J
gamma-Chlordane	1	13.81	13.74	13.88	0.96	
	2	13.71	13.63	13.77	1.7	55.6 J
alpha-Chlordane	1	14.09	14.04	14.18	1.1	
	2	14.02	13.96	14.10	0.61	57.3 J
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

SB04-06-07RE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-09RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Endosulfan sulfate	1	17.82	17.72	17.86	0.81	
	2	17.18	17.09	17.23	1.4	53.4 J
Heptachlor	1	11.41	11.34	11.48	0.45	
	2	11.21	11.14	11.29	0.63	33.3
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

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FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

SB05-06-07RE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-10RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Heptachlor	1	11.42	11.34	11.48	0.57	
	2	11.21	11.14	11.29	0.59	3.4
alpha-Chlordane	1	14.05	14.04	14.18	0.84	
	2	14.03	13.96	14.10	0.64	27.0
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

SB06-06-07RE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-11RE1 Date(s) Analyzed: 04/03/10 04/03/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
beta-BHC	1	10.43	10.39	10.54	5.4	
	2	10.40	10.33	10.47	0.77	150.1 J
4,4'-DDD	1	15.54	15.53	15.67	0.44	
	2	15.63	15.59	15.73	0.90	68.6 J
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

SB01-01-02RE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-12RE1 Date(s) Analyzed: 04/03/10 04/03/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
beta-BHC	1	10.47	10.39	10.54	0.45	
	2	10.40	10.33	10.47	0.85	61.5 J
4,4'-DDE	1	14.30	14.22	14.37	4.6	
	2	14.43	14.35	14.49	4.2	9.1
4,4'-DDT	1	16.20	16.13	16.27	3.0	
	2	16.33	16.25	16.39	2.4	22.2
Endosulfan I	1	14.43	14.35	14.49	1.6	
	2	14.16	14.07	14.21	0.22	151.6 J
Endrin	1	15.41	15.38	15.53	1.2	
	2	15.36	15.32	15.46	1.1	8.7
Heptachlor	1	11.37	11.34	11.48	1.6	
	2	11.21	11.14	11.29	0.55	97.7 J
alpha-Chlordane	1	14.07	14.04	14.18	3.6	
	2	14.00	13.96	14.10	2.4	40.0
	1					
	2					

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10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

SB01D-01-02RE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-13RE1 Date(s) Analyzed: 04/03/10 04/03/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
4,4'-DDE	1	14.30	14.22	14.37	6.4	
	2	14.44	14.35	14.49	6.0	6.4
4,4'-DDT	1	16.20	16.13	16.27	4.6	
	2	16.34	16.25	16.39	4.5	2.2
Endosulfan I	1	14.43	14.35	14.49	0.98	
	2	14.16	14.07	14.21	0.20	132.2 J
Endrin	1	15.41	15.38	15.53	1.4	
	2	15.37	15.32	15.46	0.72	64.2
Heptachlor	1	11.37	11.34	11.48	0.83	
	2	11.21	11.14	11.29	0.45	59.4
alpha-Chlordane	1	14.07	14.04	14.18	2.6	
	2	14.01	13.96	14.10	1.8	36.4
	1					
	2					
	1					
	2					

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-SD01

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-14 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Aldrin	1	12.09	12.05	12.19	6.3	
	2	12.00	11.89	12.03	2.3	93.0 J
beta-BHC	1	10.46	10.39	10.54	24	
	2	10.40	10.33	10.47	2.3	165.0 J
delta-BHC	1	10.94	10.82	10.96	6.8	
	2	11.07	11.03	11.17	3.6	61.5 J
4,4'-DDD	1	15.60	15.53	15.67	13	
	2	15.66	15.59	15.73	16	20.7
4,4'-DDE	1	14.29	14.22	14.37	18	
	2	14.43	14.35	14.49	7.8	79.1 J
4,4'-DDT	1	16.19	16.13	16.27	5.5	
	2	16.33	16.25	16.39	7.2	26.8
Dieldrin	1	14.95	14.88	15.02	3.9	
	2	14.68	14.67	14.81	2.7	36.4
Endosulfan I	1	14.47	14.35	14.49	37	
	2	14.11	14.07	14.21	13	96.0 J

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-SD01

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-14 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Endosulfan sulfate	1	17.80	17.72	17.86	10	
	2	17.16	17.09	17.23	59	142.0 J
Heptachlor	1	11.37	11.34	11.48	6.0	
	2	11.20	11.14	11.29	14	80.0
Heptachlor Epoxide	1	13.54	13.47	13.61	7.2	
	2	13.30	13.21	13.35	3.7	64.2
Endrin Ketone	1	18.43	18.31	18.45	7.4	
	2	18.27	18.21	18.36	80	166.1
gamma-Chlordane	1	13.84	13.74	13.88	9.1	
	2	13.74	13.63	13.77	34	115.5
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-SD01DRE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-15RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Aldrin	1	12.10	12.05	12.19	9.8	
	2	11.92	11.89	12.03	2.2	126.7 J
delta-BHC	1	10.95	10.82	10.96	8.4	
	2	11.08	11.03	11.17	6.7	22.5
4,4'-DDD	1	15.57	15.53	15.67	34	
	2	15.67	15.59	15.73	4.0	157.9 J
4,4'-DDE	1	14.29	14.22	14.37	10	
	2	14.43	14.35	14.49	9.2	8.3
Dieldrin	1	14.96	14.88	15.02	11	
	2	14.71	14.67	14.81	1.8	143.8 J
Endosulfan I	1	14.37	14.35	14.49	6.6	
	2	14.11	14.07	14.21	13	65.3 J
Endosulfan sulfate	1	17.81	17.72	17.86	8.8	
	2	17.18	17.09	17.23	14	45.6 J
Endrin Aldehyde	1	16.84	16.78	16.92	4.7	
	2	16.50	16.50	16.64	24	134.5 J

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-SD01DRE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-15RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Heptachlor	1	11.38	11.34	11.48	5.0	
	2	11.21	11.14	11.29	17	109.1 J
Heptachlor Epoxide	1	13.56	13.47	13.61	16	
	2	13.32	13.21	13.35	2.1	153.6
Endrin Ketone	1	18.44	18.31	18.45	4.9	
	2	18.27	18.21	18.36	100	181.3
gamma-Chlordane	1	13.83	13.74	13.88	2.5	
	2	13.75	13.63	13.77	21	157.4
alpha-Chlordane	1	14.08	14.04	14.18	23	
	2	14.00	13.96	14.10	6.0	117.2
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

MR02-IR6
9-SS02RE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-16RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
beta-BHC	1	10.48	10.39	10.54	2.0	
	2	10.45	10.33	10.47	8.5	123.8 J
delta-BHC	1	10.93	10.82	10.96	2.1	
	2	11.10	11.03	11.17	3.5	50.0 J
4,4'-DDE	1	14.30	14.22	14.37	56	
	2	14.43	14.35	14.49	57	1.8
4,4'-DDT	1	16.20	16.13	16.27	24	
	2	16.33	16.25	16.39	30	22.2
Endosulfan sulfate	1	17.82	17.72	17.86	15	
	2	17.19	17.09	17.23	12	22.2
Heptachlor	1	11.38	11.34	11.48	2.5	
	2	11.22	11.14	11.29	1.5	50.0 J
Endrin Ketone	1	18.44	18.31	18.45	11	
	2	18.31	18.21	18.36	19	53.3 J
gamma-Chlordane	1	13.85	13.74	13.88	2.1	
	2	13.75	13.63	13.77	13	144.4 J

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

MR02-IR6
9-SS02RE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-16RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
alpha-Chlordane	1	14.08	14.04	14.18	10	
	2	14.01	13.96	14.10	15	40.0
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

MR02-IR6
9-SS04RE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-17RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
gamma-BHC (Lindane)	1	10.21	10.16	10.30	1.4	
	2	10.13	10.09	10.23	3.7	90.2 J
4,4'-DDE	1	14.30	14.22	14.37	5.8	
	2	14.43	14.35	14.49	2.5	79.5 J
4,4'-DDT	1	16.19	16.13	16.27	9.2	
	2	16.33	16.25	16.39	4.6	66.7 J
Endosulfan I	1	14.40	14.35	14.49	1.5	
	2	14.14	14.07	14.21	5.8	117.8 J
Endosulfan sulfate	1	17.81	17.72	17.86	43	
	2	17.18	17.09	17.23	78	57.8 J
Endrin Ketone	1	18.44	18.31	18.45	61	
	2	18.25	18.21	18.36	9.0	148.6 J
gamma-Chlordane	1	13.86	13.74	13.88	3.9	
	2	13.76	13.63	13.77	5.1	26.7
	1					
	2					

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

MR02-IR6
9-SS05RE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-18RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Aldrin	1	12.07	12.05	12.19	0.49	
	2	12.01	11.89	12.03	0.22	76.0 J
beta-BHC	1	10.48	10.39	10.54	0.12	
	2	10.45	10.33	10.47	5.0	190.6 J
alpha-BHC	1	9.38	9.34	9.48	0.58	
	2	9.20	9.19	9.33	0.96	49.4 J
delta-BHC	1	10.92	10.82	10.96	1.3	
	2	11.15	11.03	11.17	0.98	28.1
4,4'-DDD	1	15.57	15.53	15.67	2.5	
	2	15.68	15.59	15.73	1.9	27.3
4,4'-DDE	1	14.30	14.22	14.37	22	
	2	14.43	14.35	14.49	25	12.8
4,4'-DDT	1	16.20	16.13	16.27	15	
	2	16.34	16.25	16.39	15	0.0
Endosulfan I	1	14.41	14.35	14.49	0.27	
	2	14.15	14.07	14.21	0.66	83.9 J

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

MR02-IR6
9-SS05RE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-18RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD	
Endosulfan II	1	15.92	15.87	16.01	6.5		
	2	15.89	15.78	15.92	1.2	137.7	J
Endosulfan sulfate	1	17.81	17.72	17.86	7.1		
	2	17.18	17.09	17.23	3.8	60.6	J
Endrin	1	15.41	15.38	15.53	1.1		
	2	15.34	15.32	15.46	0.87	23.4	
Endrin Aldehyde	1	16.79	16.78	16.92	2.6		
	2	16.59	16.50	16.64	2.2	16.7	
Methoxychlor	1	17.21	17.14	17.28	1.8		
	2	17.81	17.71	17.85	3.8	71.4	J
Endrin Ketone	1	18.44	18.31	18.45	2.5		
	2	18.27	18.21	18.36	29	168.2	J
gamma-Chlordane	1	13.87	13.74	13.88	2.2		
	2	13.75	13.63	13.77	7.7	111.1	J
alpha-Chlordane	1	14.08	14.04	14.18	7.6		
	2	14.00	13.96	14.10	1.2	145.4	J

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

MR02-IR6
9-SS06RE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-19RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Aldrin	1	12.10	12.05	12.19	1.1	
	2	12.01	11.89	12.03	1.0	9.5
alpha-BHC	1	9.38	9.34	9.48	3.1	
	2	9.20	9.19	9.33	4.3	32.4
delta-BHC	1	10.92	10.82	10.96	1.2	
	2	11.07	11.03	11.17	1.9	45.2 J
gamma-BHC (Lindane)	1	10.26	10.16	10.30	2.1	
	2	10.13	10.09	10.23	1.6	27.0
4,4'-DDD	1	15.56	15.53	15.67	3.0	
	2	15.66	15.59	15.73	2.0	40.0
4,4'-DDE	1	14.30	14.22	14.37	5.2	
	2	14.44	14.35	14.49	2.9	56.8 J
4,4'-DDT	1	16.20	16.13	16.27	4.5	
	2	16.34	16.25	16.39	3.3	30.8
Endosulfan I	1	14.43	14.35	14.49	1.7	
	2	14.14	14.07	14.21	1.7	0.0

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

MR02-IR6
9-SS06RE

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Lab Sample ID: 1003103-19RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Endosulfan sulfate	1	17.82	17.72	17.86	27	
	2	17.18	17.09	17.23	11	84.2
Endrin	1	15.41	15.38	15.53	3.9	
	2	15.38	15.32	15.46	1.5	88.9
Endrin Aldehyde	1	16.89	16.78	16.92	3.1	
	2	16.60	16.50	16.64	8.0	88.3
Heptachlor	1	11.38	11.34	11.48	1.9	
	2	11.21	11.14	11.29	1.1	53.3
Heptachlor Epoxide	1	13.57	13.47	13.61	2.0	
	2	13.27	13.21	13.35	1.6	22.2
Endrin Ketone	1	18.36	18.31	18.45	5.2	
	2	18.26	18.21	18.36	26	133.3
gamma-Chlordane	1	13.86	13.74	13.88	2.5	
	2	13.75	13.63	13.77	15	142.8
alpha-Chlordane	1	14.08	14.04	14.18	13	
	2	14.01	13.96	14.10	2.0	146.7

J

FORM X PEST-1

This SDG contains select metals analysis using SW-846 6010B/7470A/7471A.

HOLDING TIMES

Sampling Date: 3/4, 3/7, 3/13, 3/14
Received Date: 3/12, 3/17 Cooler temps: OK
Prep. Dates: 3/27 ICP, 3/27 Hg
Analysis Dates: 3/28 ICP, 3/30 Hg
All holding time requirements were met.

CALIBRATIONS

All initial calibration criteria were met. Single point calibration was analyzed for ICP. Calibration verification criteria were met for all ICV and CCV standards. The RL standards were analyzed and met method (+/- 30%) or DV (50-150 for Sb, Pb & Tl) criteria for all analytes. Interference check standards were analyzed and met criteria in all standards. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if an analyte is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying the criteria.
- Apply the same data validation guidelines to any associated calibration, preparation, and field QC blanks and all associated samples.
- Qualification/Action codes:
  - No Action - The sample result is greater than the CRDL and greater than ten times (10X) the blank value.
  - U - The sample result is greater than or equal to the MDL but less than or equal to the RL, result is reported as non-detect at the RL.
  - R or J+ The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator.

Blank Contamination and Qualification Summaries

Blank ID	Analyte	Concentration	Action Level	Q Flag	Q Code
CCB8	magnesium	11.1B ug/L	RL	U	MBL
	potassium	20.8B ug/L	RL	U	MBL
	sodium	513.8B ug/L	RL	U	MBL
IR69-FB01-031010	sodium	559B ug/L	RL	U	FBL
IR69-EB01-030710-SB	magnesium	10.7B ug/L	RL	U	EBL

The concentration noted for the CCBs is the highest concentration in all the CCBs. However, when qualifying samples for CCB contamination, associated samples are those just prior to or just following a CCB. Therefore, not all analytes in all samples are flagged for noted CCB contamination. See worksheets for associations. Samples are qualified for field QC blank contamination based on QC tracking provided by CH2M HILL. Negative contamination in a prep blank or CCB, if less than the analyte CRDL, is qualified based on professional judgment.

Please note that based on the National Functional Guidelines, for contamination above the CRDL, results in the field samples that are greater than the RL up to 10X the blank contamination level should be qualified as estimated and considered biased high or they should be rejected. Associated samples and required qualifications are noted in the following table.

Sample ID	Analyte	Q Flag	Q Code
IR69-SD01-10A, IR69-SD01D-10A, MR02-IR69-SS02-10A, MR02-IR69-SS04-10A, MR02-IR69-SS05-10A, MR02-IR69-SS06-10A	magnesium potassium sodium	U at RL	MBL
IR69-SB01-01-02-10A, IR69-SB01D-01-02-10A, IR69-SB04-06-07-10A, IR69-SB05-06-07-10A, IR69-SB06-06-07-10A,	sodium	U at RL	FBL
IR69-SB04-06-07-10A, IR69-SB06-06-07-10A	magnesium	U at RL	EBL

MATRIX SPIKE/DUPLICATE SUMMARY

There was no MS/MSD pair in this SDG. All LCS recoveries and RPDs were acceptable.

SERIAL DILUTIONS

The serial dilution results were OK with the exception of potassium (10.3%). Positive and non-detect results for K in the field sample are qualified as estimated J/UJ.

FIELD DUPLICATE SAMPLE SUMMARY

Note: Field duplicate results are assessed only if both results are above the CRDL.

Sample ID: IR69-SD01-10A Duplicate Sample ID: IR69-SD01D-10A

Analyte	Sample Conc.	Duplicate Conc.	RPD
aluminum	7470	6540	13%
barium			#DIV/0!
calcium	3970	3830	4%
chromium	8.8	7.4	17%
copper	9.5	7.7	21%
iron	3100	2700	14%
lead	12.4	11.5	8%
magnesium			#DIV/0!
manganese	98.2	85.2	14%
mercury			#DIV/0!
nickel	3.8	2.9	27%
vanadium	12.7	10.9	15%
zinc	14.4	9.6	40%

Comments: flag zinc as estimated J

Sample ID: IR69-SS01-10A Duplicate Sample ID: IR69-SS01D-10A

Analyte	Sample Conc.	Duplicate Conc.	RPD
aluminum	6200	5700	8%
barium			#DIV/0!
calcium	1030	1490	37%
chromium	8.8	8	10%
copper	4	4.9	20%
iron	4960	4090	19%
lead	8.8	7.5	16%
magnesium			#DIV/0!
manganese	49.3	81.1	49%
mercury	0.07	0.18	88%
nickel	1.7	1.5	13%
vanadium	12.1	10.5	14%
zinc	10.4	10.2	2%

Comments: flag calcium, mercury and manganese estimated J

Sample ID: **MR02-IR69-SS01-10A** **Duplicate Sample ID:** **MR02- IR69-SS01D-10A**

Analyte	Sample Conc.	Duplicate Conc.	RPD
aluminum	3850	3570	8%
barium	24.4	33.9	33%
calcium			#DIV/0!
chromium	2.2	2	10%
copper	3	2.5	18%
iron	1330	1020	26%
lead	8.3	8.8	6%
magnesium			#DIV/0!
manganese	28.9	29.9	3%
mercury	0.1	0.15	40%
nickel	1.7	1.6	6%
vanadium	4.7	3.5	29%
zinc	10.1	10	1%

Comments: flag mercury estimated J

Sample ID: **IR69-SB01-10A** **Duplicate Sample ID:** **IR69-SB01D-10A**

Analyte	Sample Conc.	Duplicate Conc.	RPD
aluminum	15900	12800	22%
arsenic	3.7	2.6	35%
calcium			#DIV/0!
chromium	24.1	18.1	28%
cobalt	1.3	1.1	17%
copper	3.4	2.8	19%
iron	13300	10200	26%
lead	6.8	5.6	19%
magnesium	1080	842	25%
manganese	20.3	18.4	10%
mercury			#DIV/0!
nickel	3.4	3	13%
potassium	1160	883	27%
selenium			#DIV/0!
vanadium	30.4	23	28%
zinc	10.9	9.1	18%

Comments: No qualifications

SAMPLE CALCULATION

EPA SAMPLE ID: IR69-SD01-10A
ANALYTE: calcium
CONCENTRATION: 3970 mg/Kg
%Solids – 23.4
Prep Info - 1.03g to 100ml

Raw Data result: 9569.031 ug/L

9569.031 ug/L *0.10L/1.03g * 1/0.234 = 3970.2228ug/g * 1000g/Kg * 1mg/1000ug = 3970 mg/Kg

EPA SAMPLE ID: 1R69-SD01-10A
ANALYTE: mercury
CONCENTRATION: 0.19 mg/Kg
%Solids – 23.4
Prep Info - 0.67g to 100ml

Raw Data result: 0.299 ug/L

0.299 ug/L *0.10L/0.67g * 1/0.234 = 0.1907ug/g * 1000g/Kg * 1mg/1000ug = 0.19 mg/Kg

SAMPLE RESULT VERIFICATION

Specific Comments:

All sample results were reported within the calibration/linear range of the instruments. Detection limits were acceptable. Raw data was verified. Positive results reported at concentrations between the IDL and the RL were qualified as estimated J by the laboratory. All field sample and QC blank IDs were missing either the first 4 or the last four characters. The characters (-10A) were added for the field sample.

Reviewer JA Cleveland **Date:** 72810

CompuChem
a Division of Liberty Analytical Corp.
501 Madison Avenue
Cary, NC 27513

SDG NARRATIVE
SDG # 1003103

The indicated Sample Delivery Group (SDG) consisting of nineteen (19) solid samples was received into the laboratory information management system (LIMS) on March 12 and 17, 2010 intact and in good condition with Chain of Custody (COC) Records in order, unless otherwise noted in any attachments or Quality Assurance Notices. The temperature of the samples upon receipt was 0.1 to 1.4°C. Sample ID's reported in this data package are noted by the receiving department on the COC if they differ from those listed by the samplers on the COC.

The samples were prepared and analyzed in accordance with SW846 methodology for the requested TAL metals and mercury.

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (ICV & CCV) and blanks (ICB & CCB) associated with this data were confirmed to be within allowable limits.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verification (PBS, LCSS, & LCSSD) was found to be within acceptable ranges and field samples were prepared and analyzed within the specified holding times.

MATRIX RELATED QUALITY CONTROL:

No matrix spikes were requested for this SDG.

A five-fold serial dilution of sample, CCN = 1003103-01 ID MR02-IR69-SS01L was performed in accordance with requirements for ICP and mercury analysis.

The adjusted sample concentration was inside control limits for the requested analytes except potassium.

Control limits for serial dilution are defined as a deviation less than or equal to 10% in the dilution adjusted concentrations from the original values for all analyte concentrations greater than fifty (50) times their respective Instrument Detection Limit (IDL) in the original sample.

The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice.

Susan W. Bass
Senior Chemist
March 31, 2010

SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M	
Aluminum	200.0	U	200.0	U	200.0	U	200.0	U	-7.540	B	P	NQ
Antimony	10.0	U	10.0	U	10.0	U	10.0	U	1.000	U	P	
Arsenic	10.0	U	10.0	U	10.0	U	10.0	U	1.000	U	P	
Barium	-0.4	B	NQ -0.5	B	200.0	U	-0.3	B	20.000	U	P	
Beryllium	5.0	U	5.0	U	5.0	U	5.0	U	0.500	U	P	
Cadmium	5.0	U	5.0	U	5.0	U	5.0	U	0.500	U	P	
Calcium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	500.000	U	P	
Chromium	10.0	U	10.0	U	10.0	U	10.0	U	1.000	U	P	
Cobalt	5.0	U	5.0	U	5.0	U	5.0	U	0.500	U	P	
Copper	5.0	U	5.0	U	5.0	U	5.0	U	0.324	B	P	NQ
Iron	100.0	U	100.0	U	100.0	U	100.0	U	2.030	B	P	NQ
Lead	3.0	U	3.0	U	3.0	U	3.0	U	0.300	U	P	
Magnesium	5000.0	U	5000.0	U	17.9	B	17.9	B	500.000	U	P	
Manganese	10.0	U	-0.4	B	10.0	U	10.0	U	1.000	U	P	
Mercury	-0.119	B	NQ 0.200	U	0.200	U	0.200	U	0.033	U	CV	
Nickel	5.0	U	5.0	U	5.0	U	5.0	U	0.500	U	P	
Potassium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	500.000	U	P	
Selenium	5.0	U	5.0	U	5.0	U	5.0	U	0.500	U	P	
Silver	5.0	U	5.0	U	5.0	U	5.0	U	0.100	B	P	NQ
Sodium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	500.000	U	P	
Thallium	10.0	U	10.0	U	10.0	U	10.0	U	1.000	U	P	
Vanadium	20.0	U	20.0	U	20.0	U	20.0	U	2.000	U	P	
Zinc	-0.6	B	NQ -0.7	B	-0.6	B	-0.6	B	2.000	U	P	

none assoc

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SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum			200.0	U	-125.9	B	-59.8	B			P
Antimony			3.1	B	10.0	U	10.0	U			P
Arsenic			10.0	U	10.0	U	10.0	U			P
Barium			200.0	U	200.0	U	-0.4	B			P
Beryllium			5.0	U	5.0	U	-0.3	B			P
Cadmium			5.0	U	5.0	U	5.0	U			P
Calcium			5000.0	U	5000.0	U	5000.0	U			P
Chromium			10.0	U	10.0	U	10.0	U			P
Cobalt			5.0	U	5.0	U	5.0	U			P
Copper			1.6	B	5.0	U	1.8	B			P
Iron			100.0	U	100.0	U	100.0	U			P
Lead			3.0	U	3.0	U	3.0	U			P
Magnesium			26.5	B	5000.0	U	5000.0	U			P
Manganese			10.0	U	10.0	U	-0.4	B			P
Mercury			0.200	U							CV
Nickel			5.0	U	5.0	U	5.0	U			P
Potassium			5000.0	U	5000.0	U	5000.0	U			P
Selenium			5.0	U	5.0	U	5.0	U			P
Silver			5.0	U	1.0	B	5.0	U			P
Sodium			5000.0	U	5000.0	U	5000.0	U			P
Thallium			10.0	U	10.0	U	10.0	U			P
Vanadium			20.0	U	20.0	U	20.0	U			P
Zinc			-0.6	B	-0.8	B	-0.7	B			P

4 5 6 NQ NQ NQ NQ NQ

MR02-1289-SS01

none

SS01D
SS03
SS04
SS05
SS06
SB04-06-07
SB05
SB06
SB01-01-02
SB01D-01-02

327

SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum			-63.8	B NQ	-117.1	B NQ					P
Antimony			10.0	U	10.0	U					P
Arsenic			10.0	U	10.0	U					P
Barium			-0.4	B NQ	200.0	U					P
Beryllium			-0.2	B	5.0	U					P
Cadmium			5.0	U	5.0	U					P
Calcium			5000.0	U	5000.0	U					P
Chromium			10.0	U	10.0	U					P
Cobalt			5.0	U	5.0	U					P
Copper			2.0	B NQ	4.8	B NQ					P
Iron			100.0	U	100.0	U					P
Lead			3.0	U	3.0	U					P
Magnesium			5000.0	U	11.1	B					P
Manganese			10.0	U	10.0	U					P
Nickel			5.0	U	5.0	U					P
Potassium			5000.0	U	20.8	B					P
Selenium			5.0	U	5.0	U					P
Silver			5.0	U	2.0	B NQ					P
Sodium			5000.0	U	513.8	B					P
Thallium			10.0	U	10.0	U					P
Vanadium			20.0	U	20.0	U					P
Zinc			-0.9	B NQ	-0.6	B NQ					P

SS01D
SS03
SS04
SS05
SS06
SB04-06-07
SB05
SB06
SB01-01-02
SB01D-01-02

SD01
SD01D
MB02-HR69-SS02
SS04
SS05
SS06

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SW846 - METALS

9
ICP SERIAL DILUTIONS

SAMPLE NO.

MR02-IR69-SS01L

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	31830.72		31917.51		0.3		P
Antimony	10.00	U	50.00	U			P
Arsenic	10.00	U	50.00	U			P
Barium	201.82		197.37	B	2.2		P
Beryllium	0.85	B	25.00	U	100.0		P
Cadmium	5.00	U	25.00	U			P
Calcium	3988.73	B	4144.98	B	3.9		P
Chromium	18.49		15.57	B	15.8		P
Cobalt	2.48	B	25.00	U	100.0		P
Copper	24.67		29.13		18.1		P
Iron	10977.17		11015.15		0.3		P
Lead	68.34		72.40		5.9		P
Magnesium	1354.32	B	1420.22	B	4.9		P
Manganese	239.28		232.16		3.0		P
Mercury	0.47		1.00	U	100.0		CV
Nickel	13.80		12.12	B	12.2		P
Potassium	1072.59	B	962.43	B	10.3	E	P
Selenium	5.00	U	25.00	U			P
Silver	5.00	U	25.00	U			P
Sodium	1378.12	B	2037.63	B	47.9		P
Thallium	10.00	U	50.00	U			P
Vanadium	38.98		37.63	B	3.5		P
Zinc	83.42		77.94	B	6.6		P

JWJ

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Identification/Quantitation

VOA

Samples IR69-SS05-10A and MR02-IR69-SS06-10A required a dilution to obtain results within the calibration range. All E-flagged results are excluded in favor of the corresponding D-flagged results from the dilution analysis. All results except corresponding D-flagged results in the dilution analysis are excluded in favor of the results reported from the undiluted analysis.

Several samples were re-analyzed due to non-compliant surrogate and/or internal standard area recoveries. The initial analysis was used and the re-analysis was excluded for the following samples: MR02-IR69-SS01-10A, MR02-IR69-SS01D-10A, IR69-SS01D-10A, IR69-SS03-10A, IR69-SS04-10A, IR69-SS06-10A, IR69-SB05-06-07-10A, IR69-SS05-10A, IR69-SD01D-10A, MR02-IR69-SS04-10A and MR02-IR69-SS05-10A.

SVOA

All SVOA compounds that were also analyzed by SVOA-SIM were excluded due to redundant analysis, qualifier code: RE.

The following SIM samples were re-analyzed due to non-compliant internal standard area recoveries and were excluded in favor of the initial analysis or re-analysis: IR69-SS06-10ARE, MR02-IR69-SS01-10A, IR69-SS03-10ARE, MR02-IR69-SS06-10A, IR69-SD01-10ARE, IR69-SD01D-10A and MR02-IR69-SS04-10ARE.

Pesticides/PCBs

All positive results reported with a P flag to indicate column quantitation %Ds greater than 40% are qualified as estimated J with a qualifier code of 2C.

The calibration standards associated with the original analyses exhibited extreme response decreases as the sequence progressed. The samples were taken through a GPC clean-up procedure in an attempt to minimize the matrix effects. The calibrations surrounding the RE analyses were improved although significant issues were still present and qualifications were required. It is the professional judgment of the validator that the results reported from the RE analyses provide a more accurate assessment of the identity and concentration of compounds present. Therefore, all original analyses results are excluded in favor of the results reported from the RE analyses with a qualifier code of RE with the exception of sample IR69-SD01-10A. It would be prudent to confirm the results presented due to the extent of the potential matrix effects as evidenced by the calibration issues noted. Please note that several of the RE samples were analyzed at a dilution to accurately quantitate target compounds. The RLs were adjusted appropriately.

Metals

All results reported between the IDL and the RL (B flagged by laboratory) were qualified as estimated J. No qualification code was required.

A summary of qualifications required is provided on the following page. Please do not hesitate to contact DataQual ES with any questions regarding this validation report.

Sincerely,

Laura Maschhoff
President

Jacqueline Cleveland
Vice-President

Summary of Data Qualifications

VOA

Sample ID	Compound	Results	Q-Flag	Q Code
MR02-IR69-SS01-10ARE, MR02-IR69-SS01D-10ARE, IR69-SS01D-10ARE, IR69-SS03-10ARE, IR69-SS04-10ARE, IR69-SS06-10ARE, IR69-SB05-06-07-10ARE, IR69-SD01D-10ARE, MR02-IR69-SS04-10ARE, MR02-IR69-SS05-10ARE	all results	+/-	exclude	RE

SVOA

Sample ID	Compound	Results	Q-Flag	Q Code
MR02-IR69-SS01-10A,MR02-IR69-SS01D-10A, IR69-SS01-10A,IR69-SS01D-10A,IR69-SS03-10A, IR69-SS04-10A, IR69-SS05-10A	4,6-dinitro-2-methylphenol	+/-	J/UJ	CCH
IR69-SB06-06-07-10A,IR69-SD01-10A, MR02-IR69-SS02-10A, MR02-IR69-SS04-10A, MR02-IR69-SS05-10A, MR02-IR69-SS06-10A	4-bromophenyl-phenylether	+/-	J/UJ	CCH
IR69-SD01D-10A	4-bromophenyl-phenylether	+/-	J/UJ	CCH
IR69-SD01D-10A	atrazine	+/-	J/UJ	CCL
PAH SIM: IR69-SD01-10A, MR02-IR69-SS02-0A, MR02-IR69-SS04-10A, MR02-IR69-SS05-10A, MR02-IR69-SS06-10ARE, IR69-SD01D-10ARE	naphthalene	+	U at RL	MBL
IR69-SS01D-10A, IR69-SS03-10A,IR69-SS04-10A, IR69-SS06-10A, MR02-IR69-SS01D-10A	bis(2-ethylhexyl)phthalate	+	U at RL	FBL
IR69-SS01D-10A	di-n-octylphthalate	+	U at RL	FBL
PAH SIM: IR69-SS06-10A, IR69-SS03-10A, MR02-IR69-SS01-10ARE, MR02-IR69-SS06-10ARE	all compounds associated with: crysene-d12	+	J	ISH
PAH SIM: IR69-SD01-10A, IR69-SD01D-10ARE	all compounds associated with: phenanthrene-d10	+	J	ISH
PAH SIM: MR02-IR69-SS04-10A	all compounds associated with: acenaphthene-d10 phenanthrene-d10	+	J	ISH
IR69-SS06-10A	acid fraction compounds	+/-	J/UJ	SSL
PAH SIM: IR69-SS06-10ARE, MR02-IR69-SS01-10A, IR69-SS03-10ARE, MR02-IR69-SS06-10A, IR69-SD01-10ARE, IR69-SD01D-10A, MR02-IR69-SS04-10ARE	all results	+/-	exclude	RE
all SVOA compounds also ran as SIM-SVOA	all results	+/-	exclude	RE

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS01-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-03

Sample wt/vol: 6.2 (g/mL) G Lab File ID: 1003103-0359

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: not dec. 34 Date Analyzed: 03/15/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	6.2	U
74-87-3	Chloromethane	6.2	U
75-01-4	Vinyl Chloride	6.2	U
74-83-9	Bromomethane	6.2	U
75-00-3	Chloroethane	6.2	U
75-69-4	Trichlorofluoromethane	6.2	U
75-35-4	1,1-Dichloroethene	6.2	U
75-15-0	Carbon disulfide	6.2	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	6.2	U
67-64-1	Acetone	410	J CCH
75-09-2	Methylene Chloride	6.2 ~~0.62~~	~~JB~~ UMBL
156-60-5	trans-1,2-Dichloroethene	6.2	U
1634-04-4	Methyl-tert-butyl ether	6.2	U
75-34-3	1,1-Dichloroethane	6.2	U
156-59-2	cis-1,2-Dichloroethene	6.2	U
78-93-3	2-butanone	25	J CCH
67-66-3	Chloroform	6.2	U
71-55-6	1,1,1-Trichloroethane	6.2	U
56-23-5	Carbon Tetrachloride	6.2	U
71-43-2	Benzene	6.2	U
107-06-2	1,2-Dichloroethane	6.2	U
79-01-6	Trichloroethene	6.2	U
78-87-5	1,2-Dichloropropane	6.2	~~U~~ UJ ICH
75-27-4	Bromodichloromethane	6.2	U
10061-01-5	cis-1,3-Dichloropropene	6.2	U
108-10-1	4-Methyl-2-pentanone	15	~~U~~ UJ CCH
108-88-3	Toluene	6.2 ~~4.7~~	~~J~~ UEBL
10061-02-6	trans-1,3-Dichloropropene	6.2	U
79-00-5	1,1,2-Trichloroethane	6.2	U
127-18-4	Tetrachloroethene	6.2	U
591-78-6	2-hexanone	15	~~U~~ UJCCH
124-48-1	Dibromochloromethane	6.2	U
106-93-4	1,2-Dibromoethane	6.2	U

FORM I VOA

LM 081210

LM 081210

025

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD01-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 LM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-14

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-14A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 77 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	130	J
108-95-2	Phenol	1400	U
111-44-4	Bis(2-chloroethyl)ether	740	U
95-57-8	2-Chlorophenol	1400	U
95-48-7	2-Methylphenol	1400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	740	U
98-86-2	Acetophenone	740	U
106-44-5	4-Methylphenol	1400	U
621-64-7	N-Nitroso-di-N-propylamine	740	U
67-72-1	Hexachloroethane	740	U
98-95-3	Nitrobenzene	740	U
78-59-1	Isophorone	740	U
88-75-5	2-Nitrophenol	1400	U
105-67-9	2,4-Dimethylphenol	1400	U
111-91-1	Bis(2-chloroethoxy)methane	740	U
120-83-2	2,4-Dichlorophenol	1400	U
91-20-3	Naphthalene	740	~~U~~ exclude RE
106-47-8	4-Chloroaniline	1400	U
87-68-3	Hexachlorobutadiene	740	U
105-60-2	Caprolactam	740	U
59-50-7	4-Chloro-3-methylphenol	1400	U
91-57-6	2-Methylnaphthalene	740	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	740	U
88-06-2	2,4,6-Trichlorophenol	1400	U
95-95-4	2,4,5-Trichlorophenol	1400	U
92-52-4	1,1'-Biphenyl	740	U
91-58-7	2-Chloronaphthalene	740	U
88-74-4	2-Nitroaniline	1400	U
131-11-3	Dimethylphthalate	740	U
606-20-2	2,6-Dinitrotoluene	740	U
208-96-8	Acenaphthylene	740	~~U~~ exclude RE
99-09-2	3-Nitroaniline	1400	U
83-32-9	Acenaphthene	740	~~U~~ exclude RE

LM 081310

LM 072110

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD01-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 LM 07/2/10

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-14

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-14A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 77 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1400	U
100-02-7	4-Nitrophenol	1400	U
121-14-2	2,4-Dinitrotoluene	740	U
132-64-9	Dibenzofuran	740	U
84-66-2	Diethylphthalate	740	U
7005-72-3	4-Chlorophenyl-phenylether	740	U
86-73-7	Fluorene	740	~~U~~ exclude RE
100-01-6	4-Nitroaniline	1400	U
534-52-1	4,6-Dinitro-2-methylphenol	1400	U
86-30-6	N-Nitrosodiphenylamine (1)	740	U
101-55-3	4-Bromophenyl-phenylether	740	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	740	U
1912-24-9	Atrazine	740	U
87-86-5	Pentachlorophenol	1400	U
85-01-8	Phenanthrene	740	~~U~~ exclude RE
120-12-7	Anthracene	740	~~U~~ exclude RE
86-74-8	Carbazole	740	U
84-74-2	Di-n-butylphthalate	740	U
206-44-0	Fluoranthene	740	~~U~~ exclude RE
129-00-0	Pyrene	740	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	740	U
91-94-1	3,3'-Dichlorobenzidine	740	U
117-81-7	bis(2-ethylhexyl)Phthalate	400	J
56-55-3	Benzo(a)anthracene	740	~~U~~ exclude RE
218-01-9	Chrysene	740	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	740	U
205-99-2	Benzo(b)fluoranthene	740	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	740	U
50-32-8	Benzo(a)pyrene	740	U
193-39-5	Indeno(1,2,3-cd)pyrene	740	U
53-70-3	Dibenzo(a,h)anthracene	740	U
191-24-2	Benzo(g,h,i)perylene	740	U

(1) - Cannot be separated from Diphenylamine

LM 08/2/10

LM 07/2/10

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD01D-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-15

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-15J2C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 76 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	240	J
108-95-2	Phenol	1400	U
111-44-4	Bis(2-chloroethyl)ether	710	U
95-57-8	2-Chlorophenol	1400	U
95-48-7	2-Methylphenol	1400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	710	U
98-86-2	Acetophenone	710	U
106-44-5	4-Methylphenol	1400	U
621-64-7	N-Nitroso-di-N-propylamine	710	U
67-72-1	Hexachloroethane	710	U
98-95-3	Nitrobenzene	710	U
78-59-1	Isophorone	710	U
88-75-5	2-Nitrophenol	1400	U
105-67-9	2,4-Dimethylphenol	1400	U
111-91-1	Bis(2-chloroethoxy)methane	710	U
120-83-2	2,4-Dichlorophenol	1400	U
91-20-3	Naphthalene	710	~~U~~ exclude PE
106-47-8	4-Chloroaniline	1400	U
87-68-3	Hexachlorobutadiene	710	U
105-60-2	Caprolactam	710	U
59-50-7	4-Chloro-3-methylphenol	1400	U
91-57-6	2-Methylnaphthalene	710	~~U~~ exclude PE
77-47-4	Hexachlorocyclopentadiene	710	U
88-06-2	2,4,6-Trichlorophenol	1400	U
95-95-4	2,4,5-Trichlorophenol	1400	U
92-52-4	1,1'-Biphenyl	710	U
91-58-7	2-Chloronaphthalene	710	U
88-74-4	2-Nitroaniline	1400	U
131-11-3	Dimethylphthalate	710	U
606-20-2	2,6-Dinitrotoluene	710	U
208-96-8	Acenaphthylene	710	~~U~~ exclude PE
99-09-2	3-Nitroaniline	1400	U
83-32-9	Acenaphthene	710	~~U~~ exclude PE

WM 072110

WM 072310

085

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD01D -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 WM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-15

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-15J2C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 76 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1400	U
100-02-7	4-Nitrophenol	1400	U
121-14-2	2,4-Dinitrotoluene	710	U
132-64-9	Dibenzofuran	710	U
84-66-2	Diethylphthalate	710	U
7005-72-3	4-Chlorophenyl-phenylether	710	U
86-73-7	Fluorene	710	~~U~~ exclude RE
100-01-6	4-Nitroaniline	1400	U
534-52-1	4,6-Dinitro-2-methylphenol	1400	U
86-30-6	N-Nitrosodiphenylamine (1)	710	U
101-55-3	4-Bromophenyl-phenylether	710	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	710	U
1912-24-9	Atrazine	710	~~U~~ UJ CCL
87-86-5	Pentachlorophenol	1400	U
85-01-8	Phenanthrene	710	~~U~~ exclude RE
120-12-7	Anthracene	710	~~U~~ exclude RE
86-74-8	Carbazole	710	U
84-74-2	Di-n-butylphthalate	710	U
206-44-0	Fluoranthene	710	~~U~~ exclude RE
129-00-0	Pyrene	710	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	710	U
91-94-1	3,3'-Dichlorobenzidine	710	U
117-81-7	bis(2-ethylhexyl)Phthalate	710	U
56-55-3	Benzo(a)anthracene	710	~~U~~ exclude RE
218-01-9	Chrysene	710	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	710	U
205-99-2	Benzo(b)fluoranthene	710	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	710	U
50-32-8	Benzo(a)pyrene	710	U
193-39-5	Indeno(1,2,3-cd)pyrene	710	U
53-70-3	Dibenzo(a,h)anthracene	710	U
191-24-2	Benzo(g,h,i)perylene	710	U

(1) - Cannot be separated from Diphenylamine

WM 072110

WM 072110

086

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS01-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-03C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 34 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	100	J
108-95-2	Phenol	500	U
111-44-4	Bis(2-chloroethyl)ether	260	U
95-57-8	2-Chlorophenol	500	U
95-48-7	2-Methylphenol	500	U
108-60-1	2,2'-oxybis(1-Chloropropane)	260	U
98-86-2	Acetophenone	260	U
106-44-5	4-Methylphenol	500	U
621-64-7	N-Nitroso-di-N-propylamine	260	U
67-72-1	Hexachloroethane	260	U
98-95-3	Nitrobenzene	260	U
78-59-1	Isophorone	260	U
88-75-5	2-Nitrophenol	500	U
105-67-9	2,4-Dimethylphenol	500	U
111-91-1	Bis(2-chloroethoxy)methane	260	U
120-83-2	2,4-Dichlorophenol	500	U
91-20-3	Naphthalene	260	~~U~~ exclude RE
106-47-8	4-Chloroaniline	500	U
87-68-3	Hexachlorobutadiene	260	U
105-60-2	Caprolactam	260	U
59-50-7	4-Chloro-3-methylphenol	500	U
91-57-6	2-Methylnaphthalene	260	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	260	U
88-06-2	2,4,6-Trichlorophenol	500	U
95-95-4	2,4,5-Trichlorophenol	500	U
92-52-4	1,1'-Biphenyl	260	U
91-58-7	2-Chloronaphthalene	260	U
88-74-4	2-Nitroaniline	500	U
131-11-3	Dimethylphthalate	260	U
606-20-2	2,6-Dinitrotoluene	260	U
208-96-8	Acenaphthylene	260	~~U~~ exclude RE
99-09-2	3-Nitroaniline	500	U
83-32-9	Acenaphthene	260	~~U~~ exclude RE

UM 072110

UM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS01-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-03C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 34 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	500	U
100-02-7	4-Nitrophenol	500	U
121-14-2	2,4-Dinitrotoluene	260	U
132-64-9	Dibenzofuran	260	U
84-66-2	Diethylphthalate	260	U
7005-72-3	4-Chlorophenyl-phenylether	260	U
86-73-7	Fluorene	260	~~U~~ exclude RE
100-01-6	4-Nitroaniline	500	U
534-52-1	4,6-Dinitro-2-methylphenol	500	~~U~~ UJ CCH
86-30-6	N-Nitrosodiphenylamine (1)	260	U
101-55-3	4-Bromophenyl-phenylether	260	U
118-74-1	Hexachlorobenzene	260	U
1912-24-9	Atrazine	260	U
87-86-5	Pentachlorophenol	500	U
85-01-8	Phenanthrene	260	~~U~~ exclude RE
120-12-7	Anthracene	260	~~U~~ exclude RE
86-74-8	Carbazole	260	U
84-74-2	Di-n-butylphthalate	260	U
206-44-0	Fluoranthene	260	~~U~~ exclude RE
129-00-0	Pyrene	260	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	260	U
91-94-1	3,3'-Dichlorobenzidine	260	U
117-81-7	bis(2-ethylhexyl)Phthalate	260	U
56-55-3	Benzo(a)anthracene	260	~~U~~ exclude RE
218-01-9	Chrysene	260	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	260	U
205-99-2	Benzo(b)fluoranthene	260	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	260	U
50-32-8	Benzo(a)pyrene	260	U
193-39-5	Indeno(1,2,3-cd)pyrene	260	U
53-70-3	Dibenzo(a,h)anthracene	260	U
191-24-2	Benzo(g,h,i)perylene	260	U

(1) - Cannot be separated from Diphenylamine

WM 081310

WM 072110

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS01D-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-04C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 34 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	59	J
108-95-2	Phenol	500	U
111-44-4	Bis(2-chloroethyl)ether	260	U
95-57-8	2-Chlorophenol	500	U
95-48-7	2-Methylphenol	500	U
108-60-1	2,2'-oxybis(1-Chloropropane)	260	U
98-86-2	Acetophenone	260	U
106-44-5	4-Methylphenol	500	U
621-64-7	N-Nitroso-di-N-propylamine	260	U
67-72-1	Hexachloroethane	260	U
98-95-3	Nitrobenzene	260	U
78-59-1	Isophorone	260	U
88-75-5	2-Nitrophenol	500	U
105-67-9	2,4-Dimethylphenol	500	U
111-91-1	Bis(2-chloroethoxy)methane	260	U
120-83-2	2,4-Dichlorophenol	500	U
91-20-3	Naphthalene	260	~~U~~ exclude RE
106-47-8	4-Chloroaniline	500	U
87-68-3	Hexachlorobutadiene	260	U
105-60-2	Caprolactam	260	U
59-50-7	4-Chloro-3-methylphenol	500	U
91-57-6	2-Methylnaphthalene	260	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	260	U
88-06-2	2,4,6-Trichlorophenol	500	U
95-95-4	2,4,5-Trichlorophenol	500	U
92-52-4	1,1'-Biphenyl	260	U
91-58-7	2-Chloronaphthalene	260	U
88-74-4	2-Nitroaniline	500	U
131-11-3	Dimethylphthalate	260	U
606-20-2	2,6-Dinitrotoluene	260	U
208-96-8	Acenaphthylene	260	~~U~~ exclude RE
99-09-2	3-Nitroaniline	500	U
83-32-9	Acenaphthene	260	~~U~~ exclude RE

FORM I SV 8270C

VM 081310

VM 072110

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS01D-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-04C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 34 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	500	U
100-02-7	4-Nitrophenol	500	U
121-14-2	2,4-Dinitrotoluene	260	U
132-64-9	Dibenzofuran	260	U
84-66-2	Diethylphthalate	260	U
7005-72-3	4-Chlorophenyl-phenylether	260	U
86-73-7	Fluorene	260	~~U~~ exclude RE
100-01-6	4-Nitroaniline	500	U
534-52-1	4,6-Dinitro-2-methylphenol	500	~~U~~ UJ CCH
86-30-6	N-Nitrosodiphenylamine (1)	260	U
101-55-3	4-Bromophenyl-phenylether	260	U
118-74-1	Hexachlorobenzene	260	U
1912-24-9	Atrazine	260	U
87-86-5	Pentachlorophenol	500	U
85-01-8	Phenanthrene	260	~~U~~ exclude RE
120-12-7	Anthracene	260	~~U~~ exclude RE
86-74-8	Carbazole	260	U
84-74-2	Di-n-butylphthalate	260	U
206-44-0	Fluoranthene	260	~~U~~ exclude RE
129-00-0	Pyrene	260	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	260	U
91-94-1	3,3'-Dichlorobenzidine	260	U
117-81-7	bis(2-ethylhexyl)Phthalate	260 ~~130~~	~~J~~ U FBL
56-55-3	Benzo(a)anthracene	260	~~U~~ exclude RE
218-01-9	Chrysene	260	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	260 ~~220~~	~~J~~ U FBL
205-99-2	Benzo(b)fluoranthene	260	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	260	U
50-32-8	Benzo(a)pyrene	260	U
193-39-5	Indeno(1,2,3-cd)pyrene	260	U
53-70-3	Dibenzo(a,h)anthracene	260	U
191-24-2	Benzo(g,h,i)perylene	260	U

(1) - Cannot be separated from Diphenylamine

LM 081310

LM 072110

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS03-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-05C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 27 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	86	J
108-95-2	Phenol	450	U
111-44-4	Bis(2-chloroethyl)ether	230	U
95-57-8	2-Chlorophenol	450	U
95-48-7	2-Methylphenol	450	U
108-60-1	2,2'-oxybis(1-Chloropropane)	230	U
98-86-2	Acetophenone	230	U
106-44-5	4-Methylphenol	450	U
621-64-7	N-Nitroso-di-N-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	450	U
105-67-9	2,4-Dimethylphenol	450	U
111-91-1	Bis(2-chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	450	U
91-20-3	Naphthalene	230	~~U~~ exclude RE
106-47-8	4-Chloroaniline	450	U
87-68-3	Hexachlorobutadiene	230	U
105-60-2	Caprolactam	230	U
59-50-7	4-Chloro-3-methylphenol	450	U
91-57-6	2-Methylnaphthalene	230	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	230	U
88-06-2	2,4,6-Trichlorophenol	450	U
95-95-4	2,4,5-Trichlorophenol	450	U
92-52-4	1,1'-Biphenyl	230	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	450	U
131-11-3	Dimethylphthalate	230	U
606-20-2	2,6-Dinitrotoluene	230	U
208-96-8	Acenaphthylene	230	~~U~~ exclude RE
99-09-2	3-Nitroaniline	450	U
83-32-9	Acenaphthene	230	~~U~~ exclude RE

WM 051310

WM 051210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS03-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-05C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 27 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	450	U
100-02-7	4-Nitrophenol	450	U
121-14-2	2,4-Dinitrotoluene	230	U
132-64-9	Dibenzofuran	230	U
84-66-2	Diethylphthalate	230	U
7005-72-3	4-Chlorophenyl-phenylether	230	U
86-73-7	Fluorene	230	~~U~~ exclude PE
100-01-6	4-Nitroaniline	450	U
534-52-1	4,6-Dinitro-2-methylphenol	450	~~U~~ UJ CCH
86-30-6	N-Nitrosodiphenylamine (1)	230	U
101-55-3	4-Bromophenyl-phenylether	230	U
118-74-1	Hexachlorobenzene	230	U
1912-24-9	Atrazine	230	U
87-86-5	Pentachlorophenol	450	U
85-01-8	Phenanthrene	230	~~U~~ exclude PE
120-12-7	Anthracene	230	~~U~~ exclude PE
86-74-8	Carbazole	230	U
84-74-2	Di-n-butylphthalate	230	U
206-44-0	Fluoranthene	230	~~U~~ exclude PE
129-00-0	Pyrene	230	~~U~~ exclude PE
85-68-7	Butylbenzylphthalate	230	U
91-94-1	3,3'-Dichlorobenzidine	230	U
117-81-7	bis(2-ethylhexyl)Phthalate	230 ~~110~~	~~J~~ U FBL
56-55-3	Benzo(a)anthracene	230	~~U~~ exclude PE
218-01-9	Chrysene	230	~~U~~ exclude PE
117-84-0	Di-n-octylphthalate	230	U
205-99-2	Benzo(b)fluoranthene	230	~~U~~ exclude PE
207-08-9	Benzo(k)fluoranthene	230	U
50-32-8	Benzo(a)pyrene	230	U
193-39-5	Indeno(1,2,3-cd)pyrene	230	U
53-70-3	Dibenzo(a,h)anthracene	230	U
191-24-2	Benzo(g,h,i)perylene	230	U

(1) - Cannot be separated from Diphenylamine

WM 081310

WM 072410

096

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS04-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-06C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 26 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	62	J
108-95-2	Phenol	450	U
111-44-4	Bis(2-chloroethyl)ether	230	U
95-57-8	2-Chlorophenol	450	U
95-48-7	2-Methylphenol	450	U
108-60-1	2,2'-oxybis(1-Chloropropane)	230	U
98-86-2	Acetophenone	230	U
106-44-5	4-Methylphenol	450	U
621-64-7	N-Nitroso-di-N-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	450	U
105-67-9	2,4-Dimethylphenol	450	U
111-91-1	Bis(2-chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	450	U
91-20-3	Naphthalene	230	~~U~~ exclude RE
106-47-8	4-Chloroaniline	450	U
87-68-3	Hexachlorobutadiene	230	U
105-60-2	Caprolactam	230	U
59-50-7	4-Chloro-3-methylphenol	450	U
91-57-6	2-Methylnaphthalene	230	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	230	U
88-06-2	2,4,6-Trichlorophenol	450	U
95-95-4	2,4,5-Trichlorophenol	450	U
92-52-4	1,1'-Biphenyl	230	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	450	U
131-11-3	Dimethylphthalate	230	U
606-20-2	2,6-Dinitrotoluene	230	U
208-96-8	Acenaphthylene	230	~~U~~ exclude RE
99-09-2	3-Nitroaniline	450	U
83-32-9	Acenaphthene	230	~~U~~ exclude RE

FORM I SV 8270C

WM 051310

WM 051210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS04-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-06C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 26 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	450	U
100-02-7	4-Nitrophenol	450	U
121-14-2	2,4-Dinitrotoluene	230	U
132-64-9	Dibenzofuran	230	U
84-66-2	Diethylphthalate	230	U
7005-72-3	4-Chlorophenyl-phenylether	230	U
86-73-7	Fluorene	230	~~U~~ exclude RE
100-01-6	4-Nitroaniline	450	U
534-52-1	4,6-Dinitro-2-methylphenol	450	~~U~~ UJ CCH
86-30-6	N-Nitrosodiphenylamine (1)	230	U
101-55-3	4-Bromophenyl-phenylether	230	U
118-74-1	Hexachlorobenzene	230	U
1912-24-9	Atrazine	230	U
87-86-5	Pentachlorophenol	450	U
85-01-8	Phenanthrene	230	~~U~~ exclude RE
120-12-7	Anthracene	230	~~U~~ exclude RE
86-74-8	Carbazole	230	U
84-74-2	Di-n-butylphthalate	230	U
206-44-0	Fluoranthene	230	~~U~~ exclude RE
129-00-0	Pyrene	230	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	230	U
91-94-1	3,3'-Dichlorobenzidine	230	U
117-81-7	bis(2-ethylhexyl)Phthalate	230 ~~120~~	~~J~~ UFBL
56-55-3	Benzo(a)anthracene	230	~~U~~ exclude RE
218-01-9	Chrysene	230	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	230	U
205-99-2	Benzo(b)fluoranthene	230	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	230	U
50-32-8	Benzo(a)pyrene	230	U
193-39-5	Indeno(1,2,3-cd)pyrene	230	U
53-70-3	Dibenzo(a,h)anthracene	230	U
191-24-2	Benzo(g,h,i)perylene	230	U

(1) - Cannot be separated from Diphenylamine

VM 081310

VM 072110

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS05-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-07C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 48 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	82	J
108-95-2	Phenol	630	U
111-44-4	Bis(2-chloroethyl)ether	330	U
95-57-8	2-Chlorophenol	630	U
95-48-7	2-Methylphenol	630	U
108-60-1	2,2'-oxybis(1-Chloropropane)	330	U
98-86-2	Acetophenone	330	U
106-44-5	4-Methylphenol	630	U
621-64-7	N-Nitroso-di-N-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	630	U
105-67-9	2,4-Dimethylphenol	630	U
111-91-1	Bis(2-chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	630	U
91-20-3	Naphthalene	330	~~U~~ exclude RE
106-47-8	4-Chloroaniline	630	U
87-68-3	Hexachlorobutadiene	330	U
105-60-2	Caprolactam	81	J
59-50-7	4-Chloro-3-methylphenol	630	U
91-57-6	2-Methylnaphthalene	330	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	630	U
95-95-4	2,4,5-Trichlorophenol	630	U
92-52-4	1,1'-Biphenyl	330	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	630	U
131-11-3	Dimethylphthalate	330	U
606-20-2	2,6-Dinitrotoluene	330	U
208-96-8	Acenaphthylene	330	~~U~~ exclude RE
99-09-2	3-Nitroaniline	630	U
83-32-9	Acenaphthene	330	~~U~~ exclude RE

WM 081310

WM 072110

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS05-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-07C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 48 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	630	U
100-02-7	4-Nitrophenol	630	U
121-14-2	2,4-Dinitrotoluene	330	U
132-64-9	Dibenzofuran	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	~~U~~ exclude RE
100-01-6	4-Nitroaniline	630	U
534-52-1	4,6-Dinitro-2-methylphenol	630	~~U~~ UJ CCH
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
1912-24-9	Atrazine	330	U
87-86-5	Pentachlorophenol	630	U
85-01-8	Phenanthrene	330	~~U~~ exclude RE
120-12-7	Anthracene	330	~~U~~ exclude RE
86-74-8	Carbazole	330	U
84-74-2	Di-n-butylphthalate	330	U
206-44-0	Fluoranthene	330	~~U~~ exclude RE
129-00-0	Pyrene	330	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	U
117-81-7	bis(2-ethylhexyl)Phthalate	330	U
56-55-3	Benzo(a)anthracene	330	~~U~~ exclude RE
218-01-9	Chrysene	330	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenzo(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

(1) - Cannot be separated from Diphenylamine

WM 081310

WM 072110

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS06-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-08

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-08A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 31 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	140	J
108-95-2	Phenol	480	~~U~~ UJ SSL
111-44-4	Bis(2-chloroethyl)ether	250	U
95-57-8	2-Chlorophenol	480	~~U~~ UJ SSL
95-48-7	2-Methylphenol	480	~~U~~ UJ SSL
108-60-1	2,2'-oxybis(1-Chloropropane)	250	U
98-86-2	Acetophenone	250	U
106-44-5	4-Methylphenol	480	~~U~~ UJ SSL
621-64-7	N-Nitroso-di-N-propylamine	250	U
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	480	~~U~~ UJ SSL
105-67-9	2,4-Dimethylphenol	480	~~U~~ UJ SSL
111-91-1	Bis(2-chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	480	~~U~~ UJ SSL
91-20-3	Naphthalene	250	~~U~~ exclude RE
106-47-8	4-Chloroaniline	480	U
87-68-3	Hexachlorobutadiene	250	U
105-60-2	Caprolactam	250	U
59-50-7	4-Chloro-3-methylphenol	480	~~U~~ UJ SSL
91-57-6	2-Methylnaphthalene	250	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	250	U
88-06-2	2,4,6-Trichlorophenol	480	~~U~~ UJ SSL
95-95-4	2,4,5-Trichlorophenol	480	~~U~~ UJ SSL
92-52-4	1,1'-Biphenyl	250	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	480	U
131-11-3	Dimethylphthalate	250	U
606-20-2	2,6-Dinitrotoluene	250	U
208-96-8	Acenaphthylene	250	~~U~~ exclude RE
99-09-2	3-Nitroaniline	480	U
83-32-9	Acenaphthene	250	~~U~~ exclude RE

FORM I SV 8270C

LM 03310

LM 07210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SS06-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-08

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-08A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 31 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	480	~~U~~ UJ SSL
100-02-7	4-Nitrophenol	480	~~U~~ UJ SSL
121-14-2	2,4-Dinitrotoluene	250	U
132-64-9	Dibenzofuran	250	U
84-66-2	Diethylphthalate	250	U
7005-72-3	4-Chlorophenyl-phenylether	250	U
86-73-7	Fluorene	250	~~U~~ exclude RE
100-01-6	4-Nitroaniline	480	U
534-52-1	4,6-Dinitro-2-methylphenol	480	~~U~~ UJ SSL
86-30-6	N-Nitrosodiphenylamine (1)	250	U
101-55-3	4-Bromophenyl-phenylether	250	U
118-74-1	Hexachlorobenzene	250	U
1912-24-9	Atrazine	250	U
87-86-5	Pentachlorophenol	480	~~U~~ UJ SSL
85-01-8	Phenanthrene	250	~~U~~ exclude RE
120-12-7	Anthracene	250	~~U~~ exclude RE
86-74-8	Carbazole	250	U
84-74-2	Di-n-butylphthalate	250	U
206-44-0	Fluoranthene	250	~~U~~ exclude RE
129-00-0	Pyrene	250	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	250	U
91-94-1	3,3'-Dichlorobenzidine	250	U
117-81-7	bis(2-ethylhexyl)Phthalate	250 ~~190~~	~~J~~ UP BL
56-55-3	Benzo(a)anthracene	250	~~U~~ exclude RE
218-01-9	Chrysene	250	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	250	U
205-99-2	Benzo(b)fluoranthene	250	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	250	U
50-32-8	Benzo(a)pyrene	250	U
193-39-5	Indeno(1,2,3-cd)pyrene	250	U
53-70-3	Dibenzo(a,h)anthracene	250	U
191-24-2	Benzo(g,h,i)perylene	250	U

(1) - Cannot be separated from Diphenylamine

WM 051310

WM 07/2/10

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS01 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-01C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 23 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	110	J
108-95-2	Phenol	430	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	430	U
95-48-7	2-Methylphenol	430	U
108-60-1	2,2'-oxybis(1-Chloropropane)	220	U
98-86-2	Acetophenone	220	U
106-44-5	4-Methylphenol	430	U
621-64-7	N-Nitroso-di-N-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	430	U
105-67-9	2,4-Dimethylphenol	430	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	430	U
91-20-3	Naphthalene	220	U exclude RE
106-47-8	4-Chloroaniline	430	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	430	U
91-57-6	2-Methylnaphthalene	220	U exclude RE
77-47-4	Hexachlorocyclopentadiene	220	U
88-06-2	2,4,6-Trichlorophenol	430	U
95-95-4	2,4,5-Trichlorophenol	430	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	430	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U exclude RE
99-09-2	3-Nitroaniline	430	U
83-32-9	Acenaphthene	220	U exclude RE

LM 8310

LM 072110

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS01 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 LM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-01C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 23 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	430	U
100-02-7	4-Nitrophenol	430	U
121-14-2	2,4-Dinitrotoluene	220	U
132-64-9	Dibenzofuran	220	U
84-66-2	Diethylphthalate	220	U
7005-72-3	4-Chlorophenyl-phenylether	220	U
86-73-7	Fluorene	220	~~U~~ include RE
100-01-6	4-Nitroaniline	430	U
534-52-1	4,6-Dinitro-2-methylphenol	430	~~U~~ UJ CCH
86-30-6	N-Nitrosodiphenylamine (1)	220	U
101-55-3	4-Bromophenyl-phenylether	220	~~U~~ ~~UJ CCH~~ U
118-74-1	Hexachlorobenzene	220	U
1912-24-9	Atrazine	220	U
87-86-5	Pentachlorophenol	430	U
85-01-8	Phenanthrene	220	~~U~~ include RE
120-12-7	Anthracene	220	~~U~~ include RE
86-74-8	Carbazole	220	U
84-74-2	Di-n-butylphthalate	220	U
206-44-0	Fluoranthene	220	~~U~~ include RE
129-00-0	Pyrene	220	~~U~~ include RE
85-68-7	Butylbenzylphthalate	220	U
91-94-1	3,3'-Dichlorobenzidine	220	U
117-81-7	bis(2-ethylhexyl)Phthalate	220	U
56-55-3	Benzo(a)anthracene	220	~~U~~ include RE
218-01-9	Chrysene	220	~~U~~ include RE
117-84-0	Di-n-octylphthalate	220	U
205-99-2	Benzo(b)fluoranthene	220	~~U~~ include RE
207-08-9	Benzo(k)fluoranthene	220	U
50-32-8	Benzo(a)pyrene	220	U
193-39-5	Indeno(1,2,3-cd)pyrene	220	U
53-70-3	Dibenzo(a,h)anthracene	220	U
191-24-2	Benzo(g,h,i)perylene	220	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

1 corrections LM 072110

LM 072110

LM 051310

LM 072110

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS01D -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 LM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-02C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 22 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	78	J
108-95-2	Phenol	420	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	420	U
95-48-7	2-Methylphenol	420	U
108-60-1	2,2'-oxybis(1-Chloropropane)	220	U
98-86-2	Acetophenone	220	U
106-44-5	4-Methylphenol	420	U
621-64-7	N-Nitroso-di-N-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	420	U
91-20-3	Naphthalene	220	~~U~~ exclude RE
106-47-8	4-Chloroaniline	420	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	420	U
91-57-6	2-Methylnaphthalene	220	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	220	U
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	420	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	420	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	~~U~~ exclude RE
99-09-2	3-Nitroaniline	420	U
83-32-9	Acenaphthene	220	~~U~~ exclude RE

FORM I SV 8270C

LM 072110

LM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS01D -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 LM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-02C70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 22 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	420	U
100-02-7	4-Nitrophenol	420	U
121-14-2	2,4-Dinitrotoluene	220	U
132-64-9	Dibenzofuran	220	U
84-66-2	Diethylphthalate	220	U
7005-72-3	4-Chlorophenyl-phenylether	220	U
86-73-7	Fluorene	220	~~U~~ exclude RC
100-01-6	4-Nitroaniline	420	U
534-52-1	4,6-Dinitro-2-methylphenol	420	~~U~~ UJ CCH
86-30-6	N-Nitrosodiphenylamine (1)	220	U
101-55-3	4-Bromophenyl-phenylether	220	~~U~~ ~~UJ CCH~~ U
118-74-1	Hexachlorobenzene	220	U
1912-24-9	Atrazine	220	U
87-86-5	Pentachlorophenol	420	U
85-01-8	Phenanthrene	220	~~U~~ exclude RC
120-12-7	Anthracene	220	~~U~~ exclude RC
86-74-8	Carbazole	220	U
84-74-2	Di-n-butylphthalate	220	U
206-44-0	Fluoranthene	220	~~U~~ exclude RC
129-00-0	Pyrene	220	~~U~~ exclude RC
85-68-7	Butylbenzylphthalate	220	U
91-94-1	3,3'-Dichlorobenzidine	220	U
117-81-7	bis(2-ethylhexyl)Phthalate	220 ~~110~~	~~J~~ UFBL
56-55-3	Benzo(a)anthracene	220	~~U~~ exclude RC
218-01-9	Chrysene	220	~~U~~ exclude RC
117-84-0	Di-n-octylphthalate	220	U
205-99-2	Benzo(b)fluoranthene	220	~~U~~ exclude RC
207-08-9	Benzo(k)fluoranthene	220	U
50-32-8	Benzo(a)pyrene	220	U
193-39-5	Indeno(1,2,3-cd)pyrene	220	U
53-70-3	Dibenzo(a,h)anthracene	220	U
191-24-2	Benzo(g,h,i)perylene	220	U

(1) - Cannot be separated from Diphenylamine

FORM I SV

1 corrections LM 072110 8270C

LM 072110

LM 081310

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS02 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-16 LM 072110

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-16A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 17 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	74	J
108-95-2	Phenol	400	U
111-44-4	Bis(2-chloroethyl)ether	200	U
95-57-8	2-Chlorophenol	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	200	U
98-86-2	Acetophenone	200	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-di-N-propylamine	200	U
67-72-1	Hexachloroethane	200	U
98-95-3	Nitrobenzene	200	U
78-59-1	Isophorone	200	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	Bis(2-chloroethoxy)methane	200	U
120-83-2	2,4-Dichlorophenol	400	U
91-20-3	Naphthalene	200	~~U~~ exclude RE
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	200	U
105-60-2	Caprolactam	200	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	200	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	200	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	400	U
92-52-4	1,1'-Biphenyl	200	U
91-58-7	2-Chloronaphthalene	200	U
88-74-4	2-Nitroaniline	400	U
131-11-3	Dimethylphthalate	200	U
606-20-2	2,6-Dinitrotoluene	200	U
208-96-8	Acenaphthylene	200	~~U~~ exclude RE
99-09-2	3-Nitroaniline	400	U
83-32-9	Acenaphthene	200	~~U~~ exclude RE

FORM I SV 8270C

LM 072110

LM 081310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS02 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-16

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-16A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 17 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	400	U
100-02-7	4-Nitrophenol	400	U
121-14-2	2,4-Dinitrotoluene	200	U
132-64-9	Dibenzofuran	200	U
84-66-2	Diethylphthalate	200	U
7005-72-3	4-Chlorophenyl-phenylether	200	U
86-73-7	Fluorene	200	~~U~~ exclude RE
100-01-6	4-Nitroaniline	400	U
534-52-1	4,6-Dinitro-2-methylphenol	400	U
86-30-6	N-Nitrosodiphenylamine (1)	200	U
101-55-3	4-Bromophenyl-phenylether	200	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	200	U
1912-24-9	Atrazine	200	U
87-86-5	Pentachlorophenol	400	U
85-01-8	Phenanthrene	200	~~U~~ exclude RE
120-12-7	Anthracene	200	~~U~~ exclude RE
86-74-8	Carbazole	200	U
84-74-2	Di-n-butylphthalate	200	U
206-44-0	Fluoranthene	200	~~U~~ exclude RE
129-00-0	Pyrene	200	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	200	U
91-94-1	3,3'-Dichlorobenzidine	200	U
117-81-7	bis(2-ethylhexyl)Phthalate	200	U
56-55-3	Benzo(a)anthracene	200	~~U~~ exclude RE
218-01-9	Chrysene	200	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	200	U
205-99-2	Benzo(b)fluoranthene	200	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	200	U
50-32-8	Benzo(a)pyrene	200	U
193-39-5	Indeno(1,2,3-cd)pyrene	200	U
53-70-3	Dibenzo(a,h)anthracene	200	U
191-24-2	Benzo(g,h,i)perylene	200	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS04-10A

ab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-17

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-17A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 22 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	91	J
108-95-2	Phenol	420	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	420	U
95-48-7	2-Methylphenol	420	U
108-60-1	2,2'-oxybis(1-Chloropropane)	220	U
98-86-2	Acetophenone	220	U
106-44-5	4-Methylphenol	420	U
621-64-7	N-Nitroso-di-N-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	420	U
91-20-3	Naphthalene	220	~~U~~ exclude RE
106-47-8	4-Chloroaniline	420	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	420	U
91-57-6	2-Methylnaphthalene	220	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	220	U
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	420	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	420	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	~~U~~ exclude RE
99-09-2	3-Nitroaniline	420	U
83-32-9	Acenaphthene	220	~~U~~ exclude RE

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS04-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-17

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-17A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 22 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	420	U
100-02-7	4-Nitrophenol	420	U
121-14-2	2,4-Dinitrotoluene	220	U
132-64-9	Dibenzofuran	220	U
84-66-2	Diethylphthalate	220	U
7005-72-3	4-Chlorophenyl-phenylether	220	U
86-73-7	Fluorene	220	~~U~~ exclude RE
100-01-6	4-Nitroaniline	420	U
534-52-1	4,6-Dinitro-2-methylphenol	420	U
86-30-6	N-Nitrosodiphenylamine (1)	220	U
101-55-3	4-Bromophenyl-phenylether	220	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	220	U
1912-24-9	Atrazine	220	U
87-86-5	Pentachlorophenol	420	U
85-01-8	Phenanthrene	220	~~U~~ exclude RE
120-12-7	Anthracene	220	~~U~~ exclude RE
86-74-8	Carbazole	220	U
84-74-2	Di-n-butylphthalate	220	U
206-44-0	Fluoranthene	220	~~U~~ exclude RE
129-00-0	Pyrene	220	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	220	U
91-94-1	3,3'-Dichlorobenzidine	220	U
117-81-7	bis(2-ethylhexyl)Phthalate	200	J
56-55-3	Benzo(a)anthracene	220	~~U~~ exclude RE
218-01-9	Chrysene	220	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	220	U
205-99-2	Benzo(b)fluoranthene	220	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	220	U
50-32-8	Benzo(a)pyrene	220	U
193-39-5	Indeno(1,2,3-cd)pyrene	220	U
53-70-3	Dibenzo(a,h)anthracene	220	U
191-24-2	Benzo(g,h,i)perylene	220	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS05-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-18

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-18A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 16 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	36	J
108-95-2	Phenol	390	U
111-44-4	Bis(2-chloroethyl)ether	200	U
95-57-8	2-Chlorophenol	390	U
95-48-7	2-Methylphenol	390	U
108-60-1	2,2'-oxybis(1-Chloropropane)	200	U
98-86-2	Acetophenone	200	U
106-44-5	4-Methylphenol	390	U
621-64-7	N-Nitroso-di-N-propylamine	200	U
67-72-1	Hexachloroethane	200	U
98-95-3	Nitrobenzene	200	U
78-59-1	Isophorone	200	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	Bis(2-chloroethoxy)methane	200	U
120-83-2	2,4-Dichlorophenol	390	U
91-20-3	Naphthalene	200	~~U~~ Exclude RE
106-47-8	4-Chloroaniline	390	U
87-68-3	Hexachlorobutadiene	200	U
105-60-2	Caprolactam	200	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	200	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	200	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	390	U
92-52-4	1,1'-Biphenyl	200	U
91-58-7	2-Chloronaphthalene	200	U
88-74-4	2-Nitroaniline	390	U
131-11-3	Dimethylphthalate	200	U
606-20-2	2,6-Dinitrotoluene	200	U
208-96-8	Acenaphthylene	200	~~U~~ exclude RE
99-09-2	3-Nitroaniline	390	U
83-32-9	Acenaphthene	200	~~U~~ exclude RE

LM 072110

LM 080310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS05-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-18

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-18A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 16 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	390	U
100-02-7	4-Nitrophenol	390	U
121-14-2	2,4-Dinitrotoluene	200	U
132-64-9	Dibenzofuran	200	U
84-66-2	Diethylphthalate	200	U
7005-72-3	4-Chlorophenyl-phenylether	200	U
86-73-7	Fluorene	200	~~U~~ exclude LE
100-01-6	4-Nitroaniline	390	U
534-52-1	4,6-Dinitro-2-methylphenol	390	U
86-30-6	N-Nitrosodiphenylamine (1)	200	U
101-55-3	4-Bromophenyl-phenylether	200	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	200	U
1912-24-9	Atrazine	200	U
87-86-5	Pentachlorophenol	390	U
85-01-8	Phenanthrene	200	~~U~~ exclude LE
120-12-7	Anthracene	200	~~U~~ exclude LE
86-74-8	Carbazole	200	U
84-74-2	Di-n-butylphthalate	200	U
206-44-0	Fluoranthene	200	~~U~~ exclude LE
129-00-0	Pyrene	200	~~U~~ exclude LE
85-68-7	Butylbenzylphthalate	200	U
91-94-1	3,3'-Dichlorobenzidine	200	U
117-81-7	bis(2-ethylhexyl)Phthalate	200	U
56-55-3	Benzo(a)anthracene	200	~~U~~ exclude LE
218-01-9	Chrysene	200	~~U~~ exclude LE
117-84-0	Di-n-octylphthalate	200	U
205-99-2	Benzo(b)fluoranthene	200	~~U~~ exclude LE
207-08-9	Benzo(k)fluoranthene	200	U
50-32-8	Benzo(a)pyrene	200	U
193-39-5	Indeno(1,2,3-cd)pyrene	200	U
53-70-3	Dibenzo(a,h)anthracene	200	U
191-24-2	Benzo(g,h,i)perylene	200	U

(1) - Cannot be separated from Diphenylamine

LM 081310

LM 072110

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS06-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-19

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-19A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 20 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	170	J
108-95-2	Phenol	410	U
111-44-4	Bis(2-chloroethyl)ether	210	U
95-57-8	2-Chlorophenol	410	U
95-48-7	2-Methylphenol	410	U
108-60-1	2,2'-oxybis(1-Chloropropane)	210	U
98-86-2	Acetophenone	210	U
106-44-5	4-Methylphenol	410	U
621-64-7	N-Nitroso-di-N-propylamine	210	U
67-72-1	Hexachloroethane	210	U
98-95-3	Nitrobenzene	210	U
78-59-1	Isophorone	210	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	Bis(2-chloroethoxy)methane	210	U
120-83-2	2,4-Dichlorophenol	410	U
91-20-3	Naphthalene	210	~~U~~ exclude RE
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	210	U
105-60-2	Caprolactam	210	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	210	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	210	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	410	U
92-52-4	1,1'-Biphenyl	210	U
91-58-7	2-Chloronaphthalene	210	U
88-74-4	2-Nitroaniline	410	U
131-11-3	Dimethylphthalate	210	U
606-20-2	2,6-Dinitrotoluene	210	U
208-96-8	Acenaphthylene	210	~~U~~ exclude RE
99-09-2	3-Nitroaniline	410	U
83-32-9	Acenaphthene	210	~~U~~ exclude RE

WM 05/3/10

WM 07/21/10

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MR02-IR69-SS06 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-19

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-19A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: 20 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	410	U
100-02-7	4-Nitrophenol	410	U
121-14-2	2,4-Dinitrotoluene	210	U
132-64-9	Dibenzofuran	210	U
84-66-2	Diethylphthalate	210	U
7005-72-3	4-Chlorophenyl-phenylether	210	U
86-73-7	Fluorene	210	~~U~~ exclude RE
100-01-6	4-Nitroaniline	410	U
534-52-1	4,6-Dinitro-2-methylphenol	410	U
86-30-6	N-Nitrosodiphenylamine (1)	210	U
101-55-3	4-Bromophenyl-phenylether	210	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	210	U
1912-24-9	Atrazine	210	U
87-86-5	Pentachlorophenol	410	U
85-01-8	Phenanthrene	210	~~U~~ exclude RE
120-12-7	Anthracene	210	~~U~~ exclude RE
86-74-8	Carbazole	210	U
84-74-2	Di-n-butylphthalate	210	U
206-44-0	Fluoranthene	210	~~U~~ exclude RE
129-00-0	Pyrene	210	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	210	U
91-94-1	3,3'-Dichlorobenzidine	210	U
117-81-7	bis(2-ethylhexyl)Phthalate	310	
56-55-3	Benzo(a)anthracene	210	~~U~~ exclude RE
218-01-9	Chrysene	210	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	210	U
205-99-2	Benzo(b)fluoranthene	210	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	210	U
50-32-8	Benzo(a)pyrene	210	U
193-39-5	Indeno(1,2,3-cd)pyrene	210	U
53-70-3	Dibenzo(a,h)anthracene	210	U
191-24-2	Benzo(g,h,i)perylene	210	U

(1) - Cannot be separated from Diphenylamine

LM 051310

LM 072110

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRM SB01-01-02 -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-12

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-12A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 20 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	210	U
108-95-2	Phenol	410	U
111-44-4	Bis(2-chloroethyl)ether	210	U
95-57-8	2-Chlorophenol	410	U
95-48-7	2-Methylphenol	410	U
108-60-1	2,2'-oxybis(1-Chloropropane)	210	U
98-86-2	Acetophenone	210	U
106-44-5	4-Methylphenol	410	U
621-64-7	N-Nitroso-di-N-propylamine	210	U
67-72-1	Hexachloroethane	210	U
98-95-3	Nitrobenzene	210	U
78-59-1	Isophorone	210	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	Bis(2-chloroethoxy)methane	210	U
120-83-2	2,4-Dichlorophenol	410	U
91-20-3	Naphthalene	210	~~U~~ exclude KE
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	210	U
105-60-2	Caprolactam	210	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	210	~~U~~ exclude KE
77-47-4	Hexachlorocyclopentadiene	210	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	410	U
92-52-4	1,1'-Biphenyl	210	U
91-58-7	2-Chloronaphthalene	210	U
88-74-4	2-Nitroaniline	410	U
131-11-3	Dimethylphthalate	210	U
606-20-2	2,6-Dinitrotoluene	210	U
208-96-8	Acenaphthylene	210	~~U~~ exclude KE
99-09-2	3-Nitroaniline	410	U
83-32-9	Acenaphthene	210	~~U~~ exclude KE

FORM I SV 8270C

WM 072110

WM 083110

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRIS SB01-01-02-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-12 LM 072110

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-12A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 20 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	410	U
100-02-7	4-Nitrophenol	410	U
121-14-2	2,4-Dinitrotoluene	210	U
132-64-9	Dibenzofuran	210	U
84-66-2	Diethylphthalate	210	U
7005-72-3	4-Chlorophenyl-phenylether	210	U
86-73-7	Fluorene	210	~~U~~ exclude RE
100-01-6	4-Nitroaniline	410	U
534-52-1	4,6-Dinitro-2-methylphenol	410	U
86-30-6	N-Nitrosodiphenylamine (1)	210	U
101-55-3	4-Bromophenyl-phenylether	210	U
118-74-1	Hexachlorobenzene	210	U
1912-24-9	Atrazine	210	U
87-86-5	Pentachlorophenol	410	U
85-01-8	Phenanthrene	210	~~U~~ exclude RE
120-12-7	Anthracene	210	~~U~~ exclude RE
86-74-8	Carbazole	210	U
84-74-2	Di-n-butylphthalate	210	U
206-44-0	Fluoranthene	210	~~U~~ exclude RE
129-00-0	Pyrene	210	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	210	U
91-94-1	3,3'-Dichlorobenzidine	210	U
117-81-7	bis(2-ethylhexyl)Phthalate	210	U
56-55-3	Benzo(a)anthracene	210	~~U~~ exclude RE
218-01-9	Chrysene	210	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	210	U
205-99-2	Benzo(b)fluoranthene	210	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	210	U
50-32-8	Benzo(a)pyrene	210	U
193-39-5	Indeno(1,2,3-cd)pyrene	210	U
53-70-3	Dibenzo(a,h)anthracene	210	U
191-24-2	Benzo(g,h,i)perylene	210	U

(1) - Cannot be separated from Diphenylamine

LM 051310

LM 072110

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB01D-01-02-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-13

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-13A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 16 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	200	U
108-95-2	Phenol	390	U
111-44-4	Bis(2-chloroethyl)ether	200	U
95-57-8	2-Chlorophenol	390	U
95-48-7	2-Methylphenol	390	U
108-60-1	2,2'-oxybis(1-Chloropropane)	200	U
98-86-2	Acetophenone	200	U
106-44-5	4-Methylphenol	390	U
621-64-7	N-Nitroso-di-N-propylamine	200	U
67-72-1	Hexachloroethane	200	U
98-95-3	Nitrobenzene	200	U
78-59-1	Isophorone	200	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	Bis(2-chloroethoxy)methane	200	U
120-83-2	2,4-Dichlorophenol	390	U
91-20-3	Naphthalene	200	~~U~~ exclude RE
106-47-8	4-Chloroaniline	390	U
87-68-3	Hexachlorobutadiene	200	U
105-60-2	Caprolactam	200	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	200	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	200	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	390	U
92-52-4	1,1'-Biphenyl	200	U
91-58-7	2-Chloronaphthalene	200	U
88-74-4	2-Nitroaniline	390	U
131-11-3	Dimethylphthalate	200	U
606-20-2	2,6-Dinitrotoluene	200	U
208-96-8	Acenaphthylene	200	~~U~~ exclude RE
99-09-2	3-Nitroaniline	390	U
83-32-9	Acenaphthene	200	~~U~~ exclude RE

FORM I SV 8270C

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB01D-01-02-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-13

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-13A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 16 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	390	U
100-02-7	4-Nitrophenol	390	U
121-14-2	2,4-Dinitrotoluene	200	U
132-64-9	Dibenzofuran	200	U
84-66-2	Diethylphthalate	200	U
7005-72-3	4-Chlorophenyl-phenylether	200	U
86-73-7	Fluorene	200	~~U~~ exclude RE
100-01-6	4-Nitroaniline	390	U
534-52-1	4,6-Dinitro-2-methylphenol	390	U
86-30-6	N-Nitrosodiphenylamine (1)	200	U
101-55-3	4-Bromophenyl-phenylether	200	U
118-74-1	Hexachlorobenzene	200	U
1912-24-9	Atrazine	200	U
87-86-5	Pentachlorophenol	390	U
85-01-8	Phenanthrene	200	~~U~~ exclude RE
120-12-7	Anthracene	200	~~U~~ exclude RE
86-74-8	Carbazole	200	U
84-74-2	Di-n-butylphthalate	200	U
206-44-0	Fluoranthene	200	~~U~~ exclude RE
129-00-0	Pyrene	200	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	200	U
91-94-1	3,3'-Dichlorobenzidine	200	U
117-81-7	bis(2-ethylhexyl)Phthalate	200	U
56-55-3	Benzo(a)anthracene	200	~~U~~ exclude RE
218-01-9	Chrysene	200	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	200	U
205-99-2	Benzo(b)fluoranthene	200	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	200	U
50-32-8	Benzo(a)pyrene	200	U
193-39-5	Indeno(1,2,3-cd)pyrene	200	U
53-70-3	Dibenzo(a,h)anthracene	200	U
191-24-2	Benzo(g,h,i)perylene	200	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB04-06-07-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-09A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 22 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	220	U
108-95-2	Phenol	420	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	420	U
95-48-7	2-Methylphenol	420	U
108-60-1	2,2'-oxybis(1-Chloropropane)	220	U
98-86-2	Acetophenone	220	U
106-44-5	4-Methylphenol	420	U
621-64-7	N-Nitroso-di-N-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	420	U
91-20-3	Naphthalene	220	~~U~~ exclude RE
106-47-8	4-Chloroaniline	420	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	61	J
59-50-7	4-Chloro-3-methylphenol	420	U
91-57-6	2-Methylnaphthalene	220	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	220	U
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	420	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	420	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	~~U~~ exclude RE
99-09-2	3-Nitroaniline	420	U
83-32-9	Acenaphthene	220	~~U~~ exclude RE

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

1109 SB04-06-07-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-09

LM 072110

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-09A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 22 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	420	U
100-02-7	4-Nitrophenol	420	U
121-14-2	2,4-Dinitrotoluene	220	U
132-64-9	Dibenzofuran	220	U
84-66-2	Diethylphthalate	220	U
7005-72-3	4-Chlorophenyl-phenylether	220	U
86-73-7	Fluorene	220	~~U~~ exclude RE
100-01-6	4-Nitroaniline	420	U
534-52-1	4,6-Dinitro-2-methylphenol	420	U
86-30-6	N-Nitrosodiphenylamine (1)	220	U
101-55-3	4-Bromophenyl-phenylether	220	U
118-74-1	Hexachlorobenzene	220	U
1912-24-9	Atrazine	220	U
87-86-5	Pentachlorophenol	420	U
85-01-8	Phenanthrene	220	~~U~~ exclude RE
120-12-7	Anthracene	220	~~U~~ exclude RE
86-74-8	Carbazole	220	U
84-74-2	Di-n-butylphthalate	220	U
206-44-0	Fluoranthene	220	~~U~~ exclude RE
129-00-0	Pyrene	220	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	220	U
91-94-1	3,3'-Dichlorobenzidine	220	U
117-81-7	bis(2-ethylhexyl)Phthalate	220	U
56-55-3	Benzo(a)anthracene	220	~~U~~ exclude RE
218-01-9	Chrysene	220	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	220	U
205-99-2	Benzo(b)fluoranthene	220	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	220	U
50-32-8	Benzo(a)pyrene	220	U
193-39-5	Indeno(1,2,3-cd)pyrene	220	U
53-70-3	Dibenzo(a,h)anthracene	220	U
191-24-2	Benzo(g,h,i)perylene	220	U

(1) - Cannot be separated from Diphenylamine

LM 031310

LM 072110

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRM SB05-06-07-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103 UM 072110

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-10A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 31 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	250	U
108-95-2	Phenol	480	U
111-44-4	Bis(2-chloroethyl)ether	250	U
95-57-8	2-Chlorophenol	480	U
95-48-7	2-Methylphenol	480	U
108-60-1	2,2'-oxybis(1-Chloropropane)	250	U
98-86-2	Acetophenone	250	U
106-44-5	4-Methylphenol	480	U
621-64-7	N-Nitroso-di-N-propylamine	250	U
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	480	U
105-67-9	2,4-Dimethylphenol	480	U
111-91-1	Bis(2-chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	480	U
91-20-3	Naphthalene	250	~~U~~ exclude RE
106-47-8	4-Chloroaniline	480	U
87-68-3	Hexachlorobutadiene	250	U
105-60-2	Caprolactam	150	J
59-50-7	4-Chloro-3-methylphenol	480	U
91-57-6	2-Methylnaphthalene	250	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	250	U
88-06-2	2,4,6-Trichlorophenol	480	U
95-95-4	2,4,5-Trichlorophenol	480	U
92-52-4	1,1'-Biphenyl	250	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	480	U
131-11-3	Dimethylphthalate	250	U
606-20-2	2,6-Dinitrotoluene	250	U
208-96-8	Acenaphthylene	250	~~U~~ exclude RE
99-09-2	3-Nitroaniline	480	U
83-32-9	Acenaphthene	250	~~U~~ exclude RE

UM 081310

UM 072110

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRON SB05-06-07 -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-10 WM 07/2/10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-10A70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 31 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	480	U
100-02-7	4-Nitrophenol	480	U
121-14-2	2,4-Dinitrotoluene	250	U
132-64-9	Dibenzofuran	250	U
84-66-2	Diethylphthalate	250	U
7005-72-3	4-Chlorophenyl-phenylether	250	U
86-73-7	Fluorene	250	~~U~~ exclude RE
100-01-6	4-Nitroaniline	480	U
534-52-1	4,6-Dinitro-2-methylphenol	480	U
86-30-6	N-Nitrosodiphenylamine (1)	250	U
101-55-3	4-Bromophenyl-phenylether	250	U
118-74-1	Hexachlorobenzene	250	U
1912-24-9	Atrazine	250	U
87-86-5	Pentachlorophenol	480	U
85-01-8	Phenanthrene	250	~~U~~ exclude RE
120-12-7	Anthracene	250	~~U~~ exclude RE
86-74-8	Carbazole	250	U
84-74-2	Di-n-butylphthalate	250	U
206-44-0	Fluoranthene	250	~~U~~ exclude RE
129-00-0	Pyrene	250	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	250	U
91-94-1	3,3'-Dichlorobenzidine	250	U
117-81-7	bis(2-ethylhexyl)Phthalate	540	
56-55-3	Benzo(a)anthracene	250	~~U~~ exclude RE
218-01-9	Chrysene	250	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	250	U
205-99-2	Benzo(b)fluoranthene	250	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	250	U
50-32-8	Benzo(a)pyrene	250	U
193-39-5	Indeno(1,2,3-cd)pyrene	250	U
53-70-3	Dibenzo(a,h)anthracene	250	U
191-24-2	Benzo(g,h,i)perylene	250	U

(1) - Cannot be separated from Diphenylamine

WM 08/23/10

WM 07/2/10

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB06-06-07 -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-11J

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-11JA70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 23 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	220	U
108-95-2	Phenol	430	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	430	U
95-48-7	2-Methylphenol	430	U
108-60-1	2,2'-oxybis(1-Chloropropane)	220	U
98-86-2	Acetophenone	220	U
106-44-5	4-Methylphenol	430	U
621-64-7	N-Nitroso-di-N-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	430	U
105-67-9	2,4-Dimethylphenol	430	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	430	U
91-20-3	Naphthalene	220	~~U~~ exclude RE
106-47-8	4-Chloroaniline	430	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	430	U
91-57-6	2-Methylnaphthalene	220	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	220	U
88-06-2	2,4,6-Trichlorophenol	430	U
95-95-4	2,4,5-Trichlorophenol	430	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	430	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	~~U~~ exclude RE
99-09-2	3-Nitroaniline	430	U
83-32-9	Acenaphthene	220	~~U~~ exclude RE

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69 SB06-06-07-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003103

Matrix: (soil/water) SOIL Lab Sample ID: 1003103-11J WM 072110

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003103-11JA70

Level: (low/med) LOW Date Received: 03/12/10

% Moisture: 23 decanted: (Y/N) N Date Extracted: 03/18/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	430	U
100-02-7	4-Nitrophenol	430	U
121-14-2	2,4-Dinitrotoluene	220	U
132-64-9	Dibenzofuran	220	U
84-66-2	Diethylphthalate	220	U
7005-72-3	4-Chlorophenyl-phenylether	220	U
86-73-7	Fluorene	220	~~U~~ exclude RE
100-01-6	4-Nitroaniline	430	U
534-52-1	4,6-Dinitro-2-methylphenol	430	U
86-30-6	N-Nitrosodiphenylamine (1)	220	U
101-55-3	4-Bromophenyl-phenylether	220	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	220	U
1912-24-9	Atrazine	220	U
87-86-5	Pentachlorophenol	430	U
85-01-8	Phenanthrene	220	~~U~~ exclude RE
120-12-7	Anthracene	220	~~U~~ exclude RE
86-74-8	Carbazole	220	U
84-74-2	Di-n-butylphthalate	220	U
206-44-0	Fluoranthene	220	~~U~~ exclude RE
129-00-0	Pyrene	220	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	220	U
91-94-1	3,3'-Dichlorobenzidine	220	U
117-81-7	bis(2-ethylhexyl)Phthalate	220	U
56-55-3	Benzo(a)anthracene	220	~~U~~ exclude RE
218-01-9	Chrysene	220	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	220	U
205-99-2	Benzo(b)fluoranthene	220	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	220	U
50-32-8	Benzo(a)pyrene	220	U
193-39-5	Indeno(1,2,3-cd)pyrene	220	U
53-70-3	Dibenzo(a,h)anthracene	220	U
191-24-2	Benzo(g,h,i)perylene	220	U

(1) - Cannot be separated from Diphenylamine

WM 081310

WM 072110

DataQual

Environmental Services, LLC

CH2M HILL
5700 Cleveland Street
Suite 101
Virginia Beach, VA 23462

July 30, 2010
SDG# 1003136, CompuChem
MCB Camp Lejeune, CTO-81

Dear Ms. Buckley,

The following Data Validation report is provided as requested for the parameters noted in the table below for SDG # 1003136. The data validation was performed in accordance with the SW846 Method 8260B for volatiles, 8270C and 8270C-SIM for semivolatiles and PAH, 8081A for pesticides, 8082 for PCBs and 6010B/7470A/7471A for metals and mercury and good professional judgment. Also used in the validation of these samples were The National Functional Guidelines for Organic Data Review (June, 2008) and the National Functional Guidelines for Inorganic Data Review (October, 2004), as applicable. All areas of concern are discussed in the body of the report and a summary of data qualifications is provided.

Sample ID	Lab ID	Matrix	VOA	SVOA	LL PAH	Pest	PCBs	Metals
IR69-EB01-031410-GW	1003136-01	water	X	X	X	X	X	X
IR69-EB01-031510-GW	1003136-12	water	X	X	X	X	X	X
IR69-EB01-031510-SD	1003136-11	water	X	X	X	X	X	X
IR69-EB01-031610-GW	1003136-16	water	X	X	X	X	X	X
IR69-EB01-031610-SB	1003136-09	water	X	X	X	X	X	X
IR69-GW04DW-10A	1003136-02	water	X	X	X	X	X	X
IR69-GW04IW-10A	1003136-13	water	X	X	X	X	X	X
IR69-GW15DW-10A	1003136-07	water	X	X	X	X	X	X
IR69-GW19IW-10A	1003136-14	water	X	X	X	X	X	X
IR69-GW19UW-10A	1003136-15	water	X	X	X	X	X	X
IR69-GW26DW-10A	1003136-18	water	X	X	X	X	X	X
IR69-GW26IW-10A	1003136-17	water	X	X	X	X	X	X
IR69-SW01-10A	1003136-03	water	X	X	X	X	X	X
IR69-SW01D-10A	1003136-04	water	X	X	X	X	X	X
IR69-SW02-10A	1003136-08	water	X	X	X	X	X	X
IR69-SW03-10A	1003136-10	water	X	X	X	X	X	X
IR69-TB01-031310	1003136-05	water	X					
IR69-TB01-031710	1003136-06	water	X					
IR69-TB01-031910	1003136-19	water	X					
IR69-SW02-10A MS	1003136-08MS	water	X	X		X	X	X
IR69-SW02-10A MSD	1003136-08MSD	water	X	X		X	X	X

The following quality control samples were provided with this SDG: sample IR69-SW01D-10A-field duplicate of sample IR69-SW01-10A; samples IR69-EB01-031410-GW, IR69-EB01-031510-GW, IR69-EB01-031510-SD, IR69-EB01-031610-GW and IR69-EB01-031610-SB-equipment blanks; and samples IR69-TB01-031310, IR69-TB01-031710 and IR69-TB01-031910-trip blanks.

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The samples were evaluated based on the following criteria:

- Data Completeness *
- Technical Holding Times *
- GC/MS Tunes *
- GC Performance *
- Initial/Continuing Calibrations
- CRI Standards
- Interference Check Sample *
- Blanks
- Internal Standards *
- Surrogates *
- Laboratory Control Samples *
- Matrix Spike Recoveries
- Matrix Duplicate RPDs *
- Post Digestion Spike Recoveries *
- Serial Dilutions
- Field Duplicates
- Identification/Quantitation
- Reporting Limits *
- Tentatively Identified Compounds NA

* - indicates that no qualifications were required based on this criteria

Overall Evaluation of Data/Potential Usability Issues

A summary of qualifications applied to the sample results are noted below for the fractions validated. Specific details regarding qualification of the data are addressed in the Specific Evaluation section of this narrative. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte the validator has chosen the qualifier that best indicates possible bias in the results and flagged the data accordingly. However, information regarding all quality control issues is provided in the body of the report and on the qualification summary page. Please note that when a compound or analyte is flagged due to blank contamination the BL qualifier code takes precedence over all other qualifier codes except a code that explains rejected data.

VOA

Several sample compounds were qualified as estimated based on high %Ds which were exhibited in the continuing calibrations. Qualifications were also required based on low RRF values in the initial calibrations.

Blank contamination was exhibited in the method and/or QC blanks that resulted in qualifications to the data.

Dilutions were required to obtain results within the calibration range.

SVOA

Several sample compounds were qualified as estimated based on high %Ds which were exhibited in the continuing calibrations.

Blank contamination was exhibited in the method and/or QC blanks that resulted in qualifications to the data.

Pesticides/PCBs

Reported positive results exhibited column quantitation %Ds greater than 40%. These P flagged results were qualified as estimated J.

Metals

The associated CRI standards exhibited some non-compliant recoveries. Qualifications were required.

Qualifications were required in the samples due to laboratory and field QC blank contamination.

One analyte required qualification in the samples due to non-compliant matrix spike recoveries.

Two analytes required qualification in the samples due to non-compliant serial dilution results.

The field duplicate pair required qualification as estimated for one analyte.

All results reported between the MDL and the RL (B flagged by the laboratory) were qualified as estimated J.

Specific Evaluation of Data

Data Completeness

The SDG was received complete and intact. Resubmissions were not required. Please note: All field sample and QC blank IDs were missing the first four (IR69) and/or the

last four (-10A) characters. The characters were added to the Form 1s in the DV reports by the data validator.

Technical Holding Times

According to chain of custody records, sampling was performed on 3/14-17/10 and samples were received at the laboratory 3/17-19/10. All sample preparation and analysis was performed within method holding time requirements.

Initial/Continuing Calibration

VOA

Calibration standards exhibited %Ds and RRFs that were non-compliant. A summary of these non-compliances and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	RRF, %RSD, %D	Samples	Q Flag	Q Code
IC 3/23/10	acetone 2-butaone	0.0308 0.0438	all samples	J/R	ICL
CC 3/25/10	carbon disulfide	-22.31	IR69-EB01-031410-GW, IR69-GW04DW-10A, IR69-SW01-10A, IR69-SW01D-10A, IR69-TB01-031310, IR69-TB01-031710, IR69-GW15DW-10A, IR69-SW02-10A, IR69-SW03-10A, IR69-EB01-031510-SD, IR69-GW04IW-10A, IR69-GW19UW-10A	J/UJ	CCL
CC 3/26/10	dichlorodifluoromethane chloroethane carbon disulfide cyclohexane methylcyclohexane	-23.07 -28.00 -22.19 -25.54 -26.40	IR69-EB01-031510-GW, IR69-EB01-031610-SB, IR69-GW19IW-10A, IR69-EB01-031610-GW, IR69-GW26IW-10A, IR69-GW26DW-10A	J/UJ	CCL
CC 3/26/10	dichlorodifluoromethane 1,2-dibromo-3-chloropropane	-23.19 -21.35	IR69-TB01-031910	J/UJ	CCL

SVOA

Calibration standards exhibited %Ds that were non-compliant. A summary of these non-compliances and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	RRF, %RSD, %D	Samples	Q Flag	Q Code
CC 3/29/10	caprolactam	22.08	IR69-GW04DW-10A, IR69-SW01D-10A	J UJ	CCH
CC 3/30/10	3,3'-dichlorobenzidine	-27.86	IR69-EB01-031410-GW, IR69-SW01-10A	J UJ	CCL
CC 4/5/10	4-bromophenyl-phenylether	31.22	IR69-SW02-10A, IR69-GW15DW-10A, IR69-EB01-031610-SB, IR69-SW03-10A, IR69-EB01-031510-SD, IR69-EB01-031510-GW, IR69-GW04IW-10A, IR69-GW19IW-10A, IR69-GW19UW-10A, IR69-EB01-031610-GW	J UJ	CCH
CC 4/8/10	4,6-dinitro-2-methylphenol 4-bromophenyl-phenylether	21.65 43.49	IR69-GW26IW-10A, IR69-GW26DW-10A	J UJ	CCH
	atrazine	-31.28		J UJ	CCL

CRI Standards

Metals

The CRI standard associated with all samples except IR69-EB01-031410-GW exhibited a high recovery for selenium (144.8%). All positive results for selenium, up to a concentration of 2X the RL, required qualification as estimated J with a qualifier code of OT. Please note however, that the analyte selenium was flagged as estimated in all field samples due to very low matrix spike recoveries. The final qualifier code for Se was MSL to more clearly indicate the potential for low bias in the field samples.

The CRI standard associated with one of the rinse blanks exhibited a high recovery for thallium (151%). The reported positive result in sample IR69-EB01-031410-GW was qualified as estimated J with a qualifier code of OT.

Blanks

VOA

The associated method and/or QC blanks exhibited contamination as noted in the following table. Compounds for which there was no action required, are not included in the following table.

Blank ID	Compound	Concentration	Reporting Limit
VBLKHZ	acetone	0.72J ug/L	2.5 ug/L
	methylene chloride	0.029J	0.5
VBLKHB	acetone	1.6J	2.5
	methylene chloride	0.29J	0.5
IR69-EB01-031410-GW	acetone	2.8	2.5
	methylene chloride	6.3	0.5
	2-butanone	1.5J	2.5
	chloroform	1.3	0.5
	bromodichloromethane	0092J	0.5
	toluene	1.6	0.5
	m,p-xylene	0.084J	0.5
	o-xylene	0.05J	0.5
	xylene (total)	0.09J	0.5
IR69-EB01-031510-GW	acetone	2.8	2.5
	methylene chloride	1.2	0.5
	chloroform	2.2	0.5
	benzene	0.041J	0.5
	toluene	1.7	0.5
	o-xylene	0.040J	0.5
	xylene (total)	0.040J	0.5
IR69-EB01-031610-GW	acetone	6.8	2.5
	methylene chloride	6.7	0.5
	2-butanone	2.5	2.5
	chloroform	1.3	0.5
	benzene	0.1J	0.5
	bromodichloromethane	0.1J	0.5
	toluene	1.7	0.5
	ethylbenzene	0.067J	0.5
	m,p-xylene	0.14J	0.5
	xylene (total)	0.15J	0.5
IR69-EB01-031910	acetone	7.8	2.5
	methylene chloride	1.4	0.5
	2-butanone	1.8J	2.5
	chloroform	2.4	0.5
	benzene	0.17J	0.5
	toluene	2.1	0.5
	ethylbenzene	0.076J	0.5
	m,p-xylene	0.16J	0.5
	o-xylene	0.068	0.5
	xylene (total)	0.24	0.5

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Q Code
IR69-SW01-10A, IR69-SW01D-10A, IR69-SW02-10A	acetone	U at RL	MBL
IR69-GW19IW-10A, IR69-GW19UW-10A, IR69-GW26IW-10A, IR69-SW03-10A	methylene chloride	U at RL	MBL
IR69-GW04DW-10A, IR69-GW04IW-10A, IR69-GW15DW-10A, IR69-GW19IW-10A, IR69-GW19UW-10A, IR69-GW26DW-10A, IR69-GW26IW-10A, IR69-SW03-10A	acetone	U	FBL
IR69-GW04DW-10A, IR69-GW04IW-10A, IR69-GW26DW-10A	methylene chloride	U	FBL
IR69-GW04DW-10A, IR69-GW26DW-10A	2-butanone	U at RL	FBL
IR69-GW04DW-10A, IR69-GW26DW-10A	bromodichloromethane	U at RL	FBL
IR69-GW04DW-10A	toluene	U at RL	FBL
IR69-GW04DW-10A	ethylbenzene	U at RL	FBL
IR69-GW04IW-10A	2-butanone	U at RL	FBL
IR69-GW04IW-10A, IR69-GW15DW-10A, IR69-GW19IW-10A, IR69-GW19UW-10A, IR69-GW26DW-10A, IR69-GW26IW-10A, IR69-SW01-10A, IR69-SW01D-10A, IR69-SW03-10A	toluene	U at RL	FBL
IR69-GW04IW-10A, IR69-GW26DW-10A	ethylbenzene	U at RL	FBL
IR69-GW04IW-10A	m,p-xylene	U at RL	FBL
IR69-GW04IW-10A, IR69-GW19UW-10A	o-xylene	U at RL	FBL
IR69-GW04IW-10A, IR69-GW19UW-10A	xylene (total)	U at RL	FBL
IR69-GW19IW-10A, IR69-GW26DW-10A	benzene	U at RL	FBL
IR69-SW02-10A	chloroform	U at RL	FBL
IR69-GW26IW-10A	chloroform	U	FBL

SVOA

The associated method and/or QC blanks exhibited contamination as noted in the following table. Compounds for which there was no action required, are not included in the following table.

Blank ID	Compound	Concentration	Reporting Limit	Action Level
IR69-EB01-031410-GW-SIM	naphthalene	0.072J ug/L	0.20 ug/L	< RL
IR69-EB01-031510-GW-SIM	naphthalene	0.16J	0.2	< RL
	2-methylnaphthalene	0.069J	0.2	< RL
	acenaphthylene	0.090J	0.2	< RL
	phenanthrene	0.16J	0.2	< RL
	fluoranthene	0.15J	0.2	< RL
	pyrene	0.16J	0.2	< RL
	chrysene	0.16J	0.2	< RL
	benzo(b)fluoranthene	0.15J	0.2	< RL
	benzo(k)fluoranthene	0.17J	0.2	< RL
	benzo(a)pyrene	0.15J	0.2	< RL
	indeno(1,2,3-cd)pyrene	0.14J	0.2	< RL
	dibenzo(a,h)anthracene	0.14J	0.2	< RL
	benzo(g,h,i)perylene	0.15J	0.2	< RL
IR69-EB01-031610-GW-SIM	naphthalene	0.078J	0.2	< RL

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Q Code
PAH SIM: IR69-GW04IW-10A, IR69-GW19UW-10A	naphthalene	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	2-methylnaphthalene	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	acenaphthylene	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	phenanthrene	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	fluoranthene	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	pyrene	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	chrysene	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	benzo(b)fluoranthene	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	benzo(k)fluoranthene	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	benzo(a)pyrene	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	indeno(1,2,3-cd)pyrene	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	dibenzo(a,h)anthracene	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	benzo(g,h,i)perylene	U at RL	EBL

Metals

Contamination was noted in associated blanks and qualification was required in the associated samples. Required action is noted in the following tables.

Blank ID	Analyte	Concentration	Action Level	Q Flag	Q Code
PBW	aluminum	51.583B ug/L	RL	U	MBL
	beryllium	1.110B ug/L	RL	U	MBL
CCB	magnesium	17.5B ug/L	RL	U	MBL
FB01-031910	zinc	0.97B ug/L	RL	U	EBL

Associated samples and required qualifications are noted in the following table.

Sample ID	Analyte	Q Flag	Q Code
IR69-GW19UW-10A, IR69-GW26IW-10A, IR69-SW01-10A, IR69-SW01D-10A, IR69-SW02-10A	aluminum	U at RL	MBL
IR69-GW04IW-10A, IR69-GW26IW-10A, IR69-SW01-10A, IR69-SW03-10A	beryllium	U at RL	MBL
IR69-SW02-10A	magnesium	U at RL	MBL
all field samples >MDL <RL	zinc	U at RL	EBL

Matrix Spikes

Metals

The matrix spike analyses exhibited a non-compliant %R for one analyte. Specific action is noted in the following table.

MS/MSD	Analyte	Samples Affected	%R	Q Flag	Q Code
IR69-SW02-10A	selenium	all field samples	13.4-15	J/UJ	MSL

Serial Dilution

Metals

The serial dilution analysis exhibited a non-compliant %D for two analytes. Specific action is noted in the following table.

SD	Analyte	Samples Affected	%D	Q Flag	Q Code
IR69-SW02-10A	barium	all field samples	10.2	J UJ	SD
	potassium		20.2		

Field Duplicates

Metals

The field duplicate pair of samples IR69-SW01-10A and IR69-SW01D-10A exhibited a non-compliant RPD for manganese (51%). The reported positive results for manganese in the field duplicate pair were qualified as estimated J with a FD qualifier code.

Identification/Quantitation

VOA

Samples IR69-GW04IW-10A and IR69-GW19UW-10A required a dilution to obtain results within the calibration range. All E-flagged results are excluded in favor of the corresponding D-flagged results from the dilution analysis. All results except corresponding D-flagged results in the dilution analysis are excluded in favor of the results reported from the undiluted analysis.

Pesticides/Aroclors

All positive results reported with a P flag to indicate column quantitation %Ds greater than 40% are qualified as estimated J with a qualifier code of 2C.

Metals

All results reported between the IDL and the RL (B flagged by laboratory) were qualified as estimated J. No qualification code was required.

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A summary of qualifications required is provided on the following page. Please do not hesitate to contact DataQual ES with any questions regarding this validation report.

Sincerely,

Laura Maschhoff
President

Jacqueline Cleveland
Vice-President

Summary of Data Qualifications

VOA

Sample ID	Compound	Results	Q-Flag	Q Code
all samples	acetone 2-butaone	- -	J R	ICL
IR69-EB01-031410-GW, IR69-GW04DW-10A, IR69-SW01-10A, IR69-SW01D-10A, IR69-TB01-031310, IR69-TB01-031710, IR69-GW15DW-10A, IR69-SW02-10A, IR69-SW03-10A, IR69-EB01-031510-SD, IR69-GW04IW-10A, IR69-GW19UW-10A	carbon disulfide	- -	J UJ	CCL
IR69-EB01-031510-GW, IR69-FB01-031610-SB, IR69-GW19IW-10A, IR69-EB01-031610-GW, IR69-GW26IW-10A, IR69-GW26DW-10A	dichlorodifluoromethane chloroethane carbon disulfide cyclohexane methylcyclohexane	- -	J UJ	CCL
IR69-TB01-031910	dichlorodifluoromethane 1,2-dibromo-3-chloropropane	- -	J UJ	CCL
IR69-SW01-10A, IR69-SW01D-10A, IR69-SW02-10A	acetone	-	U at RL	MBL
IR69-GW19IW-10A, IR69-GW19UW-10A, IR69-GW26IW-10A, IR69-SW03-10A	methylene chloride	-	U at RL	MBL
IR69-GW04DW-10A, IR69-GW04IW-10A, IR69-GW15DW-10A, IR69-GW19IW-10A, IR69-GW19UW-10A, IR69-GW26DW-10A, IR69-GW26IW-10A, IR69-SW03-10A	acetone	-	U	FBL
IR69-GW04DW-10A, IR69-GW04IW-10A, IR69-GW26DW-10A	methylene chloride	-	U	FBL
IR69-GW04DW-10A, IR69-GW26DW-10A	2-butanone	-	U at RL	FBL
IR69-GW04DW-10A, IR69-GW26DW-10A	bromodichloromethane	-	U at RL	FBL
IR69-GW04DW-10A	toluene	-	U at RL	FBL
IR69-GW04DW-10A	ethylbenzene	-	U at RL	FBL
IR69-GW04IW-10A	2-butanone	-	U at RL	FBL
IR69-GW04IW-10A, IR69-GW15DW-10A, IR69-GW19IW-10A, IR69-GW19UW-10A, IR69-GW26DW-10A, IR69-GW26IW-10A, IR69-SW01-10A, IR69-SW01D-10A, IR69-SW03-10A	toluene	-	U at RL	FBL
IR69-GW04IW-10A, IR69-GW26DW-10A	ethylbenzene	-	U at RL	FBL
IR69-GW04IW-10A	m,p-xylene	-	U at RL	FBL
IR69-GW04IW-10A, IR69-GW19UW-10A	o-xylene	-	U at RL	FBL
IR69-GW04IW-10A, IR69-GW19UW-10A	xylene (total)	-	U at RL	FBL
IR69-GW19IW-10A, IR69-GW26DW-10A	benzene	-	U at RL	FBL
IR69-SW02-10A	chloroform	-	U at RL	FBL
IR69-GW26IW-10A	chloroform	-	U	FBL
IR69-GW04IW-10A, IR69-GW19UW-10A	all E-flagged compounds	- -	exclude	DL
IR69-GW04IW-10ADL, IR69-GW19UW-10ADL	all except corresponding D-flagged compounds	- -	exclude	DL

Summary of Data Qualifications

SVOA

Sample ID	Compound	Results	Q-Flag	Q Code
IR69-GW04DW-10A, IR69-SW01D-10A	caprolactam	- -	J UJ	CCH
IR69-EB01-031410-GW, IR69-SW01-10A	3,3'-dichlorobenzidine	- -	J UJ	CCL
IR69-SW02-10A, IR69-GW15DW-10A, IR69-EB01-031610-SB, IR69-SW03-10A, IR69-EB01-031510-SD, IR69-EB01-031510-GW, IR69-GW04IW-10A, IR69-GW19IW-10A, IR69-GW19UW-10A, IR69-EB01-031610-GW	4-bromophenyl-phenylether	- -	J UJ	CCH
IR69-GW26IW-10A, IR69-GW26DW-10A	4,6-dinitro-2-methylphenol 4-bromophenyl-phenylether	- -	J UJ	CCH
IR69-GW26IW-10A, IR69-GW26DW-10A	atrazine	- -	J UJ	CCL
PAH SIM: IR69-GW04IW-10A, IR69-GW19UW-10A	naphthalene	-	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	2-methylnaphthalene	-	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	acenaphthylene	-	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	phenanthrene	-	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	fluoranthene	-	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	pyrene	-	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	chrysene	-	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	benzo(b)fluoranthene	-	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	benzo(k)fluoranthene	-	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	benzo(a)pyrene	-	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	indeno(1,2,3-cd)pyrene	-	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	dibenzo(a,h)anthracene	-	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	benzo(g,h,i)perylene	-	U at RL	EBL

Pesticides/PCBs

Sample ID	Compound	Results	Q-Flag	Q Code
all samples	all compounds	- P	J	2C

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Summary of Data Qualifications

Metals

Sample ID	Analyte	Results	Q-Flag	Q Code
all samples except IR69-EB01-031410-GW	selenium	· up to 2X RL	J	OT*
IR69-EB01-031410-GW	thallium	·	J	OT
IR69-GW19UW-10A, IR69-GW26IW-10A, IR69-SW01-10A, IR69-SW01D-10A, IR69-SW02-10A	aluminum	·B	U at RL	MBI
IR69-GW04IW-10A, IR69-GW26IW-10A, IR69-SW01-10A, IR69-SW03-10A	beryllium	·B	U at RL	MBI
IR69-SW02-10A	magnesium	·B	U at RL	MBI
all field samples ·MDL · RL	zinc	·B	U at RL	FBI
all field samples	selenium	· -	J UJ	MSI
all field samples	barium potassium	· -	J UJ	SD
IR69-SW01-10A, IR69-SW01D-10A	manganese	·	J	FD
all samples	all analytes	·B	J	

* Please note: the analyte selenium was flagged as estimated in all field samples due to very low matrix spike recoveries. The final qualifier code for Se was MSI to more clearly indicate the potential for low bias in the field samples

Glossary of Qualification Flags and Abbreviations

Qualification Flags (Q-Flags)

U	not detected above the reported sample quantitation limit
J	estimated value
UJ	reported quantitation limit is qualified as estimated
R	result is rejected: the presence or absence of the analyte cannot be verified
D	result value is based on dilution analysis result
NJ	analyte has been tentatively identified, estimated value
L	analyte present, biased low
UL	not detected, quantitation limit is probably higher
K	analyte present, biased high

Inorganic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 10X the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL and the result is raised to the RL and flagged U.
R or J.	The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator. (see NFG, Rev. date 10/04, p. 17 for extracted blanks (PB))

Organic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 5X (10X for common laboratory contaminants) the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is raised to the RL and flagged U.
U	The sample result for the blank contaminant is greater than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is flagged U at the reported value.

General Abbreviations

RL / MDL	reporting limit/method detection limit
CRQL	contract required quantitation limit
Q Code	qualifier code
+	positive result
-	non-detect result

QUALIFIER CODE REFERENCE

Qualifier	Description
TN	Tune
BSI	Blank Spike LCS - High Recovery
BSH	Blank Spike LCS - Low Recovery
BD	Blank Spike Blank Spike Duplicate (LCS LCSD) Precision
BRI	Below Reporting Limit
ISI	Internal Standard - Low Recovery
ISH	Internal Standard - High Recovery
MSI	Matrix Spike and or Matrix Spike Duplicate - Low Recovery
MSH	Matrix Spike and or Matrix Spike Duplicate - High Recovery
MI	Matrix interference obscuring the raw data
MDP	Matrix Spike Matrix Spike Duplicate Precision
2S	Second Source - Bad reproducibility between tandem detectors
SSI	Spiked Surrogate - Low Recovery
SSH	Spiked Surrogate - High Recovery
SD	Serial Dilution Reproducibility
ICI	Initial Calibration - Low Relative Response Factors (RRF)
ICH	Initial Calibration - High Relative Response Factors (RRF)
ICB	Initial Calibration - Bad Linearity or Curve Function
CCI	Continuing Calibration - Low Recovery or %Difference
CCH	Continuing Calibration - High Recovery or %Difference
LD	Lab Duplicate Reproducibility
HT	Holding Time
PD	Pesticide Degradation
2C	Second Column - Poor Dual Column Reproducibility
LR	Concentration Exceeds Linear Range
BL	Blank Contamination (MBL, EBL, FBL)
RE	Redundant Result - due to Re-analysis or Re-extraction
DI	Redundant Result - due to Dilution
FD	Field Duplicate
OI	Other - explained in data validation report
%SOI	High moisture content

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031410-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-01

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-0171

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	~~U~~ UJ CCL
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.8	~~B~~ J ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	6.3	~~B~~
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	1.5	~~B~~ J ICL
67-66-3	Chloroform	1.3	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.092	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	1.6	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

VM 072310

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRG9 EB01-031410-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

LMM 072510

Matrix: (soil/water) WATER Lab Sample ID: 1003136-01

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-0171

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	0.084	J
95-47-6	o-Xylene	0.050	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.090	J
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

LMM 072510

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031510-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-12

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-12R71

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ UJ CCL
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	~~U~~ UJ CCL
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	~~U~~ UJ CCL
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.8	~~B~~ J ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	1.2	~~B~~
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ R ICL
67-66-3	Chloroform	2.2	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.041	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	1.7	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031510-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-12

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-12R71

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.040	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.040	J
110-82-7	Cyclohexane	0.50	~~U~~ UJ CLL
108-87-2	Methylcyclohexane	0.50	~~U~~ UJ CLL

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

TR69 EB01-031510-SD

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-11

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-1171

Level: (low/med) LOW Date Received: 03/~~17~~ 19 /10 4/28/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	~~U~~ UJ CCL
76-13-1	1,1,2 trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	4.9	~~B~~ J ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	5.3	~~B~~
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.2	~~J~~ J ICL
67-66-3	Chloroform	1.2	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.044	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.94	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

0720

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031510-SD

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-11

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-1171

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRM EB01-031610-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136 LM 012310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-16

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-16R71

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ UJ CCL
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	~~U~~ UJ CCL
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	~~U~~ UJ CCL
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	6.8	~~B~~ J ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	6.7	~~B~~
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	J ICL
67-66-3	Chloroform	1.3	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.10	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.10	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	1.7	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

LM 012310

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031610-GW

Lab Name: COMPUCHEM Method: 8260B TRG

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-16

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-16R71

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.067	J
108-38-3	m,p-Xylene	0.14	J
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.15	J
110-82-7	Cyclohexane	0.50	~~U~~ UJ CCL
108-87-2	Methylcyclohexane	0.50	~~U~~ UJ CCL

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031610-SB

Lab Name: COMPUCHEM Method: 8260B IR69

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-09

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-09R71

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ UJ CCL
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	~~U~~ UJ CCL
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	~~U~~ UJ CCL
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	3.5	~~B~~ J ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	1.2	~~B~~
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	1.5	~~U~~ J IBL
67-66-3	Chloroform	1.9	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.073	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	1.5	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRG EB01-031610-SB

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-09

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-09R71

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	0.11	J
95-47-6	o-Xylene	0.043	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.16	J
110-82-7	Cyclohexane	0.50	~~U~~ UJ CCL
108-87-2	Methylcyclohexane	0.50	~~U~~ UJ CCL

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04DW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-02

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-0271

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.28	J
75-01-4	Vinyl Chloride	0.11	J
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.15	~~J~~ J CCL
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	6.2	~~B U FAL~~ R ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	1.2	~~B~~ U EBL
156-60-5	trans-1,2-Dichloroethene	0.78	
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	7.6	
78-93-3	2-butanone	0.5 ~~0.94~~ ~~J U FAL~~ R ICL	
67-66-3	Chloroform	5.9	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.045	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.12	J
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.5 ~~0.26~~ ~~J~~ U EBL	
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.5 ~~0.075~~ ~~J~~ U EBL	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

2 Corrections
LMM 072310

LMM 072310

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04DW-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-02

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-0271

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.5 ~~0.050~~	~~J~~ U FAL
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04IW-1DA

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136 WM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-13

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-1371

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	12	
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.093	~~B~~ J CCL
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	11	~~B~~ ~~U FBL~~ R ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	3.3	~~B~~ U FBL
156-60-5	trans-1,2-Dichloroethene	13	
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	190	~~B~~ exclude DL
78-93-3	2-butanone	0.5 ~~1.5~~	~~J UFBL~~ R ICL
67-66-3	Chloroform	6.7	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.16	J
79-01-6	Trichloroethene	0.37	J
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.5 ~~0.43~~	~~J~~ U FBL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

2 corrections
WM 072310

WM 072310

6-8

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04IW-1 OA

ab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-13

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-1371

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.5 ~~0.072~~	~~U~~ U FBL
108-38-3	m,p-Xylene	0.5 ~~0.11~~	~~U~~ U FBL
95-47-6	o-Xylene	0.5 ~~0.041~~	~~U~~ U FBL
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.5 ~~0.12~~	~~U~~ U FBL
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04IWDL 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136 1MM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-13RE1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-13D71

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 7.1

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	3.6	U exclude, DL
74-87-3	Chloromethane	3.6	U
75-01-4	Vinyl Chloride	12	D
74-83-9	Bromomethane	3.6	U
75-00-3	Chloroethane	3.6	U
75-69-4	Trichlorofluoromethane	3.6	U
75-35-4	1,1-Dichloroethene	3.6	U
75-15-0	Carbon disulfide	0.22	DJ
76-13-1	1,1,2-trichloro-1,2,2-triflu	3.6	U
67-64-1	Acetone	25	DB
79-20-9	Methyl acetate	3.6	U
75-09-2	Methylene Chloride	5.0	DB
156-60-5	trans-1,2-Dichloroethene	14	D
1634-04-4	Methyl-tert-butyl ether	3.6	U
75-34-3	1,1-Dichloroethane	3.6	U
156-59-2	cis-1,2-Dichloroethene	210	D
78-93-3	2-butanone	18	U exclude, DL
67-66-3	Chloroform	6.3	D
71-55-6	1,1,1-Trichloroethane	3.6	U
56-23-5	Carbon Tetrachloride	3.6	U
71-43-2	Benzene	3.6	U
107-06-2	1,2-Dichloroethane	3.6	U
79-01-6	Trichloroethene	0.54	DJ
78-87-5	1,2-Dichloropropane	3.6	U
75-27-4	Bromodichloromethane	3.6	U
10061-01-5	cis-1,3-Dichloropropene	3.6	U
108-10-1	4-Methyl-2-pentanone	18	U
108-88-3	Toluene	0.69	DJ
10061-02-6	trans-1,3-Dichloropropene	3.6	U
79-00-5	1,1,2-Trichloroethane	3.6	U
127-18-4	Tetrachloroethene	3.6	U
591-78-6	2-hexanone	18	U
124-48-1	Dibromochloromethane	3.6	U

FORM I VOA

117 072310

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04IWDL-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-13RE1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-13D71

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 7.1

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	3.6	U
108-90-7	Chlorobenzene	3.6	U
100-41-4	Ethylbenzene	3.6	U
108-38-3	m,p-Xylene	7.1	U
95-47-6	o-Xylene	3.6	U
100-42-5	Styrene	3.6	U
75-25-2	Bromoform	3.6	U
98-82-8	Isopropyl Benzene	3.6	U
79-34-5	1,1,2,2-Tetrachloroethane	3.6	U
541-73-1	1,3-Dichlorobenzene	3.6	U
106-46-7	1,4-Dichlorobenzene	3.6	U
95-50-1	1,2-Dichlorobenzene	3.6	U
96-12-8	1,2-Dibromo-3-Chloropropane	3.6	U
120-82-1	1,2,4-Trichlorobenzene	3.6	U
1330-20-7	Xylene (total)	3.6	U
110-82-7	Cyclohexane	3.6	U
108-87-2	Methylcyclohexane	3.6	U

exclude DL

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15DW--1 OA

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136 LM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-07

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-0771

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.052	~~J~~ J CCL
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	5.3	~~B~~ ~~U FBL~~ R ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ R ICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50	~~0.047~~ ~~U~~ U FBL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

1 Correction LM 072310

LM 072310

0.52

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15DW-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-07

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-0771

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	1.8	
106-46-7	1,4-Dichlorobenzene	1.0	
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW19IW-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-14

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-14R71

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ UJ CCL
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	~~U~~ UJ CCL
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	~~U~~ UJ CCL
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	4.6	~~B~~ ~~UPBL~~ RICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50 ~~0.061~~	~~JB~~ U MBL
156-60-5	trans-1,2-Dichloroethene	0.082	J
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	19	
78-93-3	2-butanone	2.5	~~U~~ RICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50 ~~0.037~~	~~J~~ U PBL
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	20	
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50 ~~0.042~~	~~J~~ U PBL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

1 correction
LM 072310

LM 072310

034

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW19IW-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-14

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-14R71

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	~~U~~ UJ cll
108-87-2	Methylcyclohexane	0.50	~~U~~ UJ cll

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW19UW-1DA

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-15

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-1571

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	18	
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	1.2	
75-15-0	Carbon disulfide	0.50	~~U~~ UJCL
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	4.2	B ~~U (FBL~~ RICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50 ~~0.037~~	JB U, FBL
156-60-5	trans-1,2-Dichloroethene	5.2	
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	500	~~E~~ exclude, DL
78-93-3	2-butanone	2.5	~~U~~ RICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	1.2	
107-06-2	1,2-Dichloroethane	0.58	
79-01-6	Trichloroethene	45	~~E~~ exclude DL
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50 ~~0.24~~	~~J~~ U, FBL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

Correction
LM 072310

LM 072310

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW19UW-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-15

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-1571

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.59	
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50 ~~0.14~~	~~J~~ U, FBL
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50 ~~0.14~~	~~J~~ U, FBL
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW19UWDL-01A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136 LM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-15RE1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-15D371

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/27/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 16.7

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.53	DJ exclude, DL
74-87-3	Chloromethane	8.3	U
75-01-4	Vinyl Chloride	19	D
74-83-9	Bromomethane	8.3	U
75-00-3	Chloroethane	8.3	U
75-69-4	Trichlorofluoromethane	8.3	U
75-35-4	1,1-Dichloroethene	2.1	DJ
75-15-0	Carbon disulfide	8.3	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	8.3	U
67-64-1	Acetone	53	D
79-20-9	Methyl acetate	8.3	U
75-09-2	Methylene Chloride	0.43	DJ
156-60-5	trans-1,2-Dichloroethene	5.6	DJ
1634-04-4	Methyl-tert-butyl ether	8.3	U
75-34-3	1,1-Dichloroethane	8.3	U
156-59-2	cis-1,2-Dichloroethene	570	~~D~~
78-93-3	2-butanone	42	U exclude, DL
67-66-3	Chloroform	8.3	U
71-55-6	1,1,1-Trichloroethane	8.3	U
56-23-5	Carbon Tetrachloride	8.3	U
71-43-2	Benzene	1.5	DJ
107-06-2	1,2-Dichloroethane	8.3	U
79-01-6	Trichloroethene	52	~~D~~
78-87-5	1,2-Dichloropropane	8.3	U exclude, DL
75-27-4	Bromodichloromethane	8.3	U
10061-01-5	cis-1,3-Dichloropropene	8.3	U
108-10-1	4-Methyl-2-pentanone	42	U
108-88-3	Toluene	0.57	DJ
10061-02-6	trans-1,3-Dichloropropene	8.3	U
79-00-5	1,1,2-Trichloroethane	8.3	U
127-18-4	Tetrachloroethene	8.3	U
591-78-6	2-hexanone	42	U
124-48-1	Dibromochloromethane	8.3	U

FORM I VOA

LM 072310

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW19UWDL-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-15RE1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-15D371

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/27/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 16.7

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	8.3	U
108-90-7	Chlorobenzene	8.3	U
100-41-4	Ethylbenzene	8.3	U
108-38-3	m,p-Xylene	17	U
95-47-6	o-Xylene	8.3	U
100-42-5	Styrene	8.3	U
75-25-2	Bromoform	8.3	U
98-82-8	Isopropyl Benzene	8.3	U
79-34-5	1,1,2,2-Tetrachloroethane	8.3	U
541-73-1	1,3-Dichlorobenzene	8.3	U
106-46-7	1,4-Dichlorobenzene	8.3	U
95-50-1	1,2-Dichlorobenzene	8.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.3	U
120-82-1	1,2,4-Trichlorobenzene	8.3	U
1330-20-7	Xylene (total)	8.3	U
110-82-7	Cyclohexane	8.3	U
108-87-2	Methylcyclohexane	8.3	U

exclude, DL

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW26DW-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-18

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-18R71

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ UJ CCL
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	~~U~~ UJ CCL
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.029	~~J~~ J CCL
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	6.1	~~B~~ ~~U FBL~~ RICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	1.9	~~B~~ U EBL
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	1.4	
78-93-3	2-butanone	0.5 ~~0.90~~ ~~J~~ ~~U FBL~~ RICL	
67-66-3	Chloroform	17	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.5 ~~0.051~~ ~~J~~ U FBL	
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.5 ~~0.13~~ ~~J~~ U EBL	
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.5 ~~0.11~~ ~~J~~ U FBL	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

2 corrections
LM 072310

LM 072310

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW26DW-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136 LMM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-18

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-18R71

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.5 ~~0.070~~	~~J~~ U FPL
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	~~U~~ UJ CCL
108-87-2	Methylcyclohexane	0.50	~~U~~ UJ CCL

FORM I VOA

LMM 072310

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW26IW-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136 LM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-17

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-17D71

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 2.5

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	1.3	~~U~~ UJ CCL
74-87-3	Chloromethane	1.3	U
75-01-4	Vinyl Chloride	4.5	
74-83-9	Bromomethane	1.3	U
75-00-3	Chloroethane	1.3	~~U~~ UJ CCL
75-69-4	Trichlorofluoromethane	1.3	U
75-35-4	1,1-Dichloroethene	1.3	U
75-15-0	Carbon disulfide	0.11	~~J~~ J CCL
76-13-1	1,1,2-trichloro-1,2,2-triflu	1.3	U
67-64-1	Acetone	8.0	~~B~~ ~~U FBL~~ RICL
79-20-9	Methyl acetate	1.3	U
75-09-2	Methylene Chloride	1.3 ~~0.82~~	~~BJ~~ U MBL
156-60-5	trans-1,2-Dichloroethene	0.28	J
1634-04-4	Methyl-tert-butyl ether	1.3	U
75-34-3	1,1-Dichloroethane	1.3	U
156-59-2	cis-1,2-Dichloroethene	45	
78-93-3	2-butanone	6.3	~~U~~ RICL
67-66-3	Chloroform	4.0	UFBL
71-55-6	1,1,1-Trichloroethane	1.3	U
56-23-5	Carbon Tetrachloride	1.3	U
71-43-2	Benzene	1.3	U
107-06-2	1,2-Dichloroethane	1.3	U
79-01-6	Trichloroethene	1.3	U
78-87-5	1,2-Dichloropropane	1.3	U
75-27-4	Bromodichloromethane	1.3	U
10061-01-5	cis-1,3-Dichloropropene	1.3	U
108-10-1	4-Methyl-2-pentanone	6.3	U
108-88-3	Toluene	1.3 ~~0.11~~	~~J~~ U FBL
10061-02-6	trans-1,3-Dichloropropene	1.3	U
79-00-5	1,1,2-Trichloroethane	1.3	U
127-18-4	Tetrachloroethene	1.3	U
591-78-6	2-hexanone	6.3	U
124-48-1	Dibromochloromethane	1.3	U

FORM I VOA

1 correction
LM 072310

LM 072310

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FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW26IW - 10A

ab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-17 LM 072310

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-17D71

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 2.5

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	1.3	U
108-90-7	Chlorobenzene	1.3	U
100-41-4	Ethylbenzene	1.3	U
108-38-3	m,p-Xylene	2.5	U
95-47-6	o-Xylene	1.3	U
100-42-5	Styrene	1.3	U
75-25-2	Bromoform	1.3	U
98-82-8	Isopropyl Benzene	1.3	U
79-34-5	1,1,2,2-Tetrachloroethane	1.3	U
541-73-1	1,3-Dichlorobenzene	1.3	U
106-46-7	1,4-Dichlorobenzene	1.3	U
95-50-1	1,2-Dichlorobenzene	1.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	1.3	U
120-82-1	1,2,4-Trichlorobenzene	1.3	U
1330-20-7	Xylene (total)	1.3	U
110-82-7	Cyclohexane	1.3	~~U~~ UJ CCL
108-87-2	Methylcyclohexane	1.3	~~U~~ UJ CCL

FORM I VOA

LM 072310

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW01 — 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136 LM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-03

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-0371

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	~~U~~ U5 CL
76-13-1	1,1,2-trichloro-1,2,2-trifluo	0.50	U
67-64-1	Acetone	2.5 ~~1.4~~ ~~JB~~ ~~UFBL~~ RICL	
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.058	J
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	1.2	
78-93-3	2-butanone	2.5	~~U~~ RJCL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	1.5 ~~0.040~~	~~J~~ UFBL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

1 correction
LM 072310

LM 072310

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FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW01 — 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-03

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-0371

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

LLL 072310

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW01D - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

LM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-04

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-0471

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	~~U~~ U ICL
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5 ~~1.4~~	~~JB~~ ~~U FABL~~ RICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.068	J
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	1.2	
78-93-3	2-butanone	2.5	~~U~~ RICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.5 ~~0.044~~	~~J~~ U FCL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

1 correction
LM 072310

LM 072310

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW01D — 1DA

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

IMA 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-04

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-0471

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

IMA 072310

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW02 - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136 WM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-08

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-0871

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.036	~~J~~ J UL
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5 ~~1.9~~ ~~JB~~ ~~U RICL~~	RICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ RICL
67-66-3	Chloroform	0.5 ~~0.12~~ ~~J~~	U RICL
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

1 correction WM 072310

WM 072310

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW02 - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-08

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-0871

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW03 - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-10

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-1071

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.027	~~J~~ J CCL
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	4.6	~~B~~ ~~UFBL~~ RICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.5 ~~0.094~~ ~~JB~~	U MBL
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.099	J
78-93-3	2-butanone	2.5	~~U~~ RICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.5 ~~0.045~~	~~J~~ U FBL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

1 correction
LM 072310

LM 072310

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW03 — 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-10

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-1071

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-TB0
1-031310

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-05

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-0571

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	~~U~~ UJ CCL
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.1	~~B~~ J ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ R ICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl 2-pentanone	2.5	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

MM 07/27/10

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-TB0
1-031310

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-05

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-0571

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

VM 072310

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-TB0
1-031710

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-06

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-0671

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	~~U~~ 15 UL
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5	~~U~~ RICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	~~U~~ RICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

WM 072310

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-TB0
1-031710

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-06

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-0671

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

MM 03/25/10

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-TB0
1-031910

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-19

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-19R71

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/27/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	~~U~~ UJ CCL
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5	~~U~~ R ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.035	J
78-93-3	2-butanone	2.5	~~U~~ R ICL
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

MM 072310

AMENDED DATA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-TB0
1-031910

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-19

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-19R71

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/27/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	~~U~~ UJ CCL
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

LM 07/23/10

AMENDED DATA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW02MS - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 0032649-MS1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 0032649 MS171

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/27/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	4.9	
74-87-3	Chloromethane	7.0	
75-01-4	Vinyl Chloride	6.6	
74-83-9	Bromomethane	5.9	
75-00-3	Chloroethane	4.8	
75-69-4	Trichlorofluoromethane	5.3	
75-35-4	1,1-Dichloroethene	4.9	
75-15-0	Carbon disulfide	5.5	
76-13-1	1,1,2-trichloro-1,2,2-triflu	6.0	
67-64-1	Acetone	28	
79-20-9	Methyl acetate	6.3	
75-09-2	Methylene Chloride	4.9	
156-60-5	trans-1,2-Dichloroethene	4.9	
1634-04-4	Methyl-tert-butyl ether	5.0	
75-34-3	1,1-Dichloroethane	5.3	
156-59-2	cis-1,2-Dichloroethene	4.9	
78-93-3	2-butanone	30	
67-66-3	Chloroform	5.3	
71-55-6	1,1,1-Trichloroethane	5.1	
56-23-5	Carbon Tetrachloride	5.1	
71-43-2	Benzene	5.3	
107-06-2	1,2-Dichloroethane	5.1	
79-01-6	Trichloroethene	4.6	
78-87-5	1,2-Dichloropropane	5.5	
75-27-4	Bromodichloromethane	5.1	
10061-01-5	cis-1,3-Dichloropropene	4.8	
108-10-1	4-Methyl-2-pentanone	27	
108-88-3	Toluene	4.8	
10061-02-6	trans-1,3-Dichloropropene	4.6	
79-00-5	1,1,2-Trichloroethane	4.6	
127-18-4	Tetrachloroethene	4.7	
591-78-6	2-hexanone	29	
124-48-1	Dibromochloromethane	4.2	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW02MS - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

LM 072310

Matrix: (soil/water) WATER Lab Sample ID: 0032649-MS1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 0032649-MS171

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/27/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	4.3	
108-90-7	Chlorobenzene	4.5	
100-41-4	Ethylbenzene	4.8	
108-38-3	m,p-Xylene	9.7	
95-47-6	o-Xylene	5.0	
100-42-5	Styrene	4.8	
75-25-2	Bromoform	4.2	
98-82-8	Isopropyl Benzene	4.9	
79-34-5	1,1,2,2-Tetrachloroethane	4.5	
541-73-1	1,3-Dichlorobenzene	4.3	
106-46-7	1,4-Dichlorobenzene	4.5	
95-50-1	1,2-Dichlorobenzene	4.4	
96-12-8	1,2-Dibromo-3-Chloropropane	4.4	
120-82-1	1,2,4-Trichlorobenzene	4.4	
1330-20-7	Xylene (total)	15	
110-82-7	Cyclohexane	5.7	
108-87-2	Methylcyclohexane	5.9	

FORM I VOA

LM 072310

058

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW02MSD

10A
MM
072310

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 0032649-MSD1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 0032649-MSD171

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/27/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	
74-87-3	Chloromethane	6.9	
75-01-4	Vinyl Chloride	6.9	
74-83-9	Bromomethane	4.7	
75-00-3	Chloroethane	5.2	
75-69-4	Trichlorofluoromethane	5.4	
75-35-4	1,1-Dichloroethene	4.9	
75-15-0	Carbon disulfide	5.3	
76-13-1	1,1,2-trichloro-1,2,2-triflu	5.6	
67-64-1	Acetone	26	
79-20-9	Methyl acetate	6.5	
75-09-2	Methylene Chloride	5.1	
156-60-5	trans-1,2-Dichloroethene	5.1	
1634-04-4	Methyl-tert-butyl ether	5.1	
75-34-3	1,1-Dichloroethane	5.4	
156-59-2	cis-1,2-Dichloroethene	4.9	
78-93-3	2-butanone	31	
67-66-3	Chloroform	5.4	
71-55-6	1,1,1-Trichloroethane	5.1	
56-23-5	Carbon Tetrachloride	5.0	
71-43-2	Benzene	5.4	
107-06-2	1,2-Dichloroethane	5.1	
79-01-6	Trichloroethene	4.7	
78-87-5	1,2-Dichloropropane	5.8	
75-27-4	Bromodichloromethane	5.1	
10061-01-5	cis-1,3-Dichloropropene	4.9	
108-10-1	4-Methyl-2-pentanone	28	
108-88-3	Toluene	4.7	
10061-02-6	trans-1,3-Dichloropropene	4.5	
79-00-5	1,1,2-Trichloroethane	4.7	
127-18-4	Tetrachloroethene	4.6	
591-78-6	2-hexanone	30	
124-48-1	Dibromochloromethane	4.1	

FORM I VOA

MM
072310

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW02MSD - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 0032649-MSD1

Sample wt/vol: 25 (g/ml) ML Lab File ID: 0032649-MSD171

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/27/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	4.4	
108-90-7	Chlorobenzene	4.4	
100-41-4	Ethylbenzene	4.6	
108-38-3	m,p-Xylene	9.4	
95-47-6	o-Xylene	4.8	
100-42-5	Styrene	4.7	
75-25-2	Bromoform	4.2	
98-82-8	Isopropyl Benzene	4.6	
79-34-5	1,1,2,2-Tetrachloroethane	4.6	
541-73-1	1,3-Dichlorobenzene	4.1	
106-46-7	1,4-Dichlorobenzene	4.2	
95-50-1	1,2-Dichlorobenzene	4.4	
96-12-8	1,2-Dibromo-3-Chloropropane	4.3	
120-82-1	1,2,4-Trichlorobenzene	4.2	
1330-20-7	Xylene (total)	15	
110-82-7	Cyclohexane	5.8	
108-87-2	Methylcyclohexane	5.8	

FORM I VOA

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031410-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-01JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRL4 EB01-031410-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-01JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	~~U~~ UJ CCL
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

LM 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031410-GW

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-01A60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/27/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.072	J
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRGA EB01-031510-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136 UM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-12

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-12A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

UM 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031510-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-12

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-12A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031510-GW

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-12

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-12A60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.16	J
91-57-6	2-Methylnaphthalene	0.069	J
208-96-8	Acenaphthylene	0.090	J
83-32-9	Acenaphthene	0.11	J
86-73-7	Fluorene	0.13	J
85-01-8	Phenanthrene	0.16	J
120-12-7	Anthracene	0.15	J
206-44-0	Fluoranthene	0.15	J
129-00-0	Pyrene	0.16	J
56-55-3	Benzo(a)anthracene	0.15	J
218-01-9	Chrysene	0.16	J
205-99-2	Benzo(b)fluoranthene	0.15	J
207-08-9	Benzo(k)fluoranthene	0.17	J
50-32-8	Benzo(a)pyrene	0.15	J
193-39-5	Indeno(1,2,3-cd)pyrene	0.14	J
53-70-3	Dibenzo(a,h)anthracene	0.14	J
191-24-2	Benzo(g,h,i)perylene	0.15	J

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRM EB01-031510-SD

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-11

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-11A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031510-SD

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-11

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-11A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	2.0	J
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031510-SD

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-11

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-11JA60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.051	J
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRW EB01-031610 GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-16

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-16A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/06/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4 Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69 EB01-031610-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-16 LMM 072310

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-16A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/06/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

LMM 072310

071

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031610-GW

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-16

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-16J3C60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.078	J
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRM EB01-031610-SB

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-09

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-09A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

073

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRL9 | EB01-031610-SB

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136 LM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-09

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-09A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

LM 072310

074

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031610-SB

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-09

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-09A60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.084	J
91-57-6	2-Methylnaphthalene	0.039	J
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.072	J
120-12-7	Anthracene	0.021	J
206-44-0	Fluoranthene	0.022	J
129-00-0	Pyrene	0.033	J
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04DW - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-02

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003136-02C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.1	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.1	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.1	U
98-86-2	Acetophenone	5.1	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.1	U
67-72-1	Hexachloroethane	5.1	U
98-95-3	Nitrobenzene	5.1	U
78-59-1	Isophorone	5.1	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.1	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.1	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.1	U
105-60-2	Caprolactam	5.1	~~U~~ UJ
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.1	U
77-47-4	Hexachlorocyclopentadiene	5.1	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.1	U
91-58-7	2-Chloronaphthalene	5.1	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.1	U
606-20-2	2,6-Dinitrotoluene	5.1	U
208-96-8	Acenaphthylene	5.1	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.1	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04DW — 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-02

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003136-02C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.1	U
132-64-9	Dibenzofuran	5.1	U
84-66-2	Diethylphthalate	0.63	J
7005-72-3	4-Chlorophenyl-phenylether	5.1	U
86-73-7	Fluorene	5.1	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.1	U
101-55-3	4-Bromophenyl-phenylether	5.1	U
118-74-1	Hexachlorobenzene	5.1	U
1912-24-9	Atrazine	5.1	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.1	U
120-12-7	Anthracene	5.1	U
86-74-8	Carbazole	5.1	U
84-74-2	Di-n-butylphthalate	5.1	U
206-44-0	Fluoranthene	5.1	U
129-00-0	Pyrene	5.1	U
85-68-7	Butylbenzylphthalate	5.1	U
91-94-1	3,3'-Dichlorobenzidine	5.1	U
117-81-7	bis(2-ethylhexyl)Phthalate	2.2	J
56-55-3	Benzo(a)anthracene	5.1	U
218-01-9	Chrysene	5.1	U
117-84-0	Di-n-octylphthalate	5.1	U
205-99-2	Benzo(b)fluoranthene	5.1	U
207-08-9	Benzo(k)fluoranthene	5.1	U
50-32-8	Benzo(a)pyrene	5.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.1	U
53-70-3	Dibenzo(a,h)anthracene	5.1	U
191-24-2	Benzo(g,h,i)perylene	5.1	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04DW — 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-02

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003136-02JC60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.21	U
91-57-6	2-Methylnaphthalene	0.018	J
208-96-8	Acenaphthylene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	U
206-44-0	Fluoranthene	0.21	U
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U
53-70-3	Dibenzo(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04IW - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-13

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-13A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	1.7	J
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04IW — 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-13

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-13A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	3.9	J
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

VJ CCH

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04IW - 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-13

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-13A60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.2 ~~0.031~~	~~J~~ U EBL
91-57-6	2-Methylnaphthalene	0.2 ~~0.028~~	~~J~~ U EBL
208-96-8	Acenaphthylene	0.2 ~~0.012~~	~~J~~ U EBL
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.2 ~~0.035~~	~~J~~ U EBL
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.2 ~~0.018~~	~~J~~ U EBL
129-00-0	Pyrene	0.2 ~~0.018~~	~~J~~ U EBL
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.2 ~~0.017~~	~~J~~ U EBL
205-99-2	Benzo(b)fluoranthene	~~0.016~~	~~J~~
207-08-9	Benzo(k)fluoranthene	~~0.018~~	~~J~~
50-32-8	Benzo(a)pyrene	~~0.018~~	~~J~~
193-39-5	Indeno(1,2,3-cd)pyrene	~~0.013~~	~~J~~
53-70-3	Dibenzo(a,h)anthracene	~~0.015~~	~~J~~
191-24-2	Benzo(g,h,i)perylene	~~0.017~~	~~J~~

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15DW - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-07

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-07A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15DW - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-07

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-07A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

UMA 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15DW - 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-07

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-07A60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW19IW - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-14

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-14A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/06/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

LM 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW19IW - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136 LM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-14

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-14A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/06/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

LM 072210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW19IW - 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-14

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-14A60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)____ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW19UW - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-15

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-15A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/06/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW19UW - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-15

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-15A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/06/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

MM 072310

U09

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW19UW - 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

UM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-15

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-15J2C60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.2 ~~0.030~~	~~J~~ W EPL
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

UM 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW26DW -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136 LM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-18

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-18A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/08/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	~~U~~ UJ CLL
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

LM 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW26DW 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-18

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-18A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/08/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	~~U~~ UJ CLH
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CLH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	4.8	J
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW26DW - 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-18

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-18J2C60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW26IW - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-17

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-17A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/08/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	~~U~~ UJ CCL
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	0.58	J
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

VM 07/23/10

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW26IW 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-17

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-17A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/08/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	~~U~~ UJ CLH
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CLH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	2.0	J
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW26IW — 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-17

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-17A60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW01 — 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-03JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW01 — 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-03 LMM 072310

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-03JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	~~U~~ UJ CCL
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

LMM 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW01 — 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-03JC60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW01D — 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-04C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	~~U~~ UJ CCH
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

LM 072310

100

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW01D 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-04C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW01D ~ 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-04 11 11 072310

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-04C60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

WM 072310

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW02 — 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-08A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW02 — 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-08A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U VS CLH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

LM 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW02 — 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-08A60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW03 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-10

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-10A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW03 — 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-10

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-10A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

WM 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW03 -- 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-10

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-10JA60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW02MS 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 0031936-MS1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0031936-MS1A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	19	
108-95-2	Phenol	14	
111-44-4	Bis(2-chloroethyl)ether	26	
95-57-8	2-Chlorophenol	27	
95-48-7	2-Methylphenol	27	
108-60-1	2,2'-oxybis(1-Chloropropane)	24	
98-86-2	Acetophenone	26	
106-44-5	4-Methylphenol	25	
621-64-7	N-Nitroso-di-N-propylamine	24	
67-72-1	Hexachloroethane	23	
98-95-3	Nitrobenzene	26	
78-59-1	Isophorone	25	
88-75-5	2-Nitrophenol	27	
105-67-9	2,4-Dimethylphenol	26	
111-91-1	Bis(2-chloroethoxy)methane	28	
120-83-2	2,4-Dichlorophenol	30	
91-20-3	Naphthalene	24	
106-47-8	4-Chloroaniline	38	
87-68-3	Hexachlorobutadiene	27	
105-60-2	Caprolactam	17	
59-50-7	4-Chloro-3-methylphenol	34	
91-57-6	2-Methylnaphthalene	24	
77-47-4	Hexachlorocyclopentadiene	18	
88-06-2	2,4,6-Trichlorophenol	27	
95-95-4	2,4,5-Trichlorophenol	30	
92-52-4	1,1'-Biphenyl	24	
91-58-7	2-Chloronaphthalene	24	
88-74-4	2-Nitroaniline	29	
131-11-3	Dimethylphthalate	27	
606-20-2	2,6-Dinitrotoluene	30	
208-96-8	Acenaphthylene	26	
99-09-2	3-Nitroaniline	35	
83-32-9	Acenaphthene	26	

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW02MS - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 0031936-MS1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0031936-MS1A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	35	
100-02-7	4-Nitrophenol	13	
121-14-2	2,4-Dinitrotoluene	31	
132-64-9	Dibenzofuran	27	
84-66-2	Diethylphthalate	28	
7005-72-3	4-Chlorophenyl-phenylether	26	
86-73-7	Fluorene	28	
100-01-6	4-Nitroaniline	33	
534-52-1	4,6-Dinitro-2-methylphenol	37	
86-30-6	N-Nitrosodiphenylamine (1)	36	
101-55-3	4-Bromophenyl-phenylether	36	
118-74-1	Hexachlorobenzene	29	
1912-24-9	Atrazine	28	
87-86-5	Pentachlorophenol	28	
85-01-8	Phenanthrene	28	
120-12-7	Anthracene	28	
86-74-8	Carbazole	31	
84-74-2	Di-n-butylphthalate	30	
206-44-0	Fluoranthene	32	
129-00-0	Pyrene	27	
85-68-7	Butylbenzylphthalate	29	
91-94-1	3,3'-Dichlorobenzidine	38	
117-81-7	bis(2-ethylhexyl)Phthalate	29	
56-55-3	Benzo(a)anthracene	29	
218-01-9	Chrysene	29	
117-84-0	Di-n-octylphthalate	27	
205-99-2	Benzo(b)fluoranthene	25	
207-08-9	Benzo(k)fluoranthene	30	
50-32-8	Benzo(a)pyrene	27	
193-39-5	Indeno(1,2,3-cd)pyrene	30	
53-70-3	Dibenzo(a,h)anthracene	31	
191-24-2	Benzo(g,h,i)perylene	30	

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW02MSD - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 0031936-MSD1 UM 072710

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0031936-MSD1A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	20	
108-95-2	Phenol	13	
111-44-4	Bis(2-chloroethyl)ether	25	
95-57-8	2-Chlorophenol	26	
95-48-7	2-Methylphenol	23	
108-60-1	2,2'-oxybis(1-Chloropropane)	24	
98-86-2	Acetophenone	26	
106-44-5	4-Methylphenol	21	
621-64-7	N-Nitroso-di-N-propylamine	23	
67-72-1	Hexachloroethane	23	
98-95-3	Nitrobenzene	26	
78-59-1	Isophorone	25	
88-75-5	2-Nitrophenol	27	
105-67-9	2,4-Dimethylphenol	9.0	J
111-91-1	Bis(2-chloroethoxy)methane	28	
120-83-2	2,4-Dichlorophenol	30	
91-20-3	Naphthalene	24	
106-47-8	4-Chloroaniline	32	
87-68-3	Hexachlorobutadiene	27	
105-60-2	Caprolactam	18	
59-50-7	4-Chloro-3-methylphenol	31	
91-57-6	2-Methylnaphthalene	24	
77-47-4	Hexachlorocyclopentadiene	18	
88-06-2	2,4,6-Trichlorophenol	26	
95-95-4	2,4,5-Trichlorophenol	30	
92-52-4	1,1'-Biphenyl	23	
91-58-7	2-Chloronaphthalene	24	
88-74-4	2-Nitroaniline	29	
131-11-3	Dimethylphthalate	26	
606-20-2	2,6-Dinitrotoluene	30	
208-96-8	Acenaphthylene	25	
99-09-2	3-Nitroaniline	32	
83-32-9	Acenaphthene	25	

UM 072710

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW02MSD 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 0031936-MSD1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0031936-MSD1A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: ____ decanted: (Y/N)__ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	35	
100-02-7	4-Nitrophenol	13	
121-14-2	2,4-Dinitrotoluene	31	
132-64-9	Dibenzofuran	26	
84-66-2	Diethylphthalate	28	
7005-72-3	4-Chlorophenyl-phenylether	26	
86-73-7	Fluorene	27	
100-01-6	4-Nitroaniline	29	
534-52-1	4,6-Dinitro-2-methylphenol	36	
86-30-6	N-Nitrosodiphenylamine (1)	35	
101-55-3	4-Bromophenyl-phenylether	35	
118-74-1	Hexachlorobenzene	28	
1912-24-9	Atrazine	27	
87-86-5	Pentachlorophenol	26	
85-01-8	Phenanthrene	28	
120-12-7	Anthracene	28	
86-74-8	Carbazole	30	
84-74-2	Di-n-butylphthalate	29	
206-44-0	Fluoranthene	32	
129-00-0	Pyrene	27	
85-68-7	Butylbenzylphthalate	29	
91-94-1	3,3'-Dichlorobenzidine	35	
117-81-7	bis(2-ethylhexyl)Phthalate	29	
56-55-3	Benzo(a)anthracene	29	
218-01-9	Chrysene	29	
117-84-0	Di-n-octylphthalate	26	
205-99-2	Benzo(b)fluoranthene	28	
207-08-9	Benzo(k)fluoranthene	26	
50-32-8	Benzo(a)pyrene	26	
193-39-5	Indeno(1,2,3-cd)pyrene	32	
53-70-3	Dibenzo(a,h)anthracene	30	
191-24-2	Benzo(g,h,i)perylene	31	

(1) - Cannot be separated from Diphenylamine

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1R69- EB01-031410-GW

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/28/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1R69- EB01-031510-GW JAC 73010

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-12

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/22/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

JAC 72810

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1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1R69 EB01-031510-SD

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-11

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/~~27~~19/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/22/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1R69- EB01-031610-GW JC 73010

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-16

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/22/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM 1 PEST

JC 72810

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1R69- EB01-031610-SB

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-09

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/22/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM 1 PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TR69-GW04DW-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-02

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/28/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.020	~~UP~~ J 2C
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW04IW-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-13

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/22/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW15DW-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-07

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/22/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.0071	~~JP~~ J
50-29-3	4,4'-DDT	0.056	~~JP~~ J
60-57-1	Dieldrin	0.026	~~JP~~ J
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.0073	~~JP~~ J
1031-07-8	Endosulfan sulfate	0.012	J
72-20-8	Endrin	0.19	
7421-93-4	Endrin Aldehyde	0.014	~~JP~~ J
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.031	~~JP~~ J
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.094	
5103-71-9	alpha-Chlordane	0.0067	~~JP~~ J

2C

2C

2C

2C

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW19IW-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-14

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/22/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW19UW-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-15

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/22/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TR69-GW26DW-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-18

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/22/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.020	~~JP~~ J
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

2C

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW26IW-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-17

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/22/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SW01-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/28/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TR69-SW01D 70A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/17/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/18/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/28/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SW02-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/22/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SW02MS-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 0032008-MS1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/22/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.092	
319-85-7	beta-BHC	0.12	
319-84-6	alpha-BHC	0.13	
319-86-8	delta-BHC	0.14	
58-89-9	gamma-BHC (Lindane)	0.12	
72-54-8	4,4'-DDD	0.33	
72-55-9	4,4'-DDE	0.31	
50-29-3	4,4'-DDT	0.29	
60-57-1	Dieldrin	0.33	
959-98-8	Endosulfan I	0.11	
33213-65-9	Endosulfan II	0.30	
1031-07-8	Endosulfan sulfate	0.30	
72-20-8	Endrin	0.31	
7421-93-4	Endrin Aldehyde	0.20	
76-44-8	Heptachlor	0.14	
1024-57-3	Heptachlor Epoxide	0.14	
72-43-5	Methoxychlor	0.36	J
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.33	
5103-74-2	gamma-Chlordane	0.13	
5103-71-9	alpha-Chlordane	0.14	

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TR69-SW02MSD 10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 0032008-MSD1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/22/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.089	
319-85-7	beta-BHC	0.12	
319-84-6	alpha-BHC	0.13	
319-86-8	delta-BHC	0.14	
58-89-9	gamma-BHC (Lindane)	0.12	
72-54-8	4,4'-DDD	0.33	
72-55-9	4,4'-DDE	0.32	
50-29-3	4,4'-DDT	0.29	
60-57-1	Dieldrin	0.33	
959-98-8	Endosulfan I	0.11	
33213-65-9	Endosulfan II	0.30	
1031-07-8	Endosulfan sulfate	0.30	
72-20-8	Endrin	0.29	
7421-93-4	Endrin Aldehyde	0.21	
76-44-8	Heptachlor	0.12	
1024-57-3	Heptachlor Epoxide	0.14	
72-43-5	Methoxychlor	0.36	J
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.34	
5103-74-2	gamma-Chlordane	0.12	
5103-71-9	alpha-Chlordane	0.14	

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SW02PCBMS-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 0032008-MS2

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/22/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	4.4	
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	4.2	
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM 1 PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TR69-SW02PCBMSD -10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 0032008-MSD2

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/22/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	4.2	
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	3.9	
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SW03-10A

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-10

Sample wt/vol: 975.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/22/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/09/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.051	U
319-85-7	beta-BHC	0.051	U
319-84-6	alpha-BHC	0.051	U
319-86-8	delta-BHC	0.051	U
58-89-9	gamma-BHC (Lindane)	0.051	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.051	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.051	U
1024-57-3	Heptachlor Epoxide	0.051	U
72-43-5	Methoxychlor	0.51	U
8001-35-2	Toxaphene	2.6	U
12674-11-2	Aroclor-1016	0.95	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.95	U
53469-21-9	Aroclor-1242	0.64	U
12672-29-6	Aroclor-1248	0.64	U
11097-69-1	Aroclor-1254	0.64	U
11096-82-5	Aroclor-1260	0.95	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.051	U
5103-71-9	alpha-Chlordane	0.051	U

FORM I PEST

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW04DW-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix (soil/water): WATER Lab Sample ID: 1003136-02

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	2410			P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	14.8	~~B~~	~~E~~ J	P	SD
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	40900			P	
7440-47-3	Chromium	11.5			P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	1.8	~~B~~	J	P	
7439-89-6	Iron	2170			P	
7439-92-1	Lead	4.1			P	
7439-95-4	Magnesium	2480	~~B~~	J	P	
7439-96-5	Manganese	35.1			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	1.3	~~B~~	J	P	
7440-09-7	Potassium	4270	~~B~~	~~E~~ J	P	SD
7782-49-2	Selenium	4.4	~~B~~	~~N~~ J	P	MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	125000			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	6.1	~~B~~	J	P	
7440-66-6	Zinc	29.4			P	

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW04IW-10A

JJC 72610

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix (soil/water): WATER Lab Sample ID: 1003136-13

Level (low/med): LOW Date Received: 3/19/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	234			P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	36.1	~~B~~	~~E~~ J	P	SD
7440-41-7	Beryllium	5.0 ~~1.6~~	~~B~~ U		P	MBL
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	39200			P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	1390			P	
7439-92-1	Lead	4.4			P	
7439-95-4	Magnesium	2410	~~B~~	J	P	
7439-96-5	Manganese	80.8			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	2470	~~B~~	~~E~~ J	P	SD
7782-49-2	Selenium	5.0	~~U~~	~~N~~ UJ	P	MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	68700			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	20 ~~6.0~~	~~B~~ U		P	FBL

JJC 72610

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW15DW - 10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix (soil/water): WATER Lab Sample ID: 1003136-07

Level (low/med): LOW Date Received: 3/19/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	1960			P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	16.8	~~B~~	~~E~~ J	P	SD
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	123000			P	
7440-47-3	Chromium	19.7			P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	3.5	~~B~~	J	P	
7439-89-6	Iron	6760			P	
7439-92-1	Lead	4.3			P	
7439-95-4	Magnesium	5260			P	
7439-96-5	Manganese	162			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	2.6	~~B~~	J	P	
7440-09-7	Potassium	1760	~~B~~	~~E~~ J	P	SD
7782-49-2	Selenium	5.0	~~U~~	~~N~~ UJ	P	MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	24700			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	6.8	~~B~~	J	P	
7440-66-6	Zinc	26.6			P	

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW19IW-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix (soil/water): WATER Lab Sample ID: 1003136-14

Level (low/med): LOW Date Received: 3/19/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	407			P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	4.2	~~B~~	~~E~~ J	P	SD
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	46000			P	
7440-47-3	Chromium	2.7	~~B~~	J	P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	1320			P	
7439-92-1	Lead	3.5			P	
7439-95-4	Magnesium	1700	~~B~~	J	P	
7439-96-5	Manganese	34.4			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	1100	~~B~~	~~E~~ J	P	SD
7782-49-2	Selenium	5.9		~~N~~ J	P	MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	11600			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	1.7	~~B~~	J	P	
7440-66-6	Zinc	29.1			P	

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW19UW-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

JAC 72610

Matrix (soil/water): WATER Lab Sample ID: 1003136-15

Level (low/med): LOW Date Received: 3/19/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200 ~~155~~	~~B~~	U	P	MBL
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	26.1	~~B~~	~~E~~ J	P	SD
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	24800			P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	14700			P	
7439-92-1	Lead	3.7			P	
7439-95-4	Magnesium	1890	~~B~~	J	P	SD
7439-96-5	Manganese	65.0			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	1080	~~B~~	~~E~~ J	P	SD
7782-49-2	Selenium	5.0	~~U~~	~~N~~ UJ	P	MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	12800			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	26.2			P	

Xlcorr JAC 72610

JAC 72610

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW26DW-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

JAC 7/2010

Matrix (soil/water): WATER Lab Sample ID: 1003136-18

Level (low/med): LOW Date Received: 3/19/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	284			P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	5.0	~~B~~	~~E~~ J	P	SD
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	54700			P	
7440-47-3	Chromium	6.9	~~B~~	J	P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	1080			P	
7439-92-1	Lead	3.9			P	
7439-95-4	Magnesium	1980	~~B~~	J	P	
7439-96-5	Manganese	43.3			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	2090	~~B~~	~~E~~ J	P	SD
7782-49-2	Selenium	5.0	~~U~~	~~N~~ UJ	P	MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	48000			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	1.6	~~B~~	J	P	
7440-66-6	Zinc	20 ~~13.1~~	~~B~~	U	P	FBL

JAC 7/2010

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW26IW ~ 10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix (soil/water): WATER Lab Sample ID: 1003136-17

Level (low/med): LOW Date Received: 3/19/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200 ~~127~~	~~B~~	U	P	MBL
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	20.2	~~B~~	~~E~~ J	P	SD
7440-41-7	Beryllium	5.0 ~~0.96~~	~~B~~	U	P	MBL
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	39500			P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	314			P	
7439-92-1	Lead	3.1			P	
7439-95-4	Magnesium	1840	~~B~~	J	P	
7439-96-5	Manganese	50.1			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	1520	~~B~~	~~E~~ J	P	SD
7782-49-2	Selenium	5.0	~~U~~	~~N~~ UJ	P	MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	24300			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	20 ~~2.7~~	~~B~~	U	P	FQ

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-SW01 ~10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

JAC 72610

Matrix (soil/water): WATER Lab Sample ID: 1003136-03

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200 ~~124~~	~~B~~	U	P	MBL
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	26.5	~~B~~	~~E~~ J	P	SD
7440-41-7	Beryllium	5.0 1.3	~~B~~	U	P	MBL
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	2370	~~B~~	J	P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	31.7	~~B~~	J	P	
7439-92-1	Lead	2.5	~~B~~	J	P	
7439-95-4	Magnesium	1930	~~B~~	J	P	
7439-96-5	Manganese	10.2		J	P	FD
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	553	~~B~~	~~E~~ J	P	SD
7782-49-2	Selenium	5.5		~~N~~ J	P	MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	13300			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	20 ~~3.7~~	~~B~~	U	P	FBL

JAC 72610

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-SWO1D - 10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix (soil/water): WATER Lab Sample ID: 1003136-04

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200 ~~79.1~~	~~B~~	U	P	MBL
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	23.6	~~B~~	~~E~~ J	P	SD
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	3420	~~B~~	J	P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	96.5	~~B~~	J	P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	2150	~~B~~	J	P	
7439-96-5	Manganese	17.1		J	P	FD
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	652	~~B~~	~~E~~ J	P	SD
7782-49-2	Selenium	4.0	~~B~~	~~N~~ J	P	MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	15500			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	20 ~~17.5~~	~~B~~	U	P	FBL

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

141

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-SW02-10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix (soil/water): WATER Lab Sample ID: 1003136-08

Level (low/med): LOW Date Received: 3/19/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200 ~~77.0~~	~~B~~	U	P	MBL
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	20.0	~~B~~	~~E~~ J	P	SD
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	4300	~~B~~	J	P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	101			P	
7439-92-1	Lead	2.9	~~B~~	J	P	
7439-95-4	Magnesium	5000 ~~4890~~	~~B~~	U	P	MBL
7439-96-5	Manganese	18.4			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	2080	~~B~~	~~E~~ J	P	SD
7782-49-2	Selenium	6.2		~~N~~ J	P	MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	56800			P	
7440-28-0	Thallium	6.9	~~B~~	J	P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	20 ~~3.5~~	~~B~~	U	P	FBL

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-SW03 - 10A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

JAC 7/2/10

Matrix (soil/water): WATER Lab Sample ID: 1003136-10

Level (low/med): LOW Date Received: 3/19/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	474			P	
7440-36-0	Antimony	10.0	U		P	
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	32.3	~~B~~	~~E~~ J	P	SD
7440-41-7	Beryllium	5.0 ~~0.87~~	~~B~~	U	P	MSL
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	3060	~~B~~	J	P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	752			P	
7439-92-1	Lead	2.3	~~B~~	J	P	
7439-95-4	Magnesium	1210	~~B~~	J	P	
7439-96-5	Manganese	27.5			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	708	~~B~~	~~E~~ J	P	SD
7782-49-2	Selenium	5.0	~~U~~	~~N~~ R	P	UJ MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	7720			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	0.71	~~B~~	J	P	
7440-66-6	Zinc	104			P	

Xicarr JAC 7/2/10

JAC 7/2/10

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-EB01-031410-GW

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix (soil/water): WATER Lab Sample ID: 1003136-01

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	72.9	B	J	P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U		P
7440-41-7	Beryllium	0.76	B	J	P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	5.0	U		P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	5000	U		P
7440-28-0	Thallium	6.3	B	J	P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	20.0	U		P

OT

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1R19-EB01-031510-GW

JAC 72610

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix (soil/water): WATER Lab Sample ID: 1003136-12

Level (low/med): LOW Date Received: 3/19/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U	~~E~~	P
7440-41-7	Beryllium	0.57	~~B~~	J	P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U	~~E~~	P
7782-49-2	Selenium	5.0	U	~~N~~	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	5000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	20.0	U		P

JAC 72610

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

145

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IRG9-EB01-031510-SD

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix (soil/water): WATER Lab Sample ID: 1003136-11

Level (low/med): LOW Date Received: 3/~~17~~ 19/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	4.4	~~B~~	J	P
7440-39-3	Barium	200	U	~~E~~	P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U	~~E~~	P
7782-49-2	Selenium	5.0	U	~~N~~	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	5000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	20.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1R69-EB01-031610-GW

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix (soil/water): WATER Lab Sample ID: 1003136-16

Level (low/med): LOW Date Received: 3/19/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U	E	P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U	E	P
7782-49-2	Selenium	5.0	U	N	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	5000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	20.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1009 - EB01-031610-SB

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix (soil/water): WATER Lab Sample ID: 1003136-09

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	44.2	~~B~~	J	P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	3.1	~~B~~	J	P
7440-39-3	Barium	200	U	~~E~~	P
7440-41-7	Beryllium	0.90	~~B~~	J	P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U	~~E~~	P
7782-49-2	Selenium	5.0	U	~~N~~	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	5000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	20.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

№ 02619

Page 1 of 2

CHAIN OF CUSTODY

CompuChem
a division of Liberty Analytical Corp.

501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Courier:
Airbill No.:
Sampling Complete? Y or N

Client/Reporting Information

Company Name: EZM-SL
Address: 7106 Crossroads Blvd Suite 227
City / State / Zip: Brentwood TN 37027
Project Contact: Jeff Boyce / John Hines
Phone #: 615-218-9056 / 615-373-7350
Sampler's Name: Jeff Boyce

Project Information

Project Name: DURACELL
Sampling Location: Lexington, NC
Turnaround time: STANDARD
Batch QC or Project Specific? If Specific, which Sample ID?: Complete
Are aqueous samples field filtered for metals? Y or N: MW-D. dissolved only
Are high concentrations expected? Y or N? If yes, which ID(s)?

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

Lab Use Only (Lab ID)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other None	TCL Volatiles (3-40ml)	Cd, Cr, Mn, Ni, Zn (1-500ml)	Mn - Dissolved (1-250ml)	Nitrate, ortho-P, SO4, Chloride, Alkalinity (1-500ml)	Ammonia (1-250ml)	DOC (2-40ml)	DIOC (2-40ml)	Methane, Ethane, Ethene (2-40ml)			Matrix	Preservation Check	Residual Chlorine
1003135-15	MW-37	3-18-10	1345	GW	12	5		1	3		3	X	X		X	X	X	X	X				<2	<2 <2
1003167-01	DW-2		1600		12	5		1	3		3	X	X		X	X	X	X	X				<2	<2 <2
	DW-2 MS/MSD		1600		24	10		2	6		6	X	X		X	X	X	X	X				<2	<2 <2
~~1003135-16~~ 1003136-02	MW-36		1330		5	3		2				X	X	X									<2	<2
~~1003135-17~~ 1003136-08	MW-35		1545		2			2					X	X									<2	<2
1003135-18	DW-3		1530		4	3		1				X	X										<2	
1003135-19	MW-27	3/19/10	1035		12	5		1	3		3	X	X		X	X	X	X	X				<2	(3) <2
-20	FB100319		1210	FB	12	5		1	3		3	X	X		X	X	X	X	X				<2	<2 <2
-21	EB100319		1220	EB	12	5		1	3		3		X		X	X	X	X	X				<2	<2 <2
-22	MW-54		1115	GW	12	5		1	3		3		X		X	X	X	X	X				<2	<2 <2

Lab Use Only

Sample Unpacked By: K Manning
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or N
625 & Phenol samples checked for chlorine? Y or N
608 samples checked for pH between 5.0-9.0? Y or N

Comments

Sample Custody

Relinquished by: Jeff Boyce EZM	Date/Time: 3/19/10 / 1445	Received by: [illegible]	Date/Time: 3-19-10 / 1445
Relinquished by:	Date/Time:	Received by: K Manning	Date/Time: 3-19-10 / 1700
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 2.4 °C

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer SN0010

№ 009758

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CHAIN OF CUSTODY

CompuChem
a division of Liberty Analytical Corp.

501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Courier:
Airbill No.:
Sampling Complete? Y or N

Client/Reporting Information

Company Name: ERM-SE
Address: 7106 Crossroads Blvd Suite 228
City: Brentwood State: TN Zip: 37027
Project Contact: Jeff Boyce
Phone #: 615-218-5056
Sampler's Name: Jeff Boyce

Project Information

Project Name: Duracell
Sampling Location: Lexington, NC
Turnaround time: STANDARD
Batch QC or Project Specific? If Specific, which Sample ID? - Composite
Are aqueous samples field filtered for metals? Y or N: Mn - Dissolved only
Are high concentrations expected? Y or N? If yes, which ID(s)?

Requested Analysis (include method and bottle type)

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other None	TCL-Volatiles	Cd, Cr, Mn, Hg, Zn	Mn - Dissolved	Nitrate, ortho-P, SO4, Chloride, Alkalinity	Ammonia	DOC	DIOC	Methane, Ethane, Ethene			pH/Sample Info (Lab Use) Metals	Ammonia	DOC
1003135-24	TB 20100319	31910	0800	TB	2	2						✓												
1003135-23	MW-15	31910	1410	GW	12	5		1	3			✓	✓		✓	✓	✓	✓	✓			<2	<2	<2

Lab Use Only

Sample Unpacked By: K. Manning
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or N/A
625 & Phenol samples checked for chlorine? Y or N/A
608 samples checked for pH between 5.0-9.0? Y or N/A

Comments

Sample Custody

Relinquished by: Jeff Boyce ERM	Date/Time: 31910 / 1445	Received by: Eli Curler	Date/Time: 3-19-10 / 14:45
Relinquished by:	Date/Time:	Received by: K. Manning	Date/Time: 3/19/10 1700
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 4.9 °C

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer

CompuChem
a division of Liberty Analytical Corporation

QUALITY ASSURANCE NOTICE

CompuChem ID # _____
Client ID # MW-27
Case # _____
Type of Analysis Ammonia
Receipt Date 3/19/10

The pH reading for the sample above was 3 : the required pH level is <2.

A CompuChem Project Manager contacted the client who instructed the laboratory to:

Preserve in-house ✓

Note: For samples preserved in house, certain clients require that the maximum amount of preservative added to a sample in an SDG also be added to the associated field or equipment blank. If neither blank is present, the appropriate laboratory must be notified so the proper amount of preservation can be added to the method blank.

Analyze - qualify with notice ✓

Dispose - client will resample _____

Subcontract lab to preserve _____

Project Manager [signature] Date 3/19/10

68764

Preservation Type 10% Sulfuric Acid Preservative Lot Number 7664-19-4

Preserved By [signature] Date 3/19/10

QAN-R-2
020529

QAN-R-2 052902 Hc

Data Completeness

The data package was received complete and intact. Resubmissions were not required. (SW846 Method 8260B)

Laboratory: CompuChem

Holding Times

Sampling Date: 3 14-17 10
Received Date: 3 17-19 10
Analysis Dates: 3 25-27 10

Cooler Temp: 0.1-5.9°C

All prep and analysis holding time requirements were met.

Calibrations

Mass assignments were verified by the injection of BFB.

The initial and continuing calibrations required qualifications due to high %D values and low RRFs; see attached FormVI and VIIs.

Internal Standards

All criteria met.

Blank Summary

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying criteria.
- Qualification/Action codes where applied as stated in table below:
-

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Storage, Field, Trip, Instrument	Detects	Not detected	No qualifications
	< CRQL*	< CRQL*	Report CRQL value with a U
		> CRQL*	Use professional judgment
	> CRQL*	< CRQL*	Report CRQL value with a U
		> CRQL* and < blank concentration	Report the concentration for the sample with a U, or qualify the data as unusable R
		> CRQL* and > blank concentration	Use professional judgment
	= CRQL*	< CRQL*	Report CRQL value with a U
		> CRQL*	Use professional judgment
	Gross contamination	Detects	Qualify results as unusable R

*2x the CRQL for methylene chloride, 2-butanone and acetone

Method blank contamination was exhibited- qualifications were required. The associated field QC for this data package was: IR69-TB01-031310 and IR69-TB01-031910- trip blanks; IR69-EB01-031410-GW, IR69-EB01-031510-GW and IR69-EB01-031610-GW-equipment blanks; IR69-FB01-031910- field blank.

Blank Contamination and Qualification Summaries

Blank ID	Compound	Concentration	Reporting Limit
VBLKHZ	acetone	0.72J ug L	2.5 ug/L
	methylene chloride	0.029J	0.5
VBLKIB	acetone	1.6J	2.5
	methylene chloride	0.29J	0.5
IR69-TB01-031310	acetone	2.1J	2.5
IR69-EB01-031410-GW	acetone	2.8	2.5
	methylene chloride	6.3	0.5
	2-butanone	1.5J	2.5
	chloroform	1.3	0.5
	bromodichloromethane	0092J	0.5
	toluene	1.6	0.5
	m,p-xylene	0.084J	0.5
	o-xylene	0.05J	0.5
	xylene (total)	0.09J	0.5
IR69-EB01-031510-GW	acetone	2.8	2.5
	methylene chloride	1.2	0.5
	chloroform	2.2	0.5
	benzene	0.041J	0.5
	toluene	1.7	0.5
	o-xylene	0.040J	0.5
	xylene (total)	0.040J	0.5
IR69-EB01-031610-GW	acetone	6.8	2.5
	methylene chloride	6.7	0.5
	2-butanone	2.5	2.5
	chloroform	1.3	0.5
	benzene	0.1J	0.5
	bromodichloromethane	0.1J	0.5
	toluene	1.7	0.5
	ethylbenzene	0.067J	0.5
	m,p-xylene	0.14J	0.5
	xylene (total)	0.15J	0.5
IR69-FB01-031910	acetone	7.8	2.5
	methylene chloride	1.4	0.5
	2-butanone	1.8J	2.5
	chloroform	2.4	0.5
	benzene	0.17J	0.5
	toluene	2.1	0.5
	ethylbenzene	0.076J	0.5
	m,p-xylene	0.16J	0.5
	o-xylene	0.068	0.5
	xylene (total)	0.24	0.5

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Qual Code
IR69-SW01-10A, IR69-SW01D-10A, IR69-SW02-10A	acetone	U at RL	MBL
IR69-GW19IW-10A, IR69-GW19UW-10A, IR69-GW26IW-10A, IR69-SW03-10A	methylene chloride	U at RL	MBL
IR69-GW04DW-10A, IR69-GW04IW-10A, IR69-GW15DW-10A, IR69-GW19IW-10A, IR69-GW19UW-10A, IR69-GW26DW-10A, IR69-GW26IW-10A, IR69-SW03-10A	acetone	U	FBL
IR69-GW04DW-10A, IR69-GW04IW-10A, IR69-GW26DW-10A	methylene chloride	U	FBL
IR69-GW04DW-10A, IR69-GW26DW-10A	2-butanone	U at RL	FBL
IR69-GW04DW-10A, IR69-GW26DW-10A	bromodichloromethane	U at RL	FBL
IR69-GW04DW-10A	toluene	U at RL	FBL
IR69-GW04DW-10A	ethylbenzene	U at RL	FBL
IR69-GW04IW-10A	2-butanone	U at RL	FBL
IR69-GW04IW-10A, IR69-GW15DW-10A, IR69-GW19IW-10A, IR69-GW19UW-10A, IR69-GW26-DW-10A, IR69-GW261W-10A, IR69-SW01-10A, IR69-SW01D-10A, IR69-SW03-10A	toluene	U at RL	FBL
IR69-GW04IW-10A, IR69-GW26DW-10A	ethylbenzene	U at RL	FBL
IR69-GW04IW-10A	m,p-xylene	U at RL	FBL
IR69-GW04IW-10A, IR69-GW19UW-10A	o-xylene	U at RL	FBL
IR69-GW04IW-10A, IR69-GW19UW-10A	xylene (total)	U at RL	FBL
IR69-GW19IW-10A, IR69-GW26DW-10A	benzene	U at RL	FBL
IR69-GW26IW-10A, IR69-SW02-10A	chloroform	U	FBL

Surrogates

All criteria were met.

Laboratory Control Sample

No qualifications required.

Matrix Spike/Spike Duplicate Samples

An MS/MSD was submitted for sample IR69-SW02-10A --high recoveries for chloromethane, no positive results for this compound; therefore no qualifications required.

Field Duplicate Sample

A field duplicate was submitted for sample IR69-SW01-10A, no qualifications required.

Specific Comments:

All sample results were reported within the calibration range of the instruments. Dilutions required for samples IR69-GW04IW-10A and IR69-GW19UW-10A to obtain results within the calibration reange.

Detection limits were acceptable. Raw data and calculations were verified.

We have limited the supporting documentation, found with these worksheets, to those forms that indicate qualifications were required.

Validator Signature: _____ **Date:** 7/13/10

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Lab File ID: 0C23006-TUN171 BFB Injection Date: 03/23/10

Instrument ID: 5972HP71 BFB Injection Time: 1354

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.5
75	30.0 - 60.0% of mass 95	41.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	87.1
175	5.0 - 9.0% of mass 174	6.7 (7.7)1
176	95.0 - 101.0% of mass 174	87.8 (100.8)1
177	5.0 - 9.0% of mass 176	5.9 (6.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD001	0C23006-CAL	0C23006-CAL271	03/23/10	1426
02	VSTD0.5	0C23006-CAL	0C23006-CAL171	03/23/10	1454
03	VSTD005	0C23006-CAL	0C23006-CAL371	03/23/10	1529
04	VSTD010	0C23006-CAL	0C23006-CAL471	03/23/10	1558
05	VSTD040	0C23006-CAL	0C23006-CAL671	03/23/10	1653
06	VSTD020	0C23006-CAL	0C23006-CAL5R7	03/23/10	1721
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FORM V VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Instrument ID: 5972HP71 Calibration Date(s): 03/23/10 03/23/10

Column: SPB-624 ID: 0.32 (mm) Calibration Time(s): 1426 1721

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2	MAX %RSD OR R^2	
Dichlorodifluoromethane	AVRG		0.44620239	14.057	15.000	<-
Chloromethane	AVRG		0.36100994	2.746	15.000	
Vinyl Chloride	AVRG		0.27117386	7.702	30.000	
Bromomethane	LINR	0.16722755	5.63092314	0.9978869	0.9900000	
Chloroethane	LINR	-0.0603386	6.54621450	0.9976747	0.9900000	
Trichlorofluoromethane	LINR	0.01969996	1.55131161	0.9975274	0.9900000	<-
1,1-Dichloroethene	AVRG		0.24477705	10.725	30.000	
Carbon disulfide	AVRG		0.78788743	5.941	15.000	
1,1,2-trichloro-1,2,2-triflu	LINR	-0.0934521	7.84789519	0.9991874	0.9900000	
Acetone	AVRG		0.03088940	10.967	15.000	
Methyl acetate	AVRG		0.08808612	14.290	15.000	
Methylene Chloride	AVRG		0.20486308	10.165	15.000	
trans-1,2-Dichloroethene	AVRG		0.27927231	9.612	15.000	
Methyl-tert-butyl ether	AVRG		0.37332211	10.572	15.000	
1,1-Dichloroethane	AVRG		0.51599851	6.390	15.000	
cis-1,2-Dichloroethene	AVRG		0.28384274	9.818	15.000	
2-butanone	AVRG		0.04382008	9.656	15.000	
loroform	AVRG		0.47216297	6.803	30.000	
,1,1-Trichloroethane	AVRG		0.56371143	10.946	15.000	
Carbon Tetrachloride	LINR	-0.0416406	2.25851692	0.9999137	0.9900000	
Benzene	AVRG		0.79132627	7.551	15.000	
1,2-Dichloroethane	AVRG		0.32414982	8.542	15.000	
Trichloroethene	AVRG		0.24072169	13.706	15.000	
1,2-Dichloropropane	AVRG		0.21862784	11.311	30.000	
Bromodichloromethane	AVRG		0.32785955	9.594	15.000	
cis-1,3-Dichloropropene	AVRG		0.31123012	8.964	15.000	
4-Methyl-2-pentanone	AVRG		0.14815484	11.373	15.000	
Toluene	AVRG		0.82240060	9.405	30.000	
trans-1,3-Dichloropropene	AVRG		0.37394347	7.835	15.000	
1,1,2-Trichloroethane	AVRG		0.19052002	6.720	15.000	
Tetrachloroethene	LINR	-0.0797114	3.97616834	0.9998282	0.9900000	
2-hexanone	AVRG		0.09994493	11.002	15.000	
Dibromochloromethane	AVRG		0.26627949	7.224	15.000	
1,2-Dibromoethane	AVRG		0.25346719	8.442	15.000	
Chlorobenzene	AVRG		1.04476959	10.092	15.000	
Ethylbenzene	AVRG		0.60451954	12.188	30.000	
m,p-Xylene	AVRG		0.75237608	12.316	15.000	
o-Xylene	AVRG		0.70244343	12.352	15.000	
Styrene	AVRG		1.07301015	8.083	15.000	
Bromoform	AVRG		0.16166090	7.882	15.000	
Isopropyl Benzene	AVRG		1.97002351	12.701	15.000	
1,1,2,2-Tetrachloroethane	AVRG		0.49257840	7.213	15.000	
1,3-Dichlorobenzene	AVRG		1.56833663	11.661	15.000	
1,4-Dichlorobenzene	AVRG		1.51589400	11.078	15.000	

FORM VI VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Lab File ID: 0C25007-TUN171 BFB Injection Date: 03/25/10

Instrument ID: 5972HP71 BFB Injection Time: 1335

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.8
75	30.0 - 60.0% of mass 95	39.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	77.9
175	5.0 - 9.0% of mass 174	5.9 (7.6)1
176	95.0 - 101.0% of mass 174	76.7 (98.4)1
177	5.0 - 9.0% of mass 176	5.0 (6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005	0C25007-CCV	0C25007-CCV171	03/25/10	1404
02	VBLKHZ	0032517-BLK	0032517-BLK171	03/25/10	1439
03	VHZLCS	0032517-BS1	0032517-BS171	03/25/10	1522
04	VHZLCSD	0032517-BSD	0032517-BSD171	03/25/10	1550
05	EB01-031410-GW	1003136-01	1003136-0171	03/25/10	1721
06	IR69-GW04DW	1003136-02	1003136-0271	03/25/10	1748
07	IR69-SW01	1003136-03	1003136-0371	03/25/10	1823
08	IR69-SW01D	1003136-04	1003136-0471	03/25/10	1851
09	IR69-TB01-031310	1003136-05	1003136-0571	03/25/10	1919
10	IR69-TB01-031710	1003136-06	1003136-0671	03/25/10	1946
11	IR69-GW15DW	1003136-07	1003136-0771	03/25/10	2014
12	IR69-SW02	1003136-08	1003136-0871	03/25/10	2042
13	IR69-SW03	1003136-10	1003136-1071	03/25/10	2137
14	EB01-031510-SD	1003136-11	1003136-1171	03/25/10	2205
15	IR69-GW04IW	1003136-13	1003136-1371	03/25/10	2300
16	IR69-GW19UW	1003136-15	1003136-1571	03/25/10	2356
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FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Instrument ID: 5972HP71 Calibration Date: 03/25/10 Time: 1404

Lab File ID: 0C25007-CCV171 Init. Calib. Date(s): 03/23/10 03/23/10

Init. Calib. Times: 1426 1721

GC Column: SPB-624 ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF5 or AMOUNT	CCAL RRF5	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dichlorodifluoromethane	0.4462000	0.4115968	0.4115968	0.001	-7.76	90.00	AVRG
Chloromethane	0.3610100	0.3476679	0.3476679	0.1	-3.70	90.00	AVRG
Vinyl Chloride	0.2711700	0.2744234	0.2744234	0.001	1.20	20.00	AVRG
Bromomethane	135.61649	125.00000	0.1629758	0.001	8.49	90.00	LINR
Chloroethane	99.961621	125.00000	0.1313785	0.001	-20.03	90.00	LINR
Trichlorofluoromethane	134.56116	125.00000	0.6812231	0.001	7.65	90.00	LINR
1,1-Dichloroethene	0.2447800	0.2204708	0.2204708	0.001	-9.93	20.00	AVRG
Carbon disulfide	0.7878900	0.6121417	0.6121417	0.001	-22.31	90.00	AVRG
1,1,2-trichloro-1,2,2-triflu	113.44906	125.00000	0.1275558	0.001	-9.24	90.00	LINR
Acetone	0.0308900	0.0303676	0.0303676	0.001	-1.69	90.00	AVRG
Methyl acetate	0.0880800	0.0860623	0.0860623	0.001	-2.29	90.00	AVRG
Methylene Chloride	0.2048600	0.1821975	0.1821975	0.001	-11.06	90.00	AVRG
trans-1,2-Dichloroethene	0.2792700	0.2576361	0.2576361	0.001	-7.75	90.00	AVRG
Methyl-tert-butyl ether	0.3733200	0.3529655	0.3529655	0.001	-5.45	90.00	AVRG
1-Dichloroethane	0.5160000	0.4348063	0.4348063	0.1	-15.74	90.00	AVRG
s-1,2-Dichloroethene	0.2838400	0.2685735	0.2685735	0.001	-5.38	90.00	AVRG
2-butanone	0.0438200	0.0432098	0.0432098	0.001	-1.39	90.00	AVRG
Chloroform	0.4721600	0.4500652	0.4500652	0.001	-4.68	20.00	AVRG
1,1,1-Trichloroethane	0.5637100	0.5211422	0.5211422	0.001	-7.55	90.00	AVRG
Carbon Tetrachloride	111.65184	125.00000	0.4139244	0.001	-10.68	90.00	LINR
Benzene	0.7913200	0.6709599	0.6709599	0.001	-15.21	90.00	AVRG
1,2-Dichloroethane	0.3241500	0.3157551	0.3157551	0.001	-2.59	90.00	AVRG
Trichloroethene	0.2407200	0.1958196	0.1958196	0.001	-18.65	90.00	AVRG
1,2-Dichloropropane	0.2186300	0.1947668	0.1947668	0.001	-10.91	20.00	AVRG
Bromodichloromethane	0.3278600	0.3144637	0.3144637	0.001	-4.08	90.00	AVRG
cis-1,3-Dichloropropene	0.3112300	0.2778773	0.2778773	0.001	-10.72	90.00	AVRG
4-Methyl-2-pentanone	0.1481500	0.1682544	0.1682544	0.001	13.57	90.00	AVRG
Toluene	0.8224000	0.8259126	0.8259126	0.001	0.43	20.00	AVRG
trans-1,3-Dichloropropene	0.3739400	0.3733438	0.3733438	0.001	-0.16	90.00	AVRG
1,1,2-Trichloroethane	0.1905200	0.2096978	0.2096978	0.001	10.07	90.00	AVRG
Tetrachloroethene	130.43204	125.00000	0.2824749	0.001	4.34	90.00	LINR
2-hexanone	0.0999400	0.1189810	0.1189810	0.001	19.05	90.00	AVRG
Dibromochloromethane	0.2662800	0.2677155	0.2677155	0.001	0.54	90.00	AVRG
1,2-Dibromoethane	0.2534600	0.2669178	0.2669178	0.001	5.31	90.00	AVRG
Chlorobenzene	1.0447700	1.0051987	1.0051987	0.3	-3.79	90.00	AVRG
Ethylbenzene	0.6045200	0.5936391	0.5936391	0.001	-1.80	20.00	AVRG
m,p-Xylene	0.7523800	0.7253927	0.7253927	0.001	-3.59	90.00	AVRG
o-Xylene	0.7024400	0.7057225	0.7057225	0.001	0.47	90.00	AVRG
Styrene	1.0730100	1.1117516	1.1117516	0.001	3.61	90.00	AVRG
Bromoform	0.1616600	0.1848288	0.1848288	0.1	14.33	90.00	AVRG
Isopropyl Benzene	1.9700200	1.8892120	1.8892120	0.001	-4.10	90.00	AVRG
1,1,2,2-Tetrachloroethane	0.4925800	0.4633356	0.4633356	0.3	-5.94	90.00	AVRG

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Lab File ID: 0C26008-TUN171 BFB Injection Date: 03/26/10

Instrument ID: 5972HP71 BFB Injection Time: 1138

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.2
75	30.0 - 60.0% of mass 95	36.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	80.6
175	5.0 - 9.0% of mass 174	6.3 (7.8)1
176	95.0 - 101.0% of mass 174	79.7 (98.9)1
177	5.0 - 9.0% of mass 176	5.2 (6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005	0C26008-CCV	0C26008-CCV171	03/26/10	1204
02	VBLKIB	0032606-BLK	0032606-BLK171	03/26/10	1253
03	VIBLCS	0032606-BS1	0032606-BS171	03/26/10	1351
04	VIBLCSD	0032606-BSD	0032606-BSD171	03/26/10	1419
05	EB01-031510-GW	1003136-12	1003136-12R71	03/26/10	1835
06	IR69-GW04IWDL	1003136-13R	1003136-13D71	03/26/10	1903
07	EB01-031610-SB	1003136-09	1003136-09R71	03/26/10	1931
08	IR69-GW19IW	1003136-14	1003136-14R71	03/26/10	1959
09	EB01-031610-GW	1003136-16	1003136-16R71	03/26/10	2054
10	IR69-GW26IW	1003136-17	1003136-17D71	03/26/10	2122
11	IR69-GW26DW	1003136-18	1003136-18R71	03/26/10	2150
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FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Instrument ID: 5972HP71 Calibration Date: 03/26/10 Time: 1204

Lab File ID: 0C26008-CCV171 Init. Calib. Date(s): 03/23/10 03/23/10

Init. Calib. Times: 1426 1721

GC Column: SPB-624 ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF5 or AMOUNT	CCAL RRF5	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dichlorodifluoromethane	0.4462000	0.3432717	0.3432717	0.001	-23.07	90.00	AVRG
Chloromethane	0.3610100	0.3353825	0.3353825	0.1	-7.10	90.00	AVRG
Vinyl Chloride	0.2711700	0.2600247	0.2600247	0.001	-4.11	20.00	AVRG
Bromomethane	140.66606	125.00000	0.1701499	0.001	12.53	90.00	LINR
Chloroethane	89.999163	125.00000	0.1192035	0.001	-28.00	90.00	LINR
Trichlorofluoromethane	119.17905	125.00000	0.6018987	0.001	-4.66	90.00	LINR
1,1-Dichloroethene	0.2447800	0.2181961	0.2181961	0.001	-10.86	20.00	AVRG
Carbon disulfide	0.7878900	0.6130442	0.6130442	0.001	-22.19	90.00	AVRG
1,1,2-trichloro-1,2,2-triflu	103.01690	125.00000	0.1169215	0.001	-17.59	90.00	LINR
Acetone	0.0308900	0.0278652	0.0278652	0.001	-9.79	90.00	AVRG
Methyl acetate	0.0880800	0.0770398	0.0770398	0.001	-12.53	90.00	AVRG
Methylene Chloride	0.2048600	0.1807851	0.1807851	0.001	-11.75	90.00	AVRG
trans-1,2-Dichloroethene	0.2792700	0.2632000	0.2632000	0.001	-5.75	90.00	AVRG
Methyl-tert-butyl ether	0.3733200	0.3316369	0.3316369	0.001	-11.16	90.00	AVRG
1-Dichloroethane	0.5160000	0.4131376	0.4131376	0.1	-19.93	90.00	AVRG
cis-1,2-Dichloroethene	0.2838400	0.2698000	0.2698000	0.001	-4.95	90.00	AVRG
2-butanone	0.0438200	0.0418603	0.0418603	0.001	-4.47	90.00	AVRG
Chloroform	0.4721600	0.4211360	0.4211360	0.001	-10.81	20.00	AVRG
1,1,1-Trichloroethane	0.5637100	0.4895099	0.4895099	0.001	-13.16	90.00	AVRG
Carbon Tetrachloride	103.29805	125.00000	0.3843341	0.001	-17.36	90.00	LINR
Benzene	0.7913200	0.6682329	0.6682329	0.001	-15.55	90.00	AVRG
1,2-Dichloroethane	0.3241500	0.2893774	0.2893774	0.001	-10.73	90.00	AVRG
Trichloroethene	0.2407200	0.1986317	0.1986317	0.001	-17.48	90.00	AVRG
1,2-Dichloropropane	0.2186300	0.1857144	0.1857144	0.001	-15.06	20.00	AVRG
Bromodichloromethane	0.3278600	0.2930586	0.2930586	0.001	-10.61	90.00	AVRG
cis-1,3-Dichloropropene	0.3112300	0.2636984	0.2636984	0.001	-15.27	90.00	AVRG
4-Methyl-2-pentanone	0.1481500	0.1661785	0.1661785	0.001	12.17	90.00	AVRG
Toluene	0.8224000	0.8205553	0.8205553	0.001	-0.22	20.00	AVRG
trans-1,3-Dichloropropene	0.3739400	0.3519870	0.3519870	0.001	-5.87	90.00	AVRG
1,1,2-Trichloroethane	0.1905200	0.2106047	0.2106047	0.001	10.54	90.00	AVRG
Tetrachloroethene	130.29815	125.00000	0.2822055	0.001	4.24	90.00	LINR
2-hexanone	0.0999400	0.1170281	0.1170281	0.001	17.10	90.00	AVRG
Dibromochloromethane	0.2662800	0.2571116	0.2571116	0.001	-3.44	90.00	AVRG
1,2-Dibromoethane	0.2534600	0.2638366	0.2638366	0.001	4.09	90.00	AVRG
Chlorobenzene	1.0447700	0.9981496	0.9981496	0.3	-4.46	90.00	AVRG
Ethylbenzene	0.6045200	0.5892098	0.5892098	0.001	-2.53	20.00	AVRG
m,p-Xylene	0.7523800	0.7440421	0.7440421	0.001	-1.11	90.00	AVRG
o-Xylene	0.7024400	0.6976484	0.6976484	0.001	-0.68	90.00	AVRG
Styrene	1.0730100	1.0812390	1.0812390	0.001	0.77	90.00	AVRG
Bromoform	0.1616600	0.1790676	0.1790676	0.1	10.77	90.00	AVRG
Isopropyl Benzene	1.9700200	1.8679142	1.8679142	0.001	-5.18	90.00	AVRG
1,1,2,2-Tetrachloroethane	0.4925800	0.4374268	0.4374268	0.3	-11.20	90.00	AVRG

page 1 of 2

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Instrument ID: 5972HP71 Calibration Date: 03/26/10 Time: 1204

Lab File ID: 0C26008-CCV171 Init. Calib. Date(s): 03/23/10 03/23/10

Init. Calib. Times: 1426 1721

GC Column: SPB-624 ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF5 or AMOUNT	CCAL RRF5	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
1,3-Dichlorobenzene	1.5683400	1.3269207	1.3269207	0.001	-15.39	90.00	AVRG
1,4-Dichlorobenzene	1.5159000	1.2561198	1.2561198	0.001	-17.14	90.00	AVRG
1,2-Dichlorobenzene	1.2324200	1.0559200	1.0559200	0.001	-14.32	90.00	AVRG
1,2-Dibromo-3-Chloropropane	102.47368	125.00000	0.0743263	0.001	-18.02	90.00	LINR
1,2,4-Trichlorobenzene	110.14206	125.00000	1.1003797	0.001	-11.89	90.00	LINR
Xylene (total)	0.7024400	0.6976484	0.6976484	0.001	-0.68	90.00	AVRG
Cyclohexane	94.320246	125.00000	0.2295436	0.001	-24.54	90.00	LINR
Methylcyclohexane	92.006121	125.00000	0.2585956	0.001	-26.40	90.00	LINR
Dibromofluoromethane	0.3374700	0.3069695	0.3069695	0.001	-9.04	90.00	AVRG
1,2-Dichloroethane-d4	114.11791	125.00000	0.2301093	0.001	-8.70	90.00	LINR
Toluene-d8	1.3529200	1.4247216	1.4247216	0.001	5.31	90.00	AVRG
Bromofluorobenzene	1.4270100	1.3473722	1.3473722	0.001	-5.58	90.00	AVRG

FORM VII VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Lab File ID: 0C26014-TUN171 BFB Injection Date: 03/26/10

Instrument ID: 5972HP71 BFB Injection Time: 2330

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.4
75	30.0 - 60.0% of mass 95	37.6
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.1
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	88.5
175	5.0 - 9.0% of mass 174	6.5 (7.4)1
176	95.0 - 101.0% of mass 174	87.5 (98.9)1
177	5.0 - 9.0% of mass 176	5.8 (6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005	0C26014-CCV	0C26014-CCV171	03/26/10	2356
02	VBLKSC	0032649-BLK	0032649-BLK171	03/27/10	0033
03	VSCLCS	0032649-BS1	0032649-BS171	03/27/10	0101
04	VSCLCSD	0032649-BSD	0032649-BSD171	03/27/10	0129
05	IR69-GW19UWDL	1003136-15R	1003136-15D371	03/27/10	0158
06	IR69-TB01-031910	1003136-19	1003136-19R71	03/27/10	0227
07	IR69-SW02MS	0032649-MS1	0032649-MS171	03/27/10	0256
08	IR69-SW02MSD	0032649-MSD	0032649-MSD171	03/27/10	0324
09					
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FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Instrument ID: 5972HP71 Calibration Date: 03/26/10 Time: 2356

Lab File ID: 0C26014-CCV171 Init. Calib. Date(s): 03/23/10 03/23/10

Init. Calib. Times: 1426 1721

GC Column: SPB-624 ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF5 or AMOUNT	CCAL RRF5	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dichlorodifluoromethane	0.4462000	0.3427162	0.3427162	0.001	-23.19	90.00	AVRG
Chloromethane	0.3610100	0.3414806	0.3414806	0.1	-5.41	90.00	AVRG
Vinyl Chloride	0.2711700	0.2843000	0.2843000	0.001	4.84	20.00	AVRG
Bromomethane	142.46773	125.00000	0.1727096	0.001	13.97	90.00	LINR
Chloroethane	105.24881	125.00000	0.1378398	0.001	-15.80	90.00	LINR
Trichlorofluoromethane	118.37697	125.00000	0.5977624	0.001	-5.30	90.00	LINR
1,1-Dichloroethene	0.2447800	0.2504527	0.2504527	0.001	2.32	20.00	AVRG
Carbon disulfide	0.7878900	0.7415779	0.7415779	0.001	-5.88	90.00	AVRG
1,1,2-trichloro-1,2,2-triflu	127.64612	125.00000	0.1420280	0.001	2.12	90.00	LINR
Acetone	0.0308900	0.0274771	0.0274771	0.001	-11.05	90.00	AVRG
Methyl acetate	0.0880800	0.0889781	0.0889781	0.001	1.02	90.00	AVRG
Methylene Chloride	0.2048600	0.1963137	0.1963137	0.001	-4.17	90.00	AVRG
trans-1,2-Dichloroethene	0.2792700	0.2787733	0.2787733	0.001	-0.18	90.00	AVRG
Methyl-tert-butyl ether	0.3733200	0.3540633	0.3540633	0.001	-5.16	90.00	AVRG
1-Dichloroethane	0.5160000	0.4670163	0.4670163	0.1	-9.49	90.00	AVRG
s-1,2-Dichloroethene	0.2838400	0.2819086	0.2819086	0.001	-0.68	90.00	AVRG
2-butanone	0.0438200	0.0404188	0.0404188	0.001	-7.76	90.00	AVRG
Chloroform	0.4721600	0.4333660	0.4333660	0.001	-8.22	20.00	AVRG
1,1,1-Trichloroethane	0.5637100	0.5326164	0.5326164	0.001	-5.52	90.00	AVRG
Carbon Tetrachloride	128.44188	125.00000	0.4733972	0.001	2.75	90.00	LINR
Benzene	0.7913200	0.7277270	0.7277270	0.001	-8.04	90.00	AVRG
1,2-Dichloroethane	0.3241500	0.2996782	0.2996782	0.001	-7.55	90.00	AVRG
Trichloroethene	0.2407200	0.2342264	0.2342264	0.001	-2.70	90.00	AVRG
1,2-Dichloropropane	0.2186300	0.2119303	0.2119303	0.001	-3.06	20.00	AVRG
Bromodichloromethane	0.3278600	0.2964741	0.2964741	0.001	-9.57	90.00	AVRG
cis-1,3-Dichloropropene	0.3112300	0.2736950	0.2736950	0.001	-12.06	90.00	AVRG
4-Methyl-2-pentanone	0.1481500	0.1220946	0.1220946	0.001	-17.59	90.00	AVRG
Toluene	0.8224000	0.7256639	0.7256639	0.001	-11.76	20.00	AVRG
trans-1,3-Dichloropropene	0.3739400	0.2979129	0.2979129	0.001	-20.33	90.00	AVRG
1,1,2-Trichloroethane	0.1905200	0.1659403	0.1659403	0.001	-12.90	90.00	AVRG
Tetrachloroethene	123.94729	125.00000	0.2694277	0.001	-0.84	90.00	LINR
2-hexanone	0.0999400	0.0861954	0.0861954	0.001	-13.75	90.00	AVRG
Dibromochloromethane	0.2662800	0.2216653	0.2216653	0.001	-16.75	90.00	AVRG
1,2-Dibromoethane	0.2534600	0.2195545	0.2195545	0.001	-13.38	90.00	AVRG
Chlorobenzene	1.0447700	0.9335213	0.9335213	0.3	-10.65	90.00	AVRG
Ethylbenzene	0.6045200	0.5533567	0.5533567	0.001	-8.46	20.00	AVRG
m,p-Xylene	0.7523800	0.6852239	0.6852239	0.001	-8.92	90.00	AVRG
o-Xylene	0.7024400	0.6511835	0.6511835	0.001	-7.30	90.00	AVRG
Styrene	1.0730100	0.9587524	0.9587524	0.001	-10.65	90.00	AVRG
Bromoform	0.1616600	0.1488608	0.1488608	0.1	-7.92	90.00	AVRG
Isopropyl Benzene	1.9700200	1.7871342	1.7871342	0.001	-9.28	90.00	AVRG
1,1,2,2-Tetrachloroethane	0.4925800	0.4167321	0.4167321	0.3	-15.40	90.00	AVRG

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Instrument ID: 5972HP71 Calibration Date: 03/26/10 Time: 2356

Lab File ID: 0C26014-CCV171 Init. Calib. Date(s): 03/23/10 03/23/10

Init. Calib. Times: 1426 1721

GC Column: SPB-624 ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF5 or AMOUNT	CCAL RRF5	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
1,3-Dichlorobenzene	1.5683400	1.2691178	1.2691178	0.001	-19.08	90.00	AVRG
1,4-Dichlorobenzene	1.5159000	1.2678614	1.2678614	0.001	-16.36	90.00	AVRG
1,2-Dichlorobenzene	1.2324200	1.0443518	1.0443518	0.001	-15.26	90.00	AVRG
1,2-Dibromo-3-Chloropropane	98.312492	125.00000	0.0715270	0.001	-21.35	90.00	LINR
1,2,4-Trichlorobenzene	119.93509	125.00000	1.1958283	0.001	-4.05	90.00	LINR
Xylene (total)	0.7024400	0.6511835	0.6511835	0.001	-7.30	90.00	AVRG
Cyclohexane	134.82939	125.00000	0.3120727	0.001	7.86	90.00	LINR
Methylcyclohexane	134.82588	125.00000	0.3568331	0.001	7.86	90.00	LINR
Dibromofluoromethane	0.3374700	0.3455331	0.3455331	0.001	2.39	90.00	AVRG
1,2-Dichloroethane-d4	124.73919	125.00000	0.2509846	0.001	-0.21	90.00	LINR
Toluene-d8	1.3529200	1.1609775	1.1609775	0.001	-14.19	90.00	AVRG
Bromofluorobenzene	1.4270100	1.2872889	1.2872889	0.001	-9.79	90.00	AVRG

FORM VII VOA

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKHZ

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Lab File ID: 0032517-BLK171_D Lab Sample ID: 0032517-BLK1

Date Analyzed: 03/25/10 Time Analyzed: 1439

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

Instrument ID: 5972HP71

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VHZLCS	0032517-BS1	0032517-BS17	1522
02	VHZLCSD	0032517-BSD1	0032517-BSD1	1550
03	EB01-031410-GW	1003136-01	1003136-0171	1721
04	IR69-GW04DW	1003136-02	1003136-0271	1748
05	IR69-SW01	1003136-03	1003136-0371	1823
06	IR69-SW01D	1003136-04	1003136-0471	1851
07	IR69-TB01-031310	1003136-05	1003136-0571	1919
08	IR69-TB01-031710	1003136-06	1003136-0671	1946
09	IR69-GW15DW	1003136-07	1003136-0771	2014
10	IR69-SW02	1003136-08	1003136-0871	2042
11	IR69-SW03	1003136-10	1003136-1071	2137
12	EB01-031510-SD	1003136-11	1003136-1171	2205
13	IR69-GW04IW	1003136-13	1003136-1371	2300
14	IR69-GW19UW	1003136-15	1003136-1571	2356
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30				

COMMENTS:

acetone 0.72J µg/l
MC 0.029J

FORM IV VOA

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKIB

ab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Lab File ID: 0032606-BLK171 Lab Sample ID: 0032606-BLK1

Date Analyzed: 03/26/10 Time Analyzed: 1253

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

Instrument ID: 5972HP71

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VIBLCS	0032606-BS1	0032606-BS17	1351
02	VIBLCSD	0032606-BSD1	0032606-BSD1	1419
03	EB01-031510-GW	1003136-12	1003136-12R7	1835
04	IR69-GW04IWDL	1003136-13RE1	1003136-13D7	1903
05	EB01-031610-SB	1003136-09	1003136-09R7	1931
06	IR69-GW19IW	1003136-14	1003136-14R7	1959
07	EB01-031610-GW	1003136-16	1003136-16R7	2054
08	IR69-GW26IW	1003136-17	1003136-17D7	2122
09	IR69-GW26DW	1003136-18	1003136-18R7	2150
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COMMENTS: acetone 1.6 J ug/L
MC 0.29 J

FORM IV VOA

Initial Calibration Date: 3/23/2010

RRF and %RSD Calculations:

Compound Name: vinyl chloride
Lab Value: 0.2321

Area of Compound	1465977
Area of Internal STD	789488
Conc. of Internal STD	125
Conc. of Compound	1000
Calculated RRF	0.232

Compound Name: 2-hexanone
Lab Value: 11.0

RRF of STD 1	0.1155
RRF of STD 2	0.0900
RRF of STD 3	0.0970
RRF of STD 4	0.1110
RRF of STD 5	0.0975
RRF of STD 6	0.0886
Calculated % RSD	11.0

Continuing Calibration File ID: 3/25/2010

RRF and %D Calculations:

Compound Name: methylene chloride
Lab Value: 0.182

Area of Compound	109195
Area of Internal STD	599322
Conc. of Internal STD	125
Conc. of Compound	125
Calculated RRF	0.182

Compound Name: toluene
Lab Value: 0.4

Average RRF	0.822
Calibration Check RRF	0.826
Calculated % D	-0.4

SAMPLE CALCULATION

Sample ID: EB01-031410-GW
Standard ID: 3/23/2010
Compound: acetone
Concnetration: 2 8 ug/L

	Water (ug/L)	Soil (ug/Kg)	Soil ug/Kg)
Area of Compound	9787		
Area of Internal STD	559606		
Conc. of Internal (ng)	125		
RRF of Compound	0.03089		
Dilution Factor	1		
Weight of Sample	NA	25	
Volume of Sample	25	NA	
% Moisture	NA	0.79	
Aliquot of sample	NA	NA	
Concentration	2.83	#DIV/0!	#DIV/0!

	RT of Internal STD	RT of Compound	RRT
Sample	11.073	7.684	0.694
Standard	11.075	7.686	0.694

CompuChem

A division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1003136
PROTOCOL: SW-846
REVISED

SAMPLE IDENTIFICATIONS:

IR69-SW01	**IR69-SW01D**	**EB01-031410-GW**	**IR69-GW04DW**
IR69-GW15DW	**IR69-SW02**	**IR69-TB01-031310**	**IR69-TB01-031710**
EB01-031510-SD	**EB01-031510-GW**	**EB-031610-SB**	**IR69-SW03**
IR69-GW19UW	**EB01-031610-GW**	**IR69-GW04IW**	**IR69-GW19IW**
IR69-TB01-031910		**IR69-GW26IW**	**IR69-GW26DW**

The 19 aqueous samples listed above were received intact, properly refrigerated between 0.1°C and 5.9°C, with proper documentation, in sealed shipping containers, on March 17 through 19, 2010. The Trip Blanks were scheduled for the requested analyses of the volatile fraction only and the Equipment Blanks, IR69-SW01, IR69-SW01D, IR69-SW02 and IR69-SW03 were scheduled for the requested analyses of the volatile, semivolatile and pesticide fractions. All remaining samples were scheduled for the requested analyses of the volatile, semivolatile, RSK and pesticide fractions. SW-846, 3rd Edition, Update 3, Method 8260B was used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices for SDG 1003136 are included in the sample data sections.

Analysis holding time requirements were met for all of these samples. The pH values of the samples were equal to 1. There were volatile Project/Target Compound List (TCL) analytes identified above the Contract Required Quantitation Limit (CRQL) in thirteen of these nineteen samples. All of the system monitoring compounds met recovery criteria in the analyses of the sample. All of the internal standards met response and retention time criteria in the analyses of the sample.

In the initial analyses of samples IR69-GW04IW and IR69-GW19UW, the on-column amounts of some target compounds exceeded the instrument's analytical range as defined by the highest concentration level of the Initial Calibration. The samples were reanalyzed using smaller aliquots of raw sample to bring the on-column amounts into range. We have reported both analyses of samples IR69-GW04IW and IR69-GW19UW. Due to the results of a screen, sample IR89-GW26IW was initially analyzed using a dilution of raw sample. The screen Reconstructed Ion Chromatogram (RIC) is included in the sample data package immediately following the RIC for the sample's reportable run.

All Bromofluorobenzene (BFB) abundance criteria were met for tunes associated to this SDG. All QC criteria were met for all initial and continuing calibration standards associated to this SDG. Manual integrations were performed on one or more of the process files associated with this SDG including, EB-031610-GW (1,2-Dichloromethane-d4) and VSCLCSD (Chloromethane). The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG. The associated method blanks met all quality control criteria. The associated Laboratory Control Samples (LCS/LCSD) met overall accuracy criteria. However, VHZLCS/VHZLCSD were bias high for Chloromethane and VIBLCS/VIBLCSD were bias high for Chloromethane and 2-Hexanone. IR69-SW02 was used as the original to prepare the duplicate matrix spikes as requested. The associated duplicate matrix spikes met most of the advisory accuracy and precision criteria.

AMENDED DATA

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Quentisha L. Forrester
Analyst II
April 13, 2010

AMENDED DATA

Data Completeness

The data package was received complete and intact. Resubmissions were not required. (SW846 Method 8270C)
All field sample and QC blank IDs were missing the first four (IR69) and or the last four (-10A) characters. The characters were added to the Form 1s in the DV reports by the data validator

Laboratory: CompuChem

Holding Times

Sampling Date: 3-14-17-10
Received Date: 3-17-19-10
Extraction Date: 3-19-20-10
Analysis Dates: 3-27-4-6-10
Cooler Temp: 0.1-5.9°C

All prep and analysis holding time requirements were met.

Calibrations

Mass assignments were verified by the injection of DFTPP.
The continuing calibrations required qualifications due to high %D values; see attached Form VIIs.

Internal Standards

All criteria met.

Blank Summary

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying criteria.
- Qualification Action codes where applied as stated in table below:

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Field	Detects	Not detected	No qualifications
	< CRQL*	< CRQL*	Report CRQL value with a U
		< CRQL*	Use professional judgment
		> CRQL*	Report CRQL value with a U
	< CRQL*	< CRQL* and < blank concentration	Report the concentration for the sample with a U, or qualify the data as unusable R
		< CRQL* and < blank concentration	Use professional judgment
	> CRQL*	< CRQL*	Report CRQL value with a U
		< CRQL*	Use professional judgment
	Gross contamination	Detects	Qualify results as unusable R

*5x the CRQL for bis(2-ethylhexyl)phthalate

Method blank contamination was not exhibited- qualifications were not required. The associated field QC for this data package was: IR69-EB01-031410-GW, IR69-EB01-031510-GW and IR69-EB01-031610-GW-equipment blanks; IR69-FB01-031910 (no positive results)- field blank.

Blank Contamination and Qualification Summaries

Blank ID	Compound	Concentration	Reporting Limit	Action Level	Qualifer
IR69-EB01-031410-GW-SIM	naphthalene	0.072J ug/L	0.20 ug/L	< RL	U at RL
IR69-EB01-031510-GW-SIM	naphthalene	0.16J	0.2	< RL	U at RL
	2-methylnaphthalene	0.069J	0.2	< RL	U at RL
	acenaphthylene	0.090J	0.2	< RL	U at RL
	acenaphthene	0.11J	0.2	< RL	U at RL
	fluorine	0.013J	0.2	< RL	U at RL
	phenanthrene	0.16J	0.2	< RL	U at RL
	anthracene	0.15J	0.2	< RL	U at RL
	fluoranthene	0.15J	0.2	< RL	U at RL
	pyrene	0.16J	0.2	< RL	U at RL
	benzo(a)anthracene	0.15J	0.2	< RL	U at RL
	chrysene	0.16J	0.2	< RL	U at RL
	benzo(b)fluoranthene	0.15J	0.2	< RL	U at RL
	benzo(k)fluoranthene	0.17J	0.2	< RL	U at RL
	benzo(a)pyrene	0.15J	0.2	< RL	U at RL
	indeno(1,2,3-cd)pyrene	0.14J	0.2	< RL	U at RL
	dibenzo(a,h)anthracene	0.14J	0.2	< RL	U at RL
	benzo(g,h,i)perylene	0.15J	0.2	< RL	U at RL
IR69-EB01-031610-GW-SIM	naphthalene	0.078J	0.2	< RL	U at RL

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Qual Code
PAH SIM: IR69-GW04IW-10A, IR69-GW19UW-10A	naphthalene	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	2-methylnaphthalene	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	phenanthrene	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	fluoranthene	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	pyrene	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	chrysene	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	benzo(b)fluoranthene	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	benzo(k)fluoranthene	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	benzo(a)pyrene	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	indeno(1,2,3-cd)pyrene	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	dibenzo(a,h)anthracene	U at RL	EBL
PAH SIM: IR69-GW04IW-10A	benzo(g,h,i)perylene	U at RL	EBL

Surrogates

All criteria were met.

Laboratory Control Sample

No qualifications were required.

Matrix Spike/Spike Duplicate Samples

An MS MSD was submitted for sample IR69-SW02-10A- several recoveries exhibited high results however there were no positive results therefore no qualifications were required.

Field Duplicate Sample

A field duplicate was submitted for samples IR69-SW01-10A, no positive results were exhibited in either sample--no qualifications required.

Specific Comments:

All sample results were reported within the calibration range of the instruments.

Detection limits were acceptable. Raw data and calculations were verified.

We have limited the supporting documentation, found with these worksheets, to those forms that indicate qualifications were required.

Validator Signature: L Mascellino **Date:** 7/23/10

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Lab File ID: 0C28001-TUN1C70 DFTPP Injection Date: 03/28/10

Instrument ID: 5972HP70 DFTPP Injection Time: 2359

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 80.0% of mass 198	42.0	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	58.2	
70	Less than 2.0% of mass 69	0.0	(0.0)1
127	25.0 - 75.0% of mass 198	48.6	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0 - 30.0% of mass 198	22.8	
365	Greater than 0.75% of mass 198	4.00	
441	Present, but less than mass 443	15.2	
442	40.0 - 110.0% of mass 198	93.9	
443	15.0 - 24.0% of mass 442	18.2	(19.4)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050NQ	0C28001-CCV1	0C28001-CCV1C7	03/29/10	0020
02	SBLKOD	0031807-BLK1	0031807-BLK1C7	03/29/10	0521
03	IR69-GW04DW	1003136-02	1003136-02C70	03/29/10	0752
04	IR69-SW01D	1003136-04	1003136-04C70	03/29/10	0933
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Instrument ID: 5972HP70 Calibration Date: 03/29/10 Time: 0020

Lab File ID: 0C28001-CCV1C7 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1501 1820

GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzaldehyde	0.8340000	0.7956612	0.01	-4.60	50.00	AVRG
Phenol	1.3110000	1.3498467	0.01	2.96	20.00	AVRG
Bis(2-chloroethyl)ether	1.0880000	1.0272357	0.01	-5.58	50.00	AVRG
2-Chlorophenol	1.0800000	1.0945215	0.01	1.34	50.00	AVRG
2-Methylphenol	0.9860000	1.0433718	0.01	5.82	50.00	AVRG
2,2'-oxybis(1-Chloropropane)	1.7770000	1.7079054	0.01	-3.89	50.00	AVRG
Acetophenone	1.6440000	1.8011113	0.01	9.56	50.00	AVRG
4-Methylphenol	1.0780000	1.1726724	0.01	8.78	50.00	AVRG
N-Nitroso-di-N-propylamine	0.9210000	1.0114261	0.05	9.82	50.00	AVRG
Hexachloroethane	0.6820000	0.7459421	0.01	9.38	50.00	AVRG
Nitrobenzene	0.3740000	0.3885372	0.01	3.89	50.00	AVRG
Isophorone	0.6830000	0.7351619	0.01	7.64	50.00	AVRG
2-Nitrophenol	0.1880000	0.2000195	0.01	6.39	20.00	AVRG
4-Dimethylphenol	0.2260000	0.2519646	0.01	11.49	50.00	AVRG
s(2-chloroethoxy)methane	0.3960000	0.4191094	0.01	5.84	50.00	AVRG
2,4-Dichlorophenol	0.2560000	0.2633150	0.01	2.86	20.00	AVRG
Naphthalene	0.8750000	0.9744217	0.01	11.36	50.00	AVRG
4-Chloroaniline	0.3490000	0.4180289	0.01	19.78	50.00	AVRG
Hexachlorobutadiene	0.1980000	0.2203557	0.01	11.29	20.00	AVRG
Caprolactam	0.0620000	0.0756900	0.01	22.08	50.00	AVRG
4-Chloro-3-methylphenol	0.2970000	0.3225755	0.01	8.61	20.00	AVRG
2-Methylnaphthalene	0.5320000	0.5610854	0.01	5.47	50.00	AVRG
Hexachlorocyclopentadiene	0.4430000	0.4799237	0.05	8.33	50.00	AVRG
2,4,6-Trichlorophenol	0.3660000	0.3711002	0.01	1.39	20.00	AVRG
2,4,5-Trichlorophenol	0.3820000	0.4450037	0.01	16.49	50.00	AVRG
1,1'-Biphenyl	1.2390000	1.3537757	0.01	9.26	50.00	AVRG
2-Chloronaphthalene	1.0350000	1.1330931	0.01	9.48	50.00	AVRG
2-Nitroaniline	0.4070000	0.4434618	0.01	8.96	50.00	AVRG
Dimethylphthalate	1.3010000	1.4115851	0.01	8.50	50.00	AVRG
2,6-Dinitrotoluene	0.3140000	0.3542294	0.01	12.81	50.00	AVRG
Acenaphthylene	1.6650000	1.8759795	0.01	12.67	50.00	AVRG
3-Nitroaniline	0.3570000	0.3999791	0.01	12.04	50.00	AVRG
Acenaphthene	0.9400000	1.0397791	0.01	10.61	20.00	AVRG
2,4-Dinitrophenol	0.2350000	0.2349407	0.05	-0.02	50.00	AVRG
4-Nitrophenol	0.2320000	0.2045638	0.05	-11.82	50.00	AVRG
2,4-Dinitrotoluene	0.4310000	0.4705223	0.01	9.17	50.00	AVRG
Dibenzofuran	1.4690000	1.5937810	0.01	8.49	50.00	AVRG
Diethylphthalate	1.4290000	1.5257974	0.01	6.77	50.00	AVRG
4-Chlorophenyl-phenylether	0.5720000	0.6010807	0.01	5.08	50.00	AVRG
Fluorene	1.1560000	1.2813675	0.01	10.84	50.00	AVRG
4-Nitroaniline	0.3390000	0.3631962	0.01	7.14	50.00	AVRG
4,6-Dinitro-2-methylphenol	0.1760000	0.1969459	0.01	11.90	50.00	AVRG

FORM VII SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Lab File ID: 0C29010-TUN1C70 DFTPP Injection Date: 03/30/10

Instrument ID: 5972HP70 DFTPP Injection Time: 0547

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	37.9
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	51.4
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 75.0% of mass 198	45.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	23.8
365	Greater than 0.75% of mass 198	3.97
441	Present, but less than mass 443	15.9
442	40.0 - 110.0% of mass 198	95.9
443	15.0 - 24.0% of mass 442	17.9 (18.6)2

1-Value is % mass 69 2 Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050NR	0C29010-CCV2	0C29010-CCV2C7	03/30/10	0727
02	SODLCS	0031807-BS1	0031807-BS1JC7	03/30/10	0818
03	EB01-031410-GW	1003136-01	1003136-01JC70	03/30/10	0958
04	IR69-SW01	1003136-03	1003136-03JC70	03/30/10	1049
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Instrument ID: 5972HP70 Calibration Date: 03/30/10 Time: 0727

Lab File ID: 0C29010-CCV2C7 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1501 1820

GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
N-Nitrosodiphenylamine	0.4960000	0.5062927	0.01	2.08	20.00	AVRG
4-Bromophenyl-phenylether	0.1950000	0.2234001	0.01	14.56	50.00	AVRG
Hexachlorobenzene	0.2480000	0.2611206	0.01	5.29	50.00	AVRG
Atrazine	0.1990000	0.1816188	0.01	-8.73	50.00	AVRG
Pentachlorophenol	0.1610000	0.1300168	0.05	-19.24	20.00	AVRG
Phenanthrene	0.8790000	0.8915080	0.01	1.42	50.00	AVRG
Anthracene	0.8770000	0.9232547	0.01	5.27	50.00	AVRG
Carbazole	0.8600000	0.9066675	0.01	5.43	50.00	AVRG
Di-n-butylphthalate	1.3630000	1.4132127	0.01	3.68	50.00	AVRG
Fluoranthene	1.0220000	1.1459965	0.01	12.13	20.00	AVRG
Pyrene	0.9450000	0.9605557	0.01	1.65	50.00	AVRG
Butylbenzylphthalate	0.5940000	0.5730102	0.01	-3.53	50.00	AVRG
3,3'-Dichlorobenzidine	0.2850000	0.2055827	0.01	-27.86	50.00	AVRG
(2-ethylhexyl)Phthalate	0.8340000	0.8252958	0.01	-1.04	50.00	AVRG
zo(a)anthracene	0.9020000	0.9617389	0.01	6.62	50.00	AVRG
Chrysene	0.8450000	0.9079234	0.01	7.45	50.00	AVRG
Di-n-octylphthalate	1.4240000	1.3533914	0.01	-4.96	20.00	AVRG
Benzo(b)fluoranthene	1.0060000	0.9508525	0.01	-5.48	50.00	AVRG
Benzo(k)fluoranthene	0.9530000	1.0533163	0.01	10.53	50.00	AVRG
Benzo(a)pyrene	0.8940000	0.8987377	0.01	0.53	20.00	AVRG
Indeno(1,2,3-cd)pyrene	0.8520000	0.7855089	0.01	-7.80	50.00	AVRG
Dibenzo(a,h)anthracene	0.8340000	0.8067803	0.01	-3.26	50.00	AVRG
Benzo(g,h,i)perylene	0.8520000	0.8332061	0.01	-2.20	50.00	AVRG
2-Fluorophenol	1.0350000	1.0959349	0.01	5.89	50.00	AVRG
Phenol-d5	1.4070000	1.5205285	0.01	8.07	50.00	AVRG
Nitrobenzene-d5	0.3840000	0.3744503	0.01	-2.49	50.00	AVRG
2-Fluorobiphenyl	1.1620000	1.1734754	0.01	0.99	50.00	AVRG
2,4,6-Tribromophenol	0.2870000	0.2714445	0.01	-5.42	50.00	AVRG
Terphenyl-d14	0.5850000	0.5867018	0.01	0.29	50.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Lab File ID: 0D05004-TUN1A70 DFTPP Injection Date: 04/05/10

Instrument ID: 5972HP70 DFTPP Injection Time: 1416

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 80.0% of mass 198	40.4	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	56.5	
70	Less than 2.0% of mass 69	0.0	(0.0)1
127	25.0 - 75.0% of mass 198	44.6	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.6	
275	10.0 - 30.0% of mass 198	21.7	
365	Greater than 0.75% of mass 198	3.77	
441	Present, but less than mass 443	6.7	
442	40.0 - 110.0% of mass 198	86.7	
443	15.0 - 24.0% of mass 442	16.5	(19.1)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050NY	0D05004-CCV1	0D05004-CCV1A7	04/05/10	1440
02	SBLKBX	0031936-BLK1	0031936-BLK1A7	04/05/10	1528
03	SBXLCS	0031936-BS1	0031936-BS1A70	04/05/10	1615
04	IR69-SW02	1003136-08	1003136-08A70	04/05/10	1703
05	IR69-SW02MS	0031936-MS1	0031936-MS1A70	04/05/10	1751
06	IR69-SW02MSD	0031936-MSD1	0031936-MSD1A7	04/05/10	1839
07	IR69-GW15DW	1003136-07	1003136-07A70	04/05/10	1926
08	EB01-031610-SB	1003136-09	1003136-09A70	04/05/10	2014
09	IR69-SW03	1003136-10	1003136-10A70	04/05/10	2102
10	EB01-031510-SD	1003136-11	1003136-11A70	04/05/10	2150
11	EB01-031510-GW	1003136-12	1003136-12A70	04/05/10	2238
12	IR69-GW04IW	1003136-13	1003136-13A70	04/05/10	2325
13	IR69-GW19IW	1003136-14	1003136-14A70	04/06/10	0013
14	IR69-GW19UW	1003136-15	1003136-15A70	04/06/10	0101
15	EB01-031610-GW	1003136-16	1003136-16A70	04/06/10	0149
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Instrument ID: 5972HP70 Calibration Date: 04/05/10 Time: 1440

Lab File ID: 0D05004-CCV1A7 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1501 1820

GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
N-Nitrosodiphenylamine	0.4960000	0.5390430	0.01	8.68	20.00	AVRG
4-Bromophenyl-phenylether	0.1950000	0.2558733	0.01	31.22	50.00	AVRG
Hexachlorobenzene	0.2480000	0.2517181	0.01	1.50	50.00	AVRG
Atrazine	0.1990000	0.1912046	0.01	-3.92	50.00	AVRG
Pentachlorophenol	0.1610000	0.1437491	0.05	-10.71	20.00	AVRG
Phenanthrene	0.8790000	0.8646353	0.01	-1.63	50.00	AVRG
Anthracene	0.8770000	0.8874812	0.01	1.20	50.00	AVRG
Carbazole	0.8600000	0.8822278	0.01	2.58	50.00	AVRG
Di-n-butylphthalate	1.3630000	1.4811690	0.01	8.67	50.00	AVRG
Fluoranthene	1.0220000	1.1385863	0.01	11.41	20.00	AVRG
Pyrene	0.9450000	0.8894312	0.01	-5.88	50.00	AVRG
Butylbenzylphthalate	0.5940000	0.5833744	0.01	-1.79	50.00	AVRG
3,3'-Dichlorobenzidine	0.2850000	0.3196413	0.01	12.15	50.00	AVRG
bis(2-ethylhexyl)Phthalate	0.8340000	0.8545279	0.01	2.46	50.00	AVRG
zo(a)anthracene	0.9020000	0.9238596	0.01	2.42	50.00	AVRG
rysene	0.8450000	0.8570365	0.01	1.42	50.00	AVRG
Di-n-octylphthalate	1.4240000	1.3100752	0.01	-8.00	20.00	AVRG
Benzo(b)fluoranthene	1.0060000	0.8918893	0.01	-11.34	50.00	AVRG
Benzo(k)fluoranthene	0.9530000	0.9434841	0.01	-1.00	50.00	AVRG
Benzo(a)pyrene	0.8940000	0.8491289	0.01	5.02	20.00	AVRG
Indeno(1,2,3-cd)pyrene	0.8520000	0.8823575	0.01	3.56	50.00	AVRG
Dibenzo(a,h)anthracene	0.8340000	0.8530303	0.01	2.28	50.00	AVRG
Benzo(g,h,i)perylene	0.8520000	0.8965624	0.01	5.23	50.00	AVRG
2-Fluorophenol	1.0350000	1.0385661	0.01	0.34	50.00	AVRG
Phenol-d5	1.4070000	1.4426660	0.01	2.53	50.00	AVRG
Nitrobenzene-d5	0.3840000	0.3586855	0.01	-6.59	50.00	AVRG
2-Fluorobiphenyl	1.1620000	1.0444339	0.01	-10.12	50.00	AVRG
2,4,6-Tribromophenol	0.2870000	0.2827238	0.01	-1.49	50.00	AVRG
Terphenyl-d14	0.5850000	0.5713115	0.01	-2.34	50.00	AVRG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Lab File ID: 0D08005-TUN1A70 DFTPP Injection Date: 04/08/10

Instrument ID: 5972HP70 DFTPP Injection Time: 0938

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	42.2
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	58.8
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 75.0% of mass 198	45.8
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	21.9
365	Greater than 0.75% of mass 198	3.80
441	Present, but less than mass 443	14.0
442	40.0 - 110.0% of mass 198	85.4
443	15.0 - 24.0% of mass 442	17.1 (20.0)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050NZ	0D07005-CCV1	0D07005-CCV1A7	04/08/10	1001
02	IR69-GW26IW	1003136-17	1003136-17A70	04/08/10	1049
03	IR69-GW26DW	1003136-18	1003136-18A70	04/08/10	1137
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Instrument ID: 5972HP70 Calibration Date: 04/08/10 Time: 1001

Lab File ID: 0D07005-CCV1A7 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1501 1820

GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Benzaldehyde	0.8340000	0.7319758	0.01	-12.23	50.00	AVRG
Phenol	1.3110000	1.2618473	0.01	-3.75	20.00	AVRG
Bis(2-chloroethyl)ether	1.0880000	1.0329049	0.01	-5.06	50.00	AVRG
2-Chlorophenol	1.0800000	0.9974870	0.01	-7.64	50.00	AVRG
2-Methylphenol	0.9860000	0.9372097	0.01	-4.95	50.00	AVRG
2,2'-oxybis(1-Chloropropane)	1.7770000	1.7635270	0.01	-0.76	50.00	AVRG
Acetophenone	1.6440000	1.6789853	0.01	2.13	50.00	AVRG
4-Methylphenol	1.0780000	0.9571524	0.01	-11.21	50.00	AVRG
N-Nitroso-di-N-propylamine	0.9210000	0.8862962	0.05	-3.77	50.00	AVRG
Hexachloroethane	0.6820000	0.7132555	0.01	4.58	50.00	AVRG
Nitrobenzene	0.3740000	0.3814175	0.01	1.98	50.00	AVRG
Isophorone	0.6830000	0.7021231	0.01	2.80	50.00	AVRG
2-Nitrophenol	0.1880000	0.1941266	0.01	3.26	20.00	AVRG
2,4-Dimethylphenol	0.2260000	0.2038918	0.01	-9.78	50.00	AVRG
(2-chloroethoxy)methane	0.3960000	0.4068472	0.01	2.74	50.00	AVRG
,4-Dichlorophenol	0.2560000	0.2497338	0.01	-2.45	20.00	AVRG
Naphthalene	0.8750000	0.9019033	0.01	3.07	50.00	AVRG
4-Chloroaniline	0.3490000	0.3198000	0.01	-8.37	50.00	AVRG
Hexachlorobutadiene	0.1980000	0.2250875	0.01	13.68	20.00	AVRG
Caprolactam	0.0620000	0.0585812	0.01	-5.51	50.00	AVRG
4-Chloro-3-methylphenol	0.2970000	0.3195951	0.01	7.61	20.00	AVRG
2-Methylnaphthalene	0.5320000	0.5624220	0.01	5.72	50.00	AVRG
Hexachlorocyclopentadiene	0.4430000	0.4386609	0.05	-0.98	50.00	AVRG
2,4,6-Trichlorophenol	0.3660000	0.3111570	0.01	14.98	20.00	AVRG
2,4,5-Trichlorophenol	0.3820000	0.3647843	0.01	-4.51	50.00	AVRG
1,1'-Biphenyl	1.2390000	1.1950745	0.01	-3.54	50.00	AVRG
2-Chloronaphthalene	1.0350000	0.9915119	0.01	-4.20	50.00	AVRG
2-Nitroaniline	0.4070000	0.4013329	0.01	-1.39	50.00	AVRG
Dimethylphthalate	1.3010000	1.3043604	0.01	0.26	50.00	AVRG
2,6-Dinitrotoluene	0.3140000	0.3297480	0.01	5.02	50.00	AVRG
Acenaphthylene	1.6650000	1.6699513	0.01	0.30	50.00	AVRG
3-Nitroaniline	0.3570000	0.3695262	0.01	3.51	50.00	AVRG
Acenaphthene	0.9400000	0.9531109	0.01	1.39	20.00	AVRG
2,4-Dinitrophenol	0.2350000	0.2348830	0.05	-0.05	50.00	AVRG
4-Nitrophenol	0.2320000	0.1960547	0.05	-15.49	50.00	AVRG
2,4-Dinitrotoluene	0.4310000	0.4611175	0.01	6.99	50.00	AVRG
Dibenzofuran	1.4690000	1.4703857	0.01	0.09	50.00	AVRG
Diethylphthalate	1.4290000	1.4446472	0.01	1.09	50.00	AVRG
4-Chlorophenyl-phenylether	0.5720000	0.5649431	0.01	-1.23	50.00	AVRG
Fluorene	1.1560000	1.1939214	0.01	3.28	50.00	AVRG
4-Nitroaniline	0.3390000	0.3568919	0.01	5.28	50.00	AVRG
4,6-Dinitro-2-methylphenol	0.1760000	0.2141104	0.01	21.65	50.00	AVRG

FORM VII SV

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FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Instrument ID: 5972HP70 Calibration Date: 04/08/10 Time: 1001

Lab File ID: 0D07005-CCV1A7 Init. Calib. Date(s): 03/16/10 03/16/10

Init. Calib. Times: 1501 1820

GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
N-Nitrosodiphenylamine	0.4960000	0.5422866	0.01	9.33	20.00	AVRG
4-Bromophenyl-phenylether	0.1950000	0.2798025	0.01	43.49	50.00	AVRG
Hexachlorobenzene	0.2480000	0.2652794	0.01	6.97	50.00	AVRG
Atrazine	0.1990000	0.1367446	0.01	-31.28	50.00	AVRG
Pentachlorophenol	0.1610000	0.1342137	0.05	-16.64	20.00	AVRG
Phenanthrene	0.8790000	0.8889130	0.01	1.13	50.00	AVRG
Anthracene	0.8770000	0.8968982	0.01	2.27	50.00	AVRG
Carbazole	0.8600000	0.8861221	0.01	3.04	50.00	AVRG
Di-n-butylphthalate	1.3630000	1.4695682	0.01	7.82	50.00	AVRG
Fluoranthene	1.0220000	1.1267005	0.01	10.24	20.00	AVRG
Pyrene	0.9450000	0.9125649	0.01	-3.43	50.00	AVRG
Butylbenzylphthalate	0.5940000	0.5929159	0.01	-0.18	50.00	AVRG
3,3'-Dichlorobenzidine	0.2850000	0.3076046	0.01	7.93	50.00	AVRG
s(2-ethylhexyl)Phthalate	0.8340000	0.8637311	0.01	3.56	50.00	AVRG
azo(a)anthracene	0.9020000	0.9452765	0.01	4.80	50.00	AVRG
Chrysene	0.8450000	0.8778364	0.01	3.88	50.00	AVRG
Di-n-octylphthalate	1.4240000	1.3369873	0.01	-6.11	20.00	AVRG
Benzo(b)fluoranthene	1.0060000	0.9725959	0.01	-3.32	50.00	AVRG
Benzo(k)fluoranthene	0.9530000	0.9144150	0.01	-4.05	50.00	AVRG
Benzo(a)pyrene	0.8940000	0.8824319	0.01	-1.29	20.00	AVRG
Indeno(1,2,3-cd)pyrene	0.8520000	0.9614287	0.01	12.84	50.00	AVRG
Dibenzo(a,h)anthracene	0.8340000	0.8761073	0.01	5.05	50.00	AVRG
Benzo(g,h,i)perylene	0.8520000	0.9473063	0.01	11.19	50.00	AVRG
2-Fluorophenol	1.0350000	1.0083210	0.01	-2.58	50.00	AVRG
Phenol-d5	1.4070000	1.3663343	0.01	-2.89	50.00	AVRG
Nitrobenzene-d5	0.3840000	0.3794514	0.01	-1.18	50.00	AVRG
2-Fluorobiphenyl	1.1620000	1.0724229	0.01	-7.71	50.00	AVRG
2,4,6-Tribromophenol	0.2870000	0.2369701	0.01	-17.43	50.00	AVRG
Terphenyl-d14	0.5850000	0.5690011	0.01	-2.73	50.00	AVRG

FORM VII SV

Initial Calibration Date: 3/16/2010

RRF and %RSD Calculations:

Compound Name: phenol
Lab Value: 1.426

Area of Compound	301398
Area of Internal STD	422640
Conc. of Internal STD	40
Conc. of Compound	20
Calculated RRF	1.426

Compound Name: 2-methylphenol
Lab Value: 11.1

RRF of STD 1	1.055
RRF of STD 2	1.049
RRF of STD 3	0.906
RRF of STD 4	1.084
RRF of STD 5	0.834
Calculated % RSD	11.10

Continuing Calibration File ID: 3/29/2010

RRF and %D Calculations:

Compound Name: benzo(k)fluoranthene
Lab Value: 1.128

Area of Compound	1966868
Area of Internal STD	1394517
Conc. of Internal STD	40
Conc. of Compound	50
Calculated RRF	1.128

Compound Name: indeno(1,2,3-cd)pyrene
Lab Value: 0.8

Average RRF	0.852
Calibration Check RRF	0.8455034
Calculated % D	0.76

CompuChem
a division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1003136
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS:

EB01-031410-GW, EB01-031510-GW, EB01-031510-SD, EB01-031610-GW, EB01-031610-SB, IR69-GW04DW, IR69-GW04IW, IR69-GW15DW, IR69-GW19IW, IR69-GW19UW, IR69-GW26DW, IR69-GW26IW, IR69-SW01, IR69-SW01D, IR69-SW02, IR69-SW02MS, IR69-SW02MSD, and IR69-SW03

The eighteen (18) aqueous samples listed above were scheduled for the requested analyses of the semivolatile and semivolatile SIM fractions.

For sample receiving information, please refer to SW-846 8260B SDG Narrative.

SW-846, 3rd Edition, Update 3, Separatory Funnel extraction (Method 3510C), Method 8270C, and Selected Ion Monitoring (SIM) were used to prepare and analyze these samples, with the exceptions and/or additions requested by the client. This portion of the narrative deals with the semivolatile and semivolatile SIM fractions only.

Semivolatile and Semivolatile SIM:

Extraction and analysis holding time requirements were met for these samples.

There were no semivolatile project analytes identified above the Contract Required Quantitation Limit (CRQL) in any of these samples.

Manual integrations were performed on one or more of the process files associated with this SDG. Please see the detailed Manual Integration Summary report that is located behind this SDG narrative. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.

All decaflnorotriphenylphosphine (DFTPP) abundance criteria were met for tunes associated to this SDG. Tailing factor criteria were met for pentachlorophenol and benzidine. The breakdown criterion was met for DDT. These three compounds have been added to the DFTPP solution and analyzed together.

Mass assignments were verified by the injections of perfluorotributylamine for the SIM analysis.

All QC criteria were met for all initial and continuing calibration standards associated to this SDG.

All of the surrogates met recovery and retention time criteria in the analyses of these samples.

All of the internal standards met response and retention time criteria in the analyses of these samples.

The associated method blanks met all quality control criteria.

Sample IR69-SW02 was used as the original to prepare the duplicate matrix spikes (MS/MSD) as requested. The associated MS/MSD met all accuracy and precision criteria, with the exception of the relative percent difference (RPD) of 2,4-Dimethylphenol. The RPD of 2,4-Dimethylphenol in the MS/MSD was flagged as an outlier

The associated Laboratory Control Samples prepared and analyzed along with these sample, met overall accuracy and precision criteria for the full scan and SIM analyses. The recoveries of the spike compounds 2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol, 4-Bromophenyl-phenylether, and 3,3'-Dichlorobenzidine in the SBXLCS and the recovery of 3,3'-Dichlorobenzidine in the SODLCS were bias high and were flagged as outliers. All remaining recoveries and Relative Percent Differences (RPDs) precision criteria were met in the comparison of the duplicate laboratory control samples. Since these compounds were not detected above the CRQLs in the associated samples, the results are being reported without any corrective action.

An uncertainty of these test results may be estimated from the recovery of the surrogates added to the sample prior to sample preparation or from the recovery of spiked compound(s) in the associated laboratory control sample. Further information is available upon request.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

S. A. Parikh

Saroj A. Parikh
Data Reviewer
April 28, 2010

Holding Times

Sampling Date: 3/14-3/16
Received Date: 3/17-3/19
Extraction Date: 3/18, 3/22
Analysis Dates: 3/28, 4/9

All extraction and analysis holding times were met for the samples in this SDG. No qualifications were required. Sample receipt data is in order. Cooler temperature was within acceptable range.

Calibrations

Initial calibrations were performed according to the method with a five-point curve for the single component pesticides, toxaphene, chlordane and the PCB target compounds 1016 & 1660. Single points were included for the other Aroclors. Calibration factors were calculated. %RSDs were within QC limits. Continuing calibration standards were analyzed per the SW-846 methods requested. All PEM breakdown criteria were met. All continuing calibration criteria were met. Column resolution was acceptable. The correct analytical sequence was run. All required instrument blanks were analyzed. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Any compound detected in the sample, and the associated blank, must be qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than five (5) times the blank concentration.
- Sample weight, volume or dilution factor must be taken into consideration when applying the 5X criteria.
- Apply the same data validation guidelines to any associated rinse and field blanks and all associated samples.
- Qualification Action codes:
-

No Action -	The sample result is greater than the RL and greater than five times (5X) the blank value.
U at RL-	The sample result is less than the RL when the blank contamination level is less than the RL.

No contamination that resulted in qualification of the data was noted in the associated method or instrument blanks or the submitted field QC blanks.

SURROGATE RECOVERIES

All surrogates were OK.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

The MS/MSD was OK except endrin was low in the MS. No qualifications were required.

LABORATORY CONTROL SAMPLES

The submitted LCS samples exhibited acceptable recoveries. No qualifications were required.

FIELD DUPLICATE SAMPLE SUMMARY

Please note that results aren't assessed for field duplicate reproducibility unless both results are above the compound reporting limit.

Sample ID: **IR69-SW01-10A** **Duplicate ID:** **IR69-SW01D-10A**

Compound	Sample Conc.	Duplicate Conc.	RPD
4,4'-DDE			#DIV/0!
4,4'-DDT			#DIV/0!

Comments: No qualifications were required

SAMPLE RESULT VERIFICATION

Calculations were verified. All P flagged results were qualified as estimated J (column quantitation %Ds >40.)

Reviewer JACleveland **Date:** 7/28/10

Initial Calibration Date: 3 26 2010

RRF and %RSD Calculations:

Compound Name: heptachlor in level 1 on C1
Lab Value: 742200.0000

Area of Compound	3712
Conc. of Compound	0.005
Calculated RRF	742400.0000

Compound Name: heptachlor
Lab Value: 6.7

RRF of STD 1	742200.0000
RRF of STD 2	699900.0000
RRF of STD 3	673500.0000
RRF of STD 4	652700.0000
RRF of STD 5	623462.0000
RRF of STD 6	
Calculated % RSD	6.69

Continuing Calibration File ID: 084ZINDC3ZL

RRF and %D Calculations:

Compound Name: dieldrin
Lab Value: 525762.50000

Area of compound	21031
Conc. Of compound	0.04
Calculated CF	525775.000

Compound Name: dieldrin
Lab Value: 0.3

Avg. CF from ICAL	524232.50000
CF of CCV	525762.50000
Calculated % D	-0.3

rounding differences noted - no quals required

Initial Calibration Date: 4 8 2010

RRF and %RSD Calculations:

Compound Name: methoxychlor in level 3 on C1
Lab Value: 177500.0000

Area of Compound	35501
Conc. of Compound	0.2
Calculated RRF	177505.0000

Compound Name: methoxychlor
Lab Value: 11.9

RRF of STD 1	210280.0000
RRF of STD 2	192130.0000
RRF of STD 3	177500.0000
RRF of STD 4	164977.5000
RRF of STD 5	156727.5000
RRF of STD 6	
Calculated % RSD	11.88

Continuing Calibration File ID: 055DINDC3DH

RRF and %D Calculations:

Compound Name: 4,4'-DDT
Lab Value: 430551.25000

Area of compound	17222
Conc. Of compound	0.04
Calculated CF	430550.000

Compound Name: 4,4'-DDT
Lab Value: 0.9

Avg. CF from ICAL	434308.75000
CF of CCV	430551.25000
Calculated % D	0.9

rounding differences noted - no quals required

CompuChem

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501 Madison Avenue
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SDG NARRATIVE
SDG # 1003136
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS: EB01-031410-GW, IR69-GW04DW, IR69-SW01, IR69-SW01D, IR69-GW15DW, IR69-SW02, EB01-031610-SB, IR69-SW03, EB01-031510-SD, EB01-031510-GW, IR69-GW04IW, IR69-GW19IW, IR69-GW19UW, EB01-031610-GW, IR69-GW26IW, IR69-GW26DW

The sixteen water samples listed above were received intact, refrigerated at 2.4 and 4.9°C, with proper documentation, in sealed shipping containers, on March 19, 2010. The samples were scheduled for the requested analysis of the Pesticide/PCB fraction. SW-846, 3rd Edition, Update 3, Method 8081B and 8082A were used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section and all pertinent Laboratory notices for SDG # 1003136 are included in the sample data sections.

Pesticide/PCB

Extraction and analysis holding time requirements were met for the samples.

Target analytes confirmed above the reporting limits in sample IR69-GW15DW.

All QC criteria were met for all initial and continuing calibration standards associated to this SDG.

All surrogate recoveries were with the method specified limits.

The method blank associated with the samples met all quality control criteria.

Duplicate matrix spikes were performed with sample IR69-SW02, and met recovery and precision criteria, with the exception of the recovery of Endrin Aldehyde in the MS. The Laboratory Control Samples (LCS) prepared and analyzed with the samples met recovery criteria.

An uncertainty of these test results may be estimated from the recovery of the surrogates added to the sample prior to sample preparation or from the recovery of spiked compound(s) in the associated laboratory control sample. Further information is available upon request.

I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on CD has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Teresa Amentt Jennings

Teresa Amentt Jennings
GC/HPLC Data Reviewer
April 13, 2010

3E

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix Spike - EPA Sample No.: IR69-SW02

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Aldrin	0.15	0.0	0.092	61	25-140
beta-BHC	0.15	0.0	0.12	80	65-125
alpha-BHC	0.15	0.0	0.13	87	60-130
delta-BHC	0.15	0.0	0.14	93	45-135
gamma-BHC (Lindane)	0.15	0.0	0.12	80	25-135
4,4'-DDD	0.38	0.0	0.33	87	25-150
4,4'-DDE	0.38	0.0	0.31	82	35-140
4,4'-DDT	0.38	0.0	0.29	76	45-140
Dieldrin	0.38	0.0	0.33	87	60-130
Endosulfan I	0.15	0.0	0.11	73	50-110
Endosulfan II	0.38	0.0	0.30	79	30-130
Endosulfan sulfate	0.38	0.0	0.30	79	55-135
Endrin	0.38	0.0	0.31	82	55-135
Endrin Aldehyde	0.38	0.0	0.20	53*	55-135
Heptachlor	0.15	0.0	0.14	93	40-130
Heptachlor Epoxide	0.15	0.0	0.14	93	60-130
Methoxychlor	0.38	0.0	0.36	95	55-150
Endrin Ketone	0.38	0.0	0.33	87	75-125
gamma-Chlordane	0.15	0.0	0.13	87	60-125
alpha-Chlordane	0.15	0.0	0.14	93	65-125

NQ

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

3E
WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix Spike - EPA Sample No.: IR69-SW02

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aldrin	0.15	0.089	59	3	40	25-140
beta-BHC	0.15	0.12	80	0	40	65-125
alpha-BHC	0.15	0.13	87	0	40	60-130
delta-BHC	0.15	0.14	93	0	40	45-135
gamma-BHC (Lindane)	0.15	0.12	80	0	40	25-135
4,4'-DDD	0.38	0.33	87	0	40	25-150
4,4'-DDE	0.38	0.32	84	3	40	35-140
4,4'-DDT	0.38	0.29	76	0	40	45-140
Dieldrin	0.38	0.33	87	0	40	60-130
Endosulfan I	0.15	0.11	73	0	40	50-110
Endosulfan II	0.38	0.30	79	0	40	30-130
Endosulfan sulfate	0.38	0.30	79	0	40	55-135
Endrin	0.38	0.29	76	7	40	55-135
Endrin Aldehyde	0.38	0.21	55	5	40	55-135
Heptachlor	0.15	0.12	80	15	40	40-130
Heptachlor Epoxide	0.15	0.14	93	0	40	60-130
Methoxychlor	0.38	0.36	95	0	40	55-150
Endrin Ketone	0.38	0.34	89	3	40	75-125
gamma-Chlordane	0.15	0.12	80	8	40	60-125
alpha-Chlordane	0.15	0.14	93	0	40	65-125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 20 outside limits
Spike Recovery: 1 out of 40 outside limits

COMMENTS: _____

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-GW04DW

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Lab Sample ID: 1003136-02 Date(s) Analyzed: 03/28/10 03/28/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
delta-BHC	1	10.80	10.74	10.88	0.043	
	2	10.81	10.78	10.92	0.020	73.0 J
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

page 1 of 1

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-GW15DW

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Lab Sample ID: 1003136-07 Date(s) Analyzed: 04/09/10 04/09/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
4,4'-DDE	1	14.19	14.11	14.25	0.0071	
	2	14.40	14.29	14.43	0.036	134.1 J
4,4'-DDT	1	16.07	16.01	16.15	0.056	
	2	16.22	16.19	16.33	0.13	79.6
Dieldrin	1	14.82	14.76	14.90	0.086	
	2	14.65	14.60	14.74	0.026	107.1
Endosulfan II	1	15.81	15.75	15.89	0.0073	
	2	15.82	15.71	15.85	0.030	121.7
Endosulfan sulfate	1	17.69	17.60	17.74	0.018	
	2	17.08	17.02	17.16	0.012	40.0
Endrin	1	15.29	15.26	15.40	0.21	
	2	15.37	15.25	15.39	0.19	10.0
Endrin Aldehyde	1	16.78	16.66	16.80	0.014	
	2	16.45	16.44	16.58	0.14	163.6 J
Heptachlor Epoxide	1	13.44	13.35	13.49	0.049	
	2	13.24	13.14	13.28	0.031	45.0 J

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-GW15DW

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Lab Sample ID: 1003136-07 Date(s) Analyzed: 04/09/10 04/09/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
gamma-Chlordane	1	13.63	13.63	13.77	0.097	
	2	13.66	13.56	13.71	0.094	3.1
alpha-Chlordane	1	13.95	13.93	14.06	0.0067	
	2	13.95	13.89	14.03	0.025	115.4 J
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-GW26DW

Lab Name: COMPUCHEM Contract: 8081A-8082

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Lab Sample ID: 1003136-18 Date(s) Analyzed: 04/09/10 04/09/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
delta-BHC	1	10.78	10.71	10.85	0.041	
	2	11.00	10.96	11.11	0.020	68.8 J
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

page 1 of 1

FORM X PEST-1

SAMPLE CALCULATION

Sample ID: IR69-GW15DW-10A
Standard ID: ICAL curve 4/8/10
Compound: gamma-chlordane
Concnetration: 0.094 ug/Kg

	Water (ug/L)	Soil (ug/Kg)
Area of Compound	10016	
Calibration Factor of Compound	533840	
Dilution Factor	1	
Weight/Volume of Sample	1000	
Final Volume extract	5000	
% Moisture	NA	
conversion factor	1	
Concentration	0.09381	#DIV/0!

This SDG contains select metals analysis using SW-846 6010B/7470A/7471A.

HOLDING TIMES

Sampling Date: 3/14, 3/15, 3/16
Received Date: 3/17- 3/19 Cooler temps: OK
Prep. Dates: 4/5 ICP, 4/5 Hg
Analysis Dates: 4/11-4/12 ICP, 4/6 Hg
All holding time requirements were met.

CALIBRATIONS

All initial calibration criteria were met. Single point calibration was analyzed for ICP. Calibration verification criteria were met for all ICV and CCV standards. The RL standards were analyzed and did not meet method criteria for all analytes. See report for qualifications. Interference check standards were analyzed and met criteria in all standards. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if an analyte is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying the criteria.
- Apply the same data validation guidelines to any associated calibration, preparation, and field QC blanks and all associated samples.
- Qualification Action codes:
  - No Action - The sample result is greater than the CRDL and greater than ten times (10X) the blank value.
  - U - The sample result is greater than or equal to the MDL but less than or equal to the RL, result is reported as non-detect at the RL.
  - R or J. The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator.

Blank Contamination and Qualification Summaries

Blank ID	Analyte	Concentration	Action Level	Q Flag	Q Code
PBW	aluminum	51.583B ug/L	RL	U	MBL
	beryllium	1.110B ug/L	RL	U	MBL
CCB	magnesium	17.5B ug/L	RL	U	MBL
FB01-031910	zinc	0.97B ug/L	RL	U	FBL

The concentration noted for the CCBs is the highest concentration in all the CCBs. However, when qualifying samples for CCB contamination, associated samples are those just prior to or just following a CCB. Therefore, not all analytes in all samples are flagged for noted CCB contamination. See worksheets for associations. Samples are qualified for field QC blank contamination based on QC tracking provided by CH2M HILL. Negative contamination in a prep blank or CCB, if less than the analyte CRDL, is qualified based on professional judgment.

Please note that based on the National Functional Guidelines, for contamination above the CRDL, results in the field samples that are greater than the RL up to 10X the blank contamination level should be qualified as estimated and considered biased high or they should be rejected. Associated samples and required qualifications are noted in the following table.

Sample ID	Analyte	Q Flag	Q Code
IR69-GW19UW-10A, IR69-GW26IW-10A, IR69-SW01-10A, IR69-SW01D-10A, IR69-SW02-10A	aluminum	U at RL	MBL
IR69-GW04IW-10A, IR69-GW26IW-10A, IR69-SW01-10A, IR69-SW03-10A	beryllium	U at RL	MBL
IR69-SW02-10A	magnesium	U at RL	MBL
all field samples >MDL <RL	zinc	U at RL	FBL

MATRIX SPIKE/DUPLICATE SUMMARY

Spike recoveries were acceptable in the MS or the MSD except selenium. All PDS recoveries were acceptable. Selenium exhibited a 13.4/15 in the MS/MSD. Selenium was flagged J/UJ in all samples. All RPDs were fine. All LCS recoveries and RPDs were acceptable.

SERIAL DILUTIONS

The serial dilution results were high for barium (10.2) and potassium (20.2). Results for barium and potassium were qualified as estimated in the field samples.

SAMPLE CALCULATION

EPA SAMPLE ID: IR69-GW04DW-10A
ANALYTE: Chromium
CONCENTRATION: 11.5 ug L
%Solids – NA

Raw Data result: 11.50752 ug L Water results are direct read from the instrument.

FIELD DUPLICATE SAMPLE RESULTS

Note: Field duplicate results are assessed only if both results are above the CRDL.

Sample ID: **IR69-SW01-10A** **Duplicate Sample ID:** **IR69-SW01D-10A**

Analyte	Sample Conc.	Duplicate Conc.	RPD
aluminum			#DIV/0!
barium			#DIV/0!
calcium			#DIV/0!
chromium			#DIV/0!
iron			#DIV/0!
lead			#DIV/0!
magnesium			#DIV/0!
manganese	10.2	17.2	51%
sodium	13300	15500	15%
zinc			#DIV/0!

Comments: Flag Mn in both samples

SAMPLE RESULT VERIFICATION

Specific Comments:

All sample results were reported within the calibration/linear range of the instruments. Detection limits were acceptable. Raw data was verified. All positive results reported at concentrations between the IDL and the RL were qualified as estimated J by the laboratory. All field sample and QC blank IDs were missing either the first 4 or the last four characters. The characters (-10A) were added for the field samples and the characters IR69 were added for the field QC blanks to the Form 1s in the DV reports by the data validator.

Reviewer JACleveland **Date:** 72810

CompuChem
a Division of Liberty Analytical Corp.
501 Madison Avenue
Cary, NC 27513

SDG NARRATIVE
SDG # 1003136

The indicated Sample Delivery Group (SDG) consisting of sixteen (16) water samples was received into the laboratory information management system (LIMS) on March 17 and 19, 2010 intact and in good condition with Chain of Custody (COC) Records in order, unless otherwise noted in any attachments or Quality Assurance Notices. The temperature of the samples upon receipt was 0.1 to 5.9°C. Sample ID's reported in this data package are noted by the receiving department on the COC if they differ from those listed by the samplers on the COC.

The samples were prepared and analyzed in accordance with SW846 methodology for the requested TAL metals and mercury.

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (ICV & CCV) and blanks (ICB & CCB) associated with this data were confirmed to be within allowable limits.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verification (PBW & LCSW) was found to be within acceptable ranges and the field samples were analyzed within the specified holding times.

MATRIX RELATED QUALITY CONTROL:

The sample matrix spikes, CCN = 1003136-08 ID IR69-SW02S and IR69-SW02SD were inside control limits for the requested analytes except selenium.

Control limits for matrix spikes recoveries are set at 75% to 125% of the analyte quantity added unless original sample concentrations exceed the true values of these "spikes" by a factor of four or more. In this case, affected analytes are not flagged even if recoveries are outside percentage recovery control limits.

The sample matrix duplicate, CCN = 1003136-08 ID IR69-SW02D was inside control limits for the requested analytes.

CLP control limits for duplicate determinations are +/- 20% Relative Percent Difference (RPD) for concentrations greater than or equal to five times the CRDL in both the original and duplicate samples, and +/- the CRDL for concentrations less than five times the CRDL. The RPD is not calculated if both the original and duplicate values fall below the IDL.

A five-fold serial dilution of sample, CCN = 1003136-08 ID IR69-SW02L was performed in accordance with requirements for ICP and mercury analysis.

The adjusted sample concentration was inside control limits for the requested analytes except barium and potassium.

The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice.

Susan W. Bass
Senior Chemist
April 12, 2010

SW846 - METALS

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: COMPUCHEM Contract: _____

Lab Code: LIBRTY Case No.: _____ SAS No.: _____ SDG No.: 1003136

AA CRDL Standard Source: HP0916320

ICP CRDL Standard Source: HP0916320

Concentration Units: ug/L

Analyte	True	Found	%R	CRDL Standard for ICP Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum				200.0	192.56	96.3		
Antimony				10.0	8.45	84.5		
Arsenic				10.0	11.96	119.6		
Barium				200.0	194.39	97.2		
Beryllium				5.0	4.38	87.6		
Cadmium				5.0	4.90	98.0		
Calcium				5000.0	4954.21	99.1		
Chromium				10.0	10.38	103.8		
Cobalt				5.0	3.91	78.2		
Copper				5.0	4.77	95.4		
Iron				100.0	87.56	87.6		
Lead				3.0	1.91	63.7		
Magnesium				5000.0	4754.84	95.1		
Manganese				10.0	9.03	90.3		
Mercury	0.2	0.18	90.0					
Nickel				5.0	4.70	94.0		
Potassium				5.0	4291.09	85.8		
Selenium				5.0	7.24	144.8	J+	up to 2X RL
Silver				5.0	4.59	91.8		
Sodium				5000.0	4744.32	94.9		
Thallium				10.0	5.13	0.0	51%	OK
Vanadium				20.0	18.90	94.5		
Zinc				20.0	18.06	90.3		

Control Limits: no limits have been established by EPA at this time

all except
EB01-031410-GW

SW846 - METALS

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: COMPUCHEM Contract: _____

Lab Code: LIBRTY Case No.: _____ SAS No.: _____ SDG No.: 1003136

AA CRDL Standard Source: HP0916320

ICP CRDL Standard Source: HP0916320

Concentration Units: ug/L

Analyte	True	Found	%R	CRDL Standard for ICP Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum				200.0	160.92	80.5		
Antimony				10.0	12.36	123.6		
Arsenic				10.0	9.47	94.7		
Barium				200.0	197.95	99.0		
Beryllium				5.0	4.65	93.0		
Cadmium				5.0	4.80	96.0		
Calcium				5000.0	4994.24	99.9		
Chromium				10.0	10.54	105.4		
Cobalt				5.0	4.62	92.4		
Copper				5.0	5.66	113.2		
Iron				100.0	96.07	96.1		
Lead				3.0	2.55	85.0		
Magnesium				5000.0	4904.24	98.1		
Manganese				10.0	9.43	94.3		
Nickel				5.0	3.87	77.4		
Potassium				5000.0	4354.91	87.1		
Selenium				5.0	3.55	0.0		
Silver				5.0	4.87	97.4		
Sodium				5000.0	5091.57	101.8		
Thallium				10.0	15.15	151.5		
Vanadium				20.0	19.62	98.1		
Zinc				20.0	17.59	88.0		

71% OK

J+ up to 2X RL

Control Limits: no limits have been established by EPA at this time

EB01-031410-GW

SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum	200.0	U	50.5	B NQ	-67.1	B NQ	200.0	U	51.583	B ✓	P
Antimony	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P
Arsenic	3.1	B NQ	3.2	B NQ	3.1	B NQ	5.1	B NQ	10.000	U	P
Barium	-0.6	B NQ	-0.5	B NQ	-0.5	B NQ	-0.5	B NQ	-0.654	B	P NQ
Beryllium	-0.3	B	0.8	B	-1.1	B NQ	0.2	B	1.110	B ✓	P
Cadmium	5.0	U	5.0	U	5.0	U	5.0	U	-0.344	B	P NQ
Calcium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	5000.000	U	P
Chromium	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P
Cobalt	-0.9	B NQ	5.0	U	-0.9	B NQ	5.0	U	5.000	U	P
Copper	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P
Iron	100.0	U	100.0	U	100.0	U	100.0	U	100.000	U	P
Lead	3.0	U	3.0	U	3.0	U	3.0	U	3.000	U	P
Magnesium	5000.0	U	17.5	B ✓	5000.0	U	5000.0	U	5000.000	U	P
Manganese	-0.3	B NQ	10.0	U	10.0	U	10.0	U	10.000	U	P
Mercury	0.200	U	0.200	U	-0.104	B NQ	0.200	U	0.200	U	CV
Nickel	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P
Potassium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	5000.000	U	P
Selenium	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P
Silver	5.0	U	-1.1	B NQ	5.0	U	5.0	U	5.000	U	P
Sodium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	5000.000	U	P
Thallium	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P
Vanadium	20.0	U	20.0	U	20.0	U	20.0	U	20.000	U	P
Zinc	20.0	U	20.0	U	20.0	U	20.0	U	20.000	U	P

SW02

✓ flag as noted in report

SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum			79.6	B	See PBW						P
Antimony			10.0	U							P
Arsenic			10.0	U							P
Barium			-0.5	B	NQ						P
Beryllium			1.5	B	See PBW						P
Cadmium			5.0	U							P
Calcium			5000.0	U							P
Chromium			10.0	U							P
Cobalt			5.0	U							P
Copper			5.0	U							P
Iron			100.0	U							P
Lead			3.0	U							P
Magnesium			5000.0	U							P
Manganese			10.0	U							P
Mercury			-0.114	B	NQ						CV
Nickel			5.0	U							P
Potassium			5000.0	U							P
Selenium			5.0	U							P
Silver			5.0	U							P
Sodium			5000.0	U							P
Thallium			10.0	U							P
Vanadium			20.0	U							P
Zinc			20.0	U							P

SW846 - METALS

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

IR69-SW02S

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	2159.5600		77.0472	B	2000.00	104.1		P
Antimony	75 - 125	509.9568		10.0000	U	500.00	102.0		P
Arsenic	75 - 125	40.1277		10.0000	U	40.00	100.3		P
Barium	75 - 125	1999.8700		19.9989	B	2000.00	99.0		P
Beryllium	75 - 125	47.6902		5.0000	U	50.00	95.4		P
Cadmium	75 - 125	50.1467		5.0000	U	50.00	100.3		P
Chromium	75 - 125	204.9456		10.0000	U	200.00	102.5		P
Cobalt	75 - 125	482.8030		5.0000	U	500.00	96.6		P
Copper	75 - 125	258.2205		5.0000	U	250.00	103.3		P
Iron	75 - 125	1085.7450		101.3970		1000.00	98.4		P
Lead	75 - 125	21.3675		2.9355	B	20.00	92.2		P
Manganese	75 - 125	492.6909		18.3633		500.00	94.9		P
Mercury	75 - 125	0.9500		0.2000	U	1.00	95.0		CV
Nickel	75 - 125	509.7690		5.0000	U	500.00	102.0		P
Selenium	75 - 125	7.5697		6.2340		10.00	13.4	N	P
Silver	75 - 125	48.9962		5.0000	U	50.00	98.0		P
Thallium	75 - 125	60.0094		6.9227	B	50.00	106.2		P
Vanadium	75 - 125	490.2144		20.0000	U	500.00	98.0		P
Zinc	75 - 125	489.4746		3.4765	B	500.00	97.2		P

JTBJ

not rejected because the pds is OK

Comments:

SW846 - METALS

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

IR69-SW02SD

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	2137.5130		77.0472	B	2000.00	103.0		P
Antimony	75 - 125	508.2401		10.0000	U	500.00	101.6		P
Arsenic	75 - 125	39.1055		10.0000	U	40.00	97.8		P
Barium	75 - 125	1991.3980		19.9989	B	2000.00	98.6		P
Beryllium	75 - 125	47.6703		5.0000	U	50.00	95.3		P
Cadmium	75 - 125	50.2729		5.0000	U	50.00	100.5		P
Chromium	75 - 125	205.6445		10.0000	U	200.00	102.8		P
Cobalt	75 - 125	485.8618		5.0000	U	500.00	97.2		P
Copper	75 - 125	258.2474		5.0000	U	250.00	103.3		P
Iron	75 - 125	1092.5900		101.3970		1000.00	99.1		P
Lead	75 - 125	20.9000		2.9355	B	20.00	89.8		P
Manganese	75 - 125	494.6285		18.3633		500.00	95.3		P
Mercury	75 - 125	0.9700		0.2000	U	1.00	97.0		CV
Nickel	75 - 125	512.1785		5.0000	U	500.00	102.4		P
Selenium	75 - 125	7.7324		6.2340		10.00	15.0	N	P
Silver	75 - 125	48.9833		5.0000	U	50.00	98.0		P
Thallium	75 - 125	55.2605		6.9227	B	50.00	96.7		P
Vanadium	75 - 125	491.6856		20.0000	U	500.00	98.3		P
Zinc	75 - 125	489.9620		3.4765	B	500.00	97.3		P

JTRJ

Comments:

SW846 - METALS

5B

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

IR69-SW02A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Selenium		15.09		6.23		10.0	88.6		P

Comments:

SW846 - METALS

9

ICP SERIAL DILUTIONS

SAMPLE NO.

IR69-SW02L

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	77.05	B	1000.00	U	100.0		P
Antimony	10.00	U	50.00	U			P
Arsenic	10.00	U	14.59	B	100.0		P
Barium	20.00	B	17.95	B	10.2	E	P JWS
Beryllium	5.00	U	25.00	U			P
Cadmium	5.00	U	25.00	U			P
Calcium	4298.84	B	4080.54	B	5.1		P
Chromium	10.00	U	50.00	U			P
Cobalt	5.00	U	25.00	U			P
Copper	5.00	U	25.00	U			P
Iron	101.40		500.00	U	100.0		P
Lead	2.94	B	15.00	U	100.0		P
Magnesium	4886.98	B	4932.57	B	0.9		P
Manganese	18.36		17.12	B	6.8		P
Mercury	0.20	U	1.00	U			CV
Nickel	5.00	U	25.00	U			P
Potassium	2083.59	B	1662.28	B	20.2	E	P JWS
Selenium	6.23		25.00	U	100.0		P
Silver	5.00	U	25.00	U			P
Sodium	56771.31		58771.95		3.5		P
Thallium	6.92	B	50.00	U	100.0		P
Vanadium	20.00	U	100.00	U			P
Zinc	3.48	B	3.89	B	11.8		P

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69 EB01-031410-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-01JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
100-52-7	Benzaldehyde	5.0	U	
108-95-2	Phenol	10	U	
111-44-4	Bis(2-chloroethyl)ether	5.0	U	
95-57-8	2-Chlorophenol	10	U	
95-48-7	2-Methylphenol	10	U	
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U	
98-86-2	Acetophenone	5.0	U	
106-44-5	4-Methylphenol	10	U	
621-64-7	N-Nitroso-di-N-propylamine	5.0	U	
67-72-1	Hexachloroethane	5.0	U	
98-95-3	Nitrobenzene	5.0	U	
78-59-1	Isophorone	5.0	U	
88-75-5	2-Nitrophenol	10	U	
105-67-9	2,4-Dimethylphenol	10	U	
111-91-1	Bis(2-chloroethoxy)methane	5.0	U	
120-83-2	2,4-Dichlorophenol	10	U	
91-20-3	Naphthalene	5.0	~~U~~	exclude RE
106-47-8	4-Chloroaniline	10	U	
87-68-3	Hexachlorobutadiene	5.0	U	
105-60-2	Caprolactam	5.0	U	
59-50-7	4-Chloro-3-methylphenol	10	U	
91-57-6	2-Methylnaphthalene	5.0	~~U~~	exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U	
88-06-2	2,4,6-Trichlorophenol	10	U	
95-95-4	2,4,5-Trichlorophenol	10	U	
92-52-4	1,1'-Biphenyl	5.0	U	
91-58-7	2-Chloronaphthalene	5.0	U	
88-74-4	2-Nitroaniline	10	U	
131-11-3	Dimethylphthalate	5.0	U	
606-20-2	2,6-Dinitrotoluene	5.0	U	
208-96-8	Acenaphthylene	5.0	~~U~~	exclude RE
99-09-2	3-Nitroaniline	10	U	
83-32-9	Acenaphthene	5.0	~~U~~	exclude RE

FORM I SV 8270C

UM 072310

UM 081210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69 | EB01-031410-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-01JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	~~U~~ UJ CCL
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	~~U~~
50-32-8	Benzo(a)pyrene	5.0	~~U~~
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	~~U~~
53-70-3	Dibenzo(a,h)anthracene	5.0	~~U~~
191-24-2	Benzo(g,h,i)perylene	5.0	~~U~~

(1) - Cannot be separated from Diphenylamine

LM 081210

LM 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031410-GW

Lab Name: COMPUCHEM Method: 8270C-SIM IRG

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136 MM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-01A60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/27/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.072	J
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

MM 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69 EB01-031510-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136 UM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-12

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-12A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

UM 072310

UM 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRL9 EB01-031510-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136 WM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-12

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-12A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

WM 072310

WM 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031510-GW

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-12

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-12A60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.16	J
91-57-6	2-Methylnaphthalene	0.069	J
208-96-8	Acenaphthylene	0.090	J
83-32-9	Acenaphthene	0.11	J
86-73-7	Fluorene	0.13	J
85-01-8	Phenanthrene	0.16	J
120-12-7	Anthracene	0.15	J
206-44-0	Fluoranthene	0.15	J
129-00-0	Pyrene	0.16	J
56-55-3	Benzo(a)anthracene	0.15	J
218-01-9	Chrysene	0.16	J
205-99-2	Benzo(b)fluoranthene	0.15	J
207-08-9	Benzo(k)fluoranthene	0.17	J
50-32-8	Benzo(a)pyrene	0.15	J
193-39-5	Indeno(1,2,3-cd)pyrene	0.14	J
53-70-3	Dibenzo(a,h)anthracene	0.14	J
191-24-2	Benzo(g,h,i)perylene	0.15	J

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRM | EB01-031510-SD

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-11 LM 072310

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-11A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

LM 072310

LM 081210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031510-SD

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-11

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-11A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	2.0	J
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	~~U~~
50-32-8	Benzo(a)pyrene	5.0	~~U~~
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	~~U~~
53-70-3	Dibenzo(a,h)anthracene	5.0	~~U~~
191-24-2	Benzo(g,h,i)perylene	5.0	~~U~~

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031510-SD

Lab Name: COMPUCHEM Method: 8270C-SIM IR 1/1

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136 WM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-11

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-11JA60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.051	J
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

WM 072310

069

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRL9 EB01-031610-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

LM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-16

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-16A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/06/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

LM 081210

LM 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69 EB01-031610-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-16

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-16A70 LM 072310

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/06/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

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071

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031610-GW

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-16

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-16J3C60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.078	J
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR19 EB01-031610-SB

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-09 UM 072310

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-09A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

UM 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69 EB01-031610-SB

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136 LM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-09

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-09A70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	5.0	~~U~~ exclude RE
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	~~U~~ UJ CCH
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	5.0	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	~~U~~ exclude RE
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	~~U~~ exclude RE
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	~~U~~ exclude RE
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	~~U~~ exclude RE
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

LM 072310

LM 072310

074

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031610-SB

Lab Name: COMPUCHEM

Method: 8270C-SIM

Lab Code: LIBRTY Case No.:

SAS No.:

SDG No.: 1003136

Matrix: (soil/water) WATER

Lab Sample ID: 1003136-09

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: 1003136-09A60

Level: (low/med) LOW

Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___

Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 04/03/10

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.084	J
91-57-6	2-Methylnaphthalene	0.039	J
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.072	J
120-12-7	Anthracene	0.021	J
206-44-0	Fluoranthene	0.022	J
129-00-0	Pyrene	0.033	J
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04DW - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-02

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003136-02C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.1	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.1	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.1	U
98-86-2	Acetophenone	5.1	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.1	U
67-72-1	Hexachloroethane	5.1	U
98-95-3	Nitrobenzene	5.1	U
78-59-1	Isophorone	5.1	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.1	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.1	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.1	U
105-60-2	Caprolactam	5.1	~~U~~ UJ CCH
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.1	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.1	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.1	U
91-58-7	2-Chloronaphthalene	5.1	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.1	U
606-20-2	2,6-Dinitrotoluene	5.1	U
208-96-8	Acenaphthylene	5.1	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.1	~~U~~ exclude RE

FORM I SV 8270C

UM 072310

UM 081210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04DW — 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-02

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003136-02C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.1	U
132-64-9	Dibenzofuran	5.1	U
84-66-2	Diethylphthalate	0.63	J
7005-72-3	4-Chlorophenyl-phenylether	5.1	U
86-73-7	Fluorene	5.1	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.1	U
101-55-3	4-Bromophenyl-phenylether	5.1	U
118-74-1	Hexachlorobenzene	5.1	U
1912-24-9	Atrazine	5.1	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.1	~~U~~ exclude RE
120-12-7	Anthracene	5.1	~~U~~ exclude RE
86-74-8	Carbazole	5.1	U
84-74-2	Di-n-butylphthalate	5.1	U
206-44-0	Fluoranthene	5.1	~~U~~ exclude RE
129-00-0	Pyrene	5.1	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.1	U
91-94-1	3,3'-Dichlorobenzidine	5.1	U
117-81-7	bis(2-ethylhexyl)Phthalate	2.2	J
56-55-3	Benzo(a)anthracene	5.1	~~U~~ exclude RE
218-01-9	Chrysene	5.1	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.1	U
205-99-2	Benzo(b)fluoranthene	5.1	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.1	U
50-32-8	Benzo(a)pyrene	5.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.1	U
53-70-3	Dibenzo(a,h)anthracene	5.1	U
191-24-2	Benzo(g,h,i)perylene	5.1	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

LM 072310

LM 072210

077

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04DW 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-02

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003136-02JC60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.21	U
91-57-6	2-Methylnaphthalene	0.018	J
208-96-8	Acenaphthylene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	U
206-44-0	Fluoranthene	0.21	U
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U
53-70-3	Dibenzo(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04IW - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-13

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-13A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	1.7	J
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

VM 072310

VM 081210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04IW — 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-13 UM 072310

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-13A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ VJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	3.9	J
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

UM 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04IW 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-13

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-13A60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.2 ~~0.031~~	~~J~~ UEBL
91-57-6	2-Methylnaphthalene	0.2 ~~0.028~~	~~J~~ UEBL
208-96-8	Acenaphthylene	0.2 ~~0.012~~	~~J~~ UEBL
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.2 ~~0.035~~	~~J~~ UEBL
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.2 ~~0.018~~	~~J~~ UEBL
129-00-0	Pyrene	0.2 ~~0.018~~	~~J~~ UEBL
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.2 ~~0.017~~	~~J~~ UEBL
205-99-2	Benzo(b)fluoranthene	~~0.016~~	~~J~~
207-08-9	Benzo(k)fluoranthene	~~0.018~~	~~J~~
50-32-8	Benzo(a)pyrene	~~0.018~~	~~J~~
193-39-5	Indeno(1,2,3-cd)pyrene	0.013	J
53-70-3	Dibenzo(a,h)anthracene	~~0.015~~	~~J~~
191-24-2	Benzo(g,h,i)perylene	~~0.017~~	~~J~~

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15DW - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136 WM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-07

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-07A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

WM 072310

WM 081210

082

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15DW - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-07

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-07A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ VS CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

LM 072310

LM 081210

LM 072310

U03

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW15DW 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-07

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-07A60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

LM 072310

064

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW19IW - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-14

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-14A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/06/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

LM 08/2/10

LM 07/23/10

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW19IW - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136 LM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-14

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-14A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/06/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

LM 072310

LM 072310

U06

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW19IW - 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-14

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-14A60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

UM 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW19UW - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-15

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-15A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/06/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

WM 072310

WM 081210

088

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW19UW - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-15

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-15A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/06/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

LM 072310

LM 08/2/10

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW19UW 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-15

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-15J2C60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.2 ~~0.030~~	~~J~~ U EBL
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW26DW -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-18

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-18A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/08/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	~~U~~ ~~UJ~~ ~~CCL~~ U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

LM 0812-10

LM 0723-10

091

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW26DW ~ 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-18

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-18A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/08/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	~~U~~ UJ CCH
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	~~U~~ UJ CCL
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	4.8	J
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

LM 05/12/10

LM 07/23/10

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW26DW - 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-18

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-18J2C60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW26IW - 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-17

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-17A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/08/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

LM 072310

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	~~U~~ US CCU U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	0.58	J
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

LM 082210

LM 072310

094

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW26IW — 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-17

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-17A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/08/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	~~U~~ UJ CCH
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	~~U~~ UJ CCL
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	2.0	J
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	~~U~~
50-32-8	Benzo(a)pyrene	5.0	~~U~~
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	~~U~~
53-70-3	Dibenzo(a,h)anthracene	5.0	~~U~~
191-24-2	Benzo(g,h,i)perylene	5.0	~~U~~

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

LM 081210

LM 072310

095

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW26IW 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-17

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-17A60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW01 — 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-03 LM 072310

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-03JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

LM 072310

LM 072310

097

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW01 — 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-03 LM 072310

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-03JC70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	~~U~~ VJ UCL
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

LM 081210

LM 072310

098

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW01 — 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-03JC60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW01D — 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-04 LM 072310

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-04C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	~~U~~ UJ CCIA
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

LM 072310

LM 082210

100

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW01D ~ 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-04C70

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW01D — 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-04 WM 072310

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-04C60

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/19/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

WM 072310

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW02 — 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-08 LM 072310

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-08A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

LM 072310

LM 082210

103

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW02 — 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-08 UM 072310

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-08A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ VS CLH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

UM 081210

UM 072310

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW02 — 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-08A60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

UM 072310

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

UM 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW03 — 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-10

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-10A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

WM 072310

WM 072310

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW03 — 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-10

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-10A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/05/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	~~U~~ UJ CCH
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

WM 072310

WM 08/2/10

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SW03 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-10

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003136-10JA60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/20/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW26DW-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

LM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-18

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-18R71

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U VJ CCL
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U VJ CCL
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.029	J J CCL
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	6.1	B U FBE RICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	1.9	B U EBL
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	1.4	
78-93-3	2-butanone	2.5 ~~0.5~~ ~~0.90~~	J ~~U FBE~~ RICL
67-66-3	Chloroform	cdcl 8/12/10 17	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.5 ~~0.051~~	J U FBL
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.5 ~~0.13~~	J U EBL
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.5 ~~0.11~~	J U FBL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

2 corrections
LM 072310

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FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW26DW-10A

WM 072310

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-18

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-18R71

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/26/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.5 ~~0.070~~	~~J~~ U FBL
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	~~U~~ UJ CCL
108-87-2	Methylcyclohexane	0.50	~~U~~ UJ CCL

FORM I VOA

WM 072310

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04DW — IDA

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136 WM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-02

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-0271

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.28	J
75-01-4	Vinyl Chloride	0.11	J
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.15	~~J~~ J CCL
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	6.2	~~B~~ ~~U EBL~~ R ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	1.2	~~B~~ U EBL
156-60-5	trans-1,2-Dichloroethene	0.78	
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	7.6	
78-93-3	2-butanone	2.5 ~~0.5~~ 0.94	~~J~~ ~~U EBL~~ R ICL
67-66-3	Chloroform	5.9	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.045	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.12	J
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.5 ~~0.26~~	~~J~~ U EBL
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.5 ~~0.075~~	~~J~~ U EBL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

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2 corrections
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FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04DW 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-02

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-0271

Level: (low/med) LOW Date Received: 03/17/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.5 ~~0.050~~	~~J~~ U PBL
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04IW-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

WM 012310

Matrix: (soil/water) WATER Lab Sample ID: 1003136-13

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-1371

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	12	
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.093	~~J~~ J CCL
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	11	~~B~~ ~~U FBL~~ R ICL
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	3.3	~~B~~ U EBL
156-60-5	trans-1,2-Dichloroethene	13	
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	190	~~E~~ exclude DL
78-93-3	2-butanone	2.5 ~~0.5~~ ~~1.5~~	~~J~~ ~~U FBL~~ R ICL
67-66-3	Chloroform	6.7	
71-55-6	1,1,1-Trichloroethane	cdac 8/18/10 0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.16	J
79-01-6	Trichloroethene	0.37	J
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.5 ~~0.43~~	~~J~~ U FBL
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

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028

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW04IW-10A

ab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003136

Matrix: (soil/water) WATER Lab Sample ID: 1003136-13

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003136-1371

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. _____ Date Analyzed: 03/25/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.5 ~~0.072~~	J UFBL
108-38-3	m,p-Xylene	~~0.11~~	J UFBL
95-47-6	o-Xylene	1.0 ~~0.3~~ 0.5 ~~0.041~~	J UFBL
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.5 ~~0.12~~	J UFBL
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

DataQual

Environmental Services, LLC

CH2M HILL
5700 Cleveland Street
Suite 101
Virginia Beach, VA 23462

July 27, 2010
CompuChem
SDG#s 1003149

MCB Camp Lejeune, CTO-81 – Site 69

Dear Ms. Buckley,

The following Data Validation report is provided as requested for the parameters noted in the table below for SDG #s 1003149. The data validation was performed in accordance with the SW846 Methods 6010B/7470A for dissolved metals and mercury and good professional judgment. Also used in the validation of these samples were the National Functional Guidelines for Inorganic Data Review (October, 2004), as applicable. All areas of concern are discussed in the body of the report and a summary of data qualifications is provided.

Sample ID	Lab ID	Matrix	D Metals
IR69-SW01-10A	1003149-02	water	X
IR69-SW01D-10A	1003149-03	water	X
IR69-SW02-10A	1003149-04	water	X
IR69-SW03-10A	1003149-05	water	X
IR69-EB01-030410-GW	1003149-01	water	X
IR69-EB01-031510-GW	1003149-06	water	X
IR69-SW02-10A MS	1003149-04 MS	water	X
IR69-SW02-10A MSD	1003149-04 MSD	water	X

The following quality control samples were provided with this SDG: samples IR69-EB01-030410-GW and IR69-EB01-031510-GW.

The samples were evaluated based on the following criteria:

- Data Completeness *
- Technical Holding Times *
- Initial/Continuing Calibrations *
- CRI Standards *
- Interference Check Sample *
- Blanks
- Laboratory Control Samples *
- Matrix Spike Recoveries
- Matrix Duplicate RPDs *
- Post Digestion Spike Recoveries *

- Serial Dilutions *
- Field Duplicates
- Identification/Quantitation
- Reporting Limits *

* - indicates that no qualifications were required based on this criteria

Overall Evaluation of Data/Potential Usability Issues

A summary of qualifications applied to the sample results are noted below for the fractions validated. Specific details regarding qualification of the data are addressed in the Specific Evaluation section of this narrative. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte the validator has chosen the qualifier that best indicates possible bias in the results and flagged the data accordingly. However, information regarding all quality control issues is provided in the body of the report and on the qualification summary page. Please note that when a compound or analyte is flagged due to blank contamination the BL qualifier code takes precedence over all other qualifier codes except a code that explains rejected data.

Dissolved Metals

Qualifications were required in the samples due to laboratory and field blank contamination.

One analyte required qualification in the samples due to non-compliant matrix spike %Rs.

One analyte was qualified as estimated J in the field duplicate pair due to a non-complaint RPD.

All results reported between the MDL and the RL (B flagged by the laboratory) were qualified as estimated J.

Specific Evaluation of Data

Data Completeness

The dissolved metals fraction required resubmission due to unexplained RE samples. Please note: All field sample and QC blank IDs were missing the first four (IR69) and/or the last four (-10A) characters. The characters were added to the Form 1s in the DV reports by the data validator.

Technical Holding Times

According to chain of custody records, sampling was performed on 3/14/10 - 3/15/10 and samples were received at the laboratory 3/17/10 and 3/19/10. All sample preparation and analysis was performed within method holding time requirements.

Blanks

Dissolved Metals

Contamination was noted in associated blanks and qualification was required in the associated samples. Required action is noted in the following tables.

Blank ID	Analyte	Concentration	Action Level	Q Flag	Q Code
PBW	antimony	7.897B ug/L	RL	U	MBL
	lead	2.152B ug/L	RL	U	MBL
	zinc	0.953B ug/L	RL	U	MBL
CCB	calcium	26.8B ug/L	RL	U	MBL
	barium	0.2B ug/L	RL	U	MBL
	beryllium	1.3B ug/L	RL	U	MBL
	potassium	16.4B ug/L	RL	U	MBL
IR69-FB01-031910	zinc	0.97B ug/L	RL	U	FBL
IR69-EB01-031410-GW	aluminum	72.9B ug/L	RL	U	EBL
IR69-EB01-031510-GW	beryllium	0.57B ug/L	RL	U	EBL

Associated samples and required qualifications are noted in the following table.

Sample ID	Analyte	Q Flag	Q Code
all field samples	antimony	U at RL	MBL
IR69-SW01-10A, IR69-SW01D-10A, IR69-SW03-10A	lead	U at RL	MBL
IR69-SW01D-10A, IR69-SW02-10A, IR69-SW03-10A	vanadium	U at RL	MBL
IR69-SW02-10A	calcium	U at RL	MBL
all field samples	barium	U at RL	MBL
IR69-SW01-10A, IR69-SW01D-10A	beryllium	U at RL	MBL
IR69-SW01-10A, IR69-SW01D-10A, IR69-SW03-10A	potassium	U at RL	EBL
IR69-SW01D-10A, IR69-SW02-10A	zinc	U at RL	FBL
IR69-SW01-10A, IR69-SW01D-10A	aluminum	U at RL	EBL
IR69-SW02-10A	beryllium	U at RL	EBL

Matrix Spike Recoveries

Dissolved Metals

The matrix spike pair exhibited non-compliant %Rs for one analyte. Specific action is noted in the following table.

MS/MSD	Analyte	Samples Affected	%R	Q Flag	Q Code
IR69-SW02-10A	selenium	all field samples	70.2/49.9	J/UJ	MSL

Field Duplicates

Dissolved Metals

The field duplicate pair of samples IR69-SW01-10A and IR69-SW01D-10A exhibited a non-compliant RPD for the analyte manganese (50%). This analyte was flagged as estimated in the field duplicate pair with a qualifier code of FD.

Identification/Quantitation

Dissolved Metals

All results reported between the IDL and the RL (B flagged by laboratory) were qualified as estimated J. No qualification code was required.

A summary of qualifications required is provided on the following page. Please do not hesitate to contact DataQual ES with any questions regarding this validation report.

Sincerely,

Jacqueline Cleveland

Jacqueline Cleveland
Vice-President

Summary of Data Qualifications

Dissolved Metals

Sample ID	Analyte	Results	Q-Flag	Q Code
all field samples	antimony	+B	U at RL	MBL
IR69-SW01-10A, IR69-SW01D-10A, IR69-SW03-10A	lead	+B	U at RL	MBL
IR69-SW01D-10A, IR69-SW02-10A, IR69-SW03-10A	vanadium	+B	U at RL	MBL
IR69-SW02-10A	calcium	+B	U at RL	MBL
all field samples	barium	+B	U at RL	MBL
IR69-SW01-10A, IR69-SW01D-10A	beryllium	+B	U at RL	MBL
IR69-SW01-10A, IR69-SW01D-10A, IR69-SW03-10A	potassium	+B	U at RL	MBL
IR69-SW01D-10A, IR69-SW02-10A	zinc	+B	U at RL	FBL
IR69-SW01-10A, IR69-SW01D-10A	aluminum	+B	U at RL	EBL
IR69-SW02-10A	beryllium	+B	U at RL	EBL
all field samples	selenium	+/-	J/UJ	MSL
IR69-SW01-10A, IR69-SW01D-10A	manganese	+	J	FD
all samples	all analytes	+B	J	

Glossary of Qualification Flags and Abbreviations

Qualification Flags (Q-Flags)

U	not detected above the reported sample quantitation limit
J	estimated value
UJ	reported quantitation limit is qualified as estimated
R	result is rejected; the presence or absence of the analyte cannot be verified
D	result value is based on dilution analysis result
NJ	analyte has been tentatively identified, estimated value
L	analyte present, biased low
UL	not detected, quantitation limit is probably higher
K	analyte present, biased high

Inorganic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 10X the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL and the result is raised to the RL and flagged U.
R or J_+	The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator. (see NFG, Rev. date 10/04, p. 17 for extracted blanks (PB))

Organic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 5X (10X for common laboratory contaminants) the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is raised to the RL and flagged U.
U	The sample result for the blank contaminant is greater than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is flagged U at the reported value.

General Abbreviations

RL / MDL	reporting limit/method detection limit
CRQL	contract required quantitation limit
Q Code	qualifier code
+	positive result
-	non-detect result

QUALIFIER CODE REFERENCE

Qualifier	Description
TN	Tune
BSL	Blank Spike/LCS - High Recovery
BSH	Blank Spike/LCS - Low Recovery
BD	Blank Spike/Blank Spike Duplicate (LCS/LCSD) Precision
BRL	Below Reporting Limit
ISL	Internal Standard - Low Recovery
ISH	Internal Standard - High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate - Low Recovery
MSH	Matrix Spike and/or Matrix Spike Duplicate - High Recovery
MI	Matrix interference obscuring the raw data
MDP	Matrix Spike/Matrix Spike Duplicate Precision
2S	Second Source - Bad reproducibility between tandem detectors
SSL	Spiked Surrogate - Low Recovery
SSH	Spiked Surrogate - High Recovery
SD	Serial Dilution Reproducibility
ICL	Initial Calibration - Low Relative Response Factors (RRF)
ICH	Initial Calibration - High Relative Response Factors (RRF)
ICB	Initial Calibration - Bad Linearity or Curve Function
CCL	Continuing Calibration - Low Recovery or %Difference
CCH	Continuing Calibration - High Recovery or %Difference
LD	Lab Duplicate Reproducibility
HT	Holding Time
PD	Pesticide Degradation
2C	Second Column - Poor Dual Column Reproducibility
LR	Concentration Exceeds Linear Range
BL	Blank Contamination (MBL, EBL, FBL, TBL)
RE	Redundant Result - due to Re-analysis or Re-extraction
DL	Redundant Result - due to Dilution
FD	Field Duplicate
OT	Other - explained in data validation report
%SOL	High moisture content

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-SW01-10A

JLC 12310

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003149

Matrix (soil/water): WATER Lab Sample ID: 1003149-02

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200 ~~61.5~~	~~B~~	U	P	FBL
7440-36-0	Antimony	10 ~~7.6~~	~~B~~	U	P	MBL
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	200 ~~17.1~~	~~B~~	U	P	MBL
7440-41-7	Beryllium	5.0 ~~0.77~~	~~B~~	U	P	MBL
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	2460	~~B~~	J	P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	79.0	~~B~~	J	P	
7439-92-1	Lead	3.0 ~~1.7~~	~~B~~	U	P	MBL
7439-95-4	Magnesium	1900	~~B~~	J	P	
7439-96-5	Manganese	10.7		J	P	FD
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	5000 ~~799~~	~~B~~	U	P	MBL
7782-49-2	Selenium	5.0	~~U~~	~~N~~ UJ	P	MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	15100			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20.0	U		P	
7440-66-6	Zinc	20.0	U		P	

JLC 12310

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments: DISSOLVED

SW846 - METALS
-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-SW01D -10A

JAC 12310

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003149

Matrix (soil/water): WATER Lab Sample ID: 1003149-03

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	200 ~~67.6~~	~~B~~	U	P	EBL
7440-36-0	Antimony	10 ~~7.4~~	B	U	P	MBL
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	200 ~~16.4~~	~~B~~	U	P	MBL
7440-41-7	Beryllium	5.0 ~~0.76~~	~~B~~	U	P	MBL
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	3390	~~B~~	J	P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	100	U		P	
7439-92-1	Lead	3.0 ~~2.8~~	~~B~~	U	P	MBL
7439-95-4	Magnesium	2110	~~B~~	J	P	
7439-96-5	Manganese	17.9		J	P	FD
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	5000 ~~878~~	~~B~~	U	P	MBL
7782-49-2	Selenium	5.0	~~U~~ ~~N~~	UJ	P	MSL
7440-22-4	Silver	1.0	~~B~~	J	P	
7440-23-5	Sodium	16200			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20 ~~1.4~~	~~B~~	U	P	MBL
7440-66-6	Zinc	20 ~~4.2~~	~~B~~	U	P	FBL

JAC 12310

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments: DISSOLVED

SW846 - METALS
-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-SW02 ~~10R~~ JC 72310

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003149

Matrix (soil/water): WATER Lab Sample ID: 1003149-04

Level (low/med): LOW Date Received: 3/19/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	121	~~B~~	J	P	
7440-36-0	Antimony	10 ~~6.3~~	~~B~~	U	P	MBL
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	200 ~~14.2~~	~~B~~	U	P	MBL
7440-41-7	Beryllium	5.0 ~~1.1~~	~~B~~	U	P	FBL
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	5000 ~~4490~~	~~B~~	~~J~~ U	P	MBL JC 72910
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	62.3	~~B~~	J	P	
7439-92-1	Lead	3.0	U		P	
7439-95-4	Magnesium	5190			P	
7439-96-5	Manganese	19.2			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	2840	~~B~~	J	P	
7782-49-2	Selenium	5.0	~~U~~	~~N~~ UJ	P	MBL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	65800			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20 ~~0.90~~	~~B~~	U	P	MBL
7440-66-6	Zinc	20 ~~8.7~~	~~B~~	U	P	FBL

JC 72910

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments: **DISSOLVED**

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-SW03-10A

JAC 72310

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003149

Matrix (soil/water): WATER Lab Sample ID: 1003149-05

Level (low/med): LOW Date Received: 3/19/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	329			P	
7440-36-0	Antimony	10 ~~7.1~~	~~B~~	U	P	MBL
7440-38-2	Arsenic	10.0	U		P	
7440-39-3	Barium	200 ~~22.9~~	~~B~~	U	P	MBL
7440-41-7	Beryllium	5.0	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-70-2	Calcium	3210	~~B~~	J	P	
7440-47-3	Chromium	10.0	U		P	
7440-48-4	Cobalt	5.0	U		P	
7440-50-8	Copper	5.0	U		P	
7439-89-6	Iron	408			P	
7439-92-1	Lead	3.0 ~~1.3~~	~~B~~	U	P	MBL
7439-95-4	Magnesium	1190	~~B~~	J	P	
7439-96-5	Manganese	29.4			P	
7439-97-6	Mercury	0.20	U		CV	
7440-02-0	Nickel	5.0	U		P	
7440-09-7	Potassium	5000 ~~905~~	~~B~~	U	P	MBL
7782-49-2	Selenium	5.0	~~U~~	~~N~~ UJ	P	MSL
7440-22-4	Silver	5.0	U		P	
7440-23-5	Sodium	8080			P	
7440-28-0	Thallium	10.0	U		P	
7440-62-2	Vanadium	20 ~~1.4~~	~~B~~	U	P	MBL
7440-66-6	Zinc	113			P	

JAC 72310

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments: DISSOLVED

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1869-EB01-030410-GW

JAC 72310

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003149

Matrix (soil/water): WATER Lab Sample ID: 1003149-01

Level (low/med): LOW Date Received: 3/17/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	41.0	~~B~~	J	P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U		P
7440-41-7	Beryllium	0.80	~~B~~	J	P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	1.4	~~B~~	J	P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	5.0	U	~~N~~	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	730	~~B~~	J	P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	1.1	~~B~~	J	P
7440-66-6	Zinc	20.0	U		P

JAC 72910

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments: DISSOLVED

SW846 - METALS
-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1869-EB01-031510-GW

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003149

Matrix (soil/water): WATER Lab Sample ID: 1003149-06

Level (low/med): LOW Date Received: 3/19/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	6.6	~~B~~	J	P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	1.3	~~B~~	J	P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	5.0	U	N	P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	713	~~B~~	J	P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	1.2	~~B~~	J	P
7440-66-6	Zinc	20.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments: DISSOLVED

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CHAIN OF CUSTODY

501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Page 1 of 1 — 21867 — 10 — 144

Courier:
Airbill No.:
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Jessica Hugh

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

CompuChem No.	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other none	8260B	8270C/8270C SIM 2-1L Ambers	RSK 175 MEE 2-40ml VOAs HCl	3550B/8081A/8082 2-1L Ambers	TOC 2-40ml VOAs H2SO4	CNNS-AIK 1-250ml poly, none	Sulfide 1-500ml poly, 2ml Zn Ace, 6N NaOH	TAL 1-500ml poly HNO3	6010B/METALS 1-500ml poly HNO3 Dissolved	6010B/metals Field Filtered					
1003136-01 / 1003149-01	IR69-EB-031410-GW	3/14/10	0900	RI	12	2	1	2	2		5		2	2	2	2	1	1	1	1		<2	>9	<2	<2	

Sample Receipt Conditions

Sample Unpacked By: Jennifer Doyle
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Residual Chlorine Present?
Yes ____ No ✓

Relinquished by: [illegible]	Date/Time: 3/16/10 1700	Received by: Jennifer Doyle	Date/Time: 3/17/10 1600
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 0.6 °C

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer

21758 12 145 115

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CHAIN OF CUSTODY

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Page 1 of 1

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name: Jessica Mtijk

Project Information

Project Name: CTO-081
Sampling Location: MCB Camby Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N: Y - labeled "FF" in field book
Are high concentrations expected? Y or N? If yes, which ID(s)?

Requested Analyses

Sample ID (Lab Use Only)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MeOH	Other none	8260B	8270C	8270C-SIM	RSK 175 MEE	8330B	8081A	8082	TOC	CN/NS-AIK	Sulfide	TAL 6010B metals	Dissolved 6010B metals									
													2-1L Amber	2-40ml	10ml HCl	2-1L Amber		2-40ml VOAs HCl	1-250ml poly, non-poly	1-500ml poly ZnAc CaOH	1-500ml poly HNO3 HAD3	1-500ml poly HNO3 Field Filtered									
1003136-03 / 1003149-02	FR69-SW01-10A	3/14/10	1345	SW	6			2			4			2		2						1	1			<2	<2					
1003136-04 / 1003149-03	FR69-SW01D-10A	3/14/10	1350	SW	6			2			4			2		2						1	1			<2	<2					

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab Use Only

Sample Unpacked By: Jennifer Dolen
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Residual Chlorine Present?
Yes ____ No ✓

Chain of Custody

Relinquished by: Jessica Mtijk	Date/Time: 3/16/10 1700	Received by: Jennifer Dolen	Date/Time: 3/17/10 1600
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 1.1 °C

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer

№ 01751

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016

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CHAIN OF CUSTODY

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Page ____ of ____

Courier
Airbill No.
Sampling Complete? Y or N

Client Reporting Information	Project Information
Company Name: CH2M Hill	Project Name: CTO-081
Address: 11301 Carmel Commons Blvd Ste 304	Sampling Location: MCB Camp Lejeune Site 69
City: Charlotte State: NC Zip: 28226	Turnaround time: Standard
Project Contact: Gwen Buckley	Batch QC or Project Specific? If Specific, which Sample ID? Batch
Phone #: 757-671-6292	Are aqueous samples field filtered for metals? Y or N
Sampler's Name	Are high concentrations expected? Y or N? If yes, which ID(s)?

Analysis Requested (Preservation/Container)

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	8260B 2-1L	8270C/8270C-SIM 2-1L Ambers	RSK175 MEE VOAs-HCl 2-40ml	8550B/8081A/8082 Ambers 2-1L	2-40ml VOAs H2SO4	TOC 1-250ml	CNWS-AIK 1-250ml poly, none	Sulfide 1-500ml poly, zinc acetate/NaOH	TPH 1-500ml poly, HNO3	6010B/METALS Dissolved 1-500ml poly, HNO3	6010B/METALS Total 1-500ml poly, HNO3		Lab Use Only			
1003136-08 1003149-01	IR69-SW02-14A	3/15/10	1035	SW	6			2					2		2					1	1			<2	<2		
1003136-08 1003149-02	IR69-SW02-14A-MS	3/15/10	1035	SW	6			2					2		2					1	1			2	<2		

Residual Chlorine Present?
Yes ____ No ✓

Lab Use Only

Sample Unpacked By: Quiana Byrd	Cyanide samples checked for sulfide & chlorine? Y or NA
Sample Order Entry By: [illegible]	625 & Phenol samples checked for chlorine? Y or NA
Samples Received in Good Condition? Y or N	608 samples checked for pH between 5.0-9.0? Y or NA
If no, explain:	

Comments

Relinquished by: [signature]	Date/Time: 3/19/10 1000	Received by: Quiana Byrd	Date/Time: 3/19/10 1200
Relinquished by:	Date/Time:	Received by:	Date/Time: 3/19/10
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 0.6 °C

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer

015

14958

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CHAIN OF CUSTODY

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Page ____ of ____

Courier
Airbill No.
Sampling Complete? Y or N

Company Name: CH2M Hill	Project Name: CTO-081
Address: 11301 Carmel Commons Blvd Ste 304	Sampling Location: MCB Camp Lejeune Site 69
City: Charlotte State: NC Zip: 28226	Turnaround time: Standard
Project Contact: Jason Buckley	Batch QC or Project Specific? If Specific, which Sample ID? Batch
Phone #: 757-671-6292	Are aqueous samples field filtered for metals? Y or N
Sampler's Name	Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab Sample ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other	8260B (2-1L)	8270C/8270C-SIM (Amber)	RSK 175 MEE (VOAs HCl) (2-40ml)	3550B/8015B/8082 (Amber) (2-1L)	TOC (2-40ml VOAs H2SO4)	CN/NS-AIK (Poly, no ox) (1-250ml)	Sulfide (ZnAc 6N NaOH) (1-500ml poly)	TAL 6010B/METALS (HNO3) (1-500ml poly)	Dissolved 6010B/metals (HNO3 Filtered) (1-500ml poly)							
1003136-08 1003149-04	IR69-SW02-16A-SD	3/15/10	1035	SW	6			2					2		2				1	1		<2	<2				
1003136-09	IR69-EB-03/16/10-SB	3/16/10	1630	RI	~~5~~ 4	~~3~~ 2		1				~~3~~ 2	2		2				1			<2	/				

Residual Chlorine Present?
Yes ____ No ✓

Sample Unpacked By: Deana Bond	Cyanide samples checked for sulfide & chlorine? Y or (NA)
Sample Order Entry By: [illegible]	625 & Phenol samples checked for chlorine? Y or (NA)
Samples Received in Good Condition (Y) or N	608 samples checked for pH between 5.0-9.0? Y or (NA)
If no, explain:	

Relinquished by: [illegible]	Date/Time: 3-19-10 0830	Received by: Deana Bond	Date/Time: 3-19-10 ~~1600~~
Relinquished by:	Date/Time:	Received by:	Date/Time: 3/19/10
Subcontact? Y or (N) If yes, where?	Custody Seal(s) intact? (Y) or N	On Ice? (Y) or N	Cooler Temp: 0.7 °C

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer

№ 01759

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CHAIN OF CUSTODY

CompuChem
a division of Liberty Analytical Corp.

501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Courier
Airbill No.
Sampling Complete? Y or N

Client/Report Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lej. Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N: IR69-SW03-10A-FF for dissolved metals
Are high concentrations expected? Y or N If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

CompuChem #	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other none	8260B	8270C/8270C-SIM/Amsers	RSK 175 MEE VOAs HCl	3550B/8081A/8082/Amsers	TOC	CNWS-AIK	Sulfide	6010B/METALS	6010B metals	SM5310B-TOC	Filtered	Preserved			
1003136-10 1003149-05	IR69-SW03-10A	3/15/10	1530	SW	6			2			4		2		2				1	1		42	42			
1003174-03	IR69-SD03-10A	3/15/10	1600	SO	3						3		X		X				1		1	42	/			
														1=8oz												
														1-4oz												
														1-4oz TOC?												

sediments need TOC
3/23/10

Residual Chlorine Present?
Yes ____ No ✓

Lab Use Only

Sample Unpacked By: Diane Byrd
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

For SO: 8270C/8270C-SIM/3550B/8081A/8082 analyses combined in one jar (8oz) 3/24/10

Relinquished by:	Date/Time: 3/19/10 1000	Received by: Diane Byrd	Date/Time: 3-19-10 1315
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where? Custody Seal(s) intact? Y or N On Ice? Y or N Cooler Temp: 0.7 °C

Samples stored 60 days after date report mailed at no extra charge.

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V5

№ 01812

Page 1 of 1

CompuChem
a division of Liberty Analytical Corp.

CHAIN OF CUSTODY

501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Courier
Airbill No.
Sampling Complete? Y or N

Company Name	CH2M Hill	Project Name	CTO-081
Address	11301 Carmel Commons Blvd Ste 304	Sampling Location	MCB Camp Lej Site 69
City / State / Zip	Charlotte NC 28226	Turnaround time	Standard
Project Contact	Gwen Buckley	Batch QC or Project Specific? If Specific, which Sample ID?	Batch
Phone #	757-671-6292	Are aqueous samples field filtered for metals? Y or N	Yes labeled "-FF"
Sampler's Name		Are high concentrations expected? Y or N If yes, which ID(s)?	

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Sample Number	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other none	8260B 2-L	8270C/8270C-SIM/Aroma 2-40ml	RSK 175 MEE/VOAs HCl 2-L	3550B/8015B/8082/Aroma 2-40ml VOAs H2SO4	TOC 1-250ml	CNHS-AIK 1-500ml poly, none	Sulfide 1-500ml poly ZnAc & NaOH	TPH 1-500ml poly HNO3	6010B/METALS 1-500ml poly HNO3	6010B metals Field Filtered	
1003136-11	IR69-EB-031510-SD	3/15/10	1700	RI	7			1	2		4		2		2	~~2~~			1			
1003136-12 1003149-06	IR69-EB-031510-GW	3/15/10	1715	RI	12	2	1	2	2		~~4~~ 5		2	2	2	2	1	1	1	1		
1003174-04	IR69-SB03-04-05-10A	3/16/10	1530	SO	2								X		X				X			

1-8oz
1-2oz MR

Residual Chlorine Present?
Yes ____ No ✓

Lab Use Only

Sample Unpacked By: Diane Dyer
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments
Did receive 2-40ml TOC for IR69-EB-031510-SD
Received 1-8oz jar for IR69-SB03-04-05-10A labeled for 8270C & 8081A. DB 3/19/10

Relinquished by:	Date/Time: 3/19/10 1700	Received by: Diane Dyer	Date/Time: 3/19/10 1700
Relinquished by:	Date/Time:	Received by:	Date/Time: DB 3/19/10

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 0.5°C

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer

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015

This SDG contains select metals analysis using SW-846 6010B/7470A/7471A.

HOLDING TIMES

Sampling Date: 3/14, 3/15
Received Date: 3/17, 3/19 Cooler temps: OK
Prep. Dates: 4/1 ICP, 4/1 Hg
Analysis Dates: 4/2, 4/7 ICP, 4/5-4/6 Hg
All holding time requirements were met.

CALIBRATIONS

All initial calibration criteria were met. Single point calibration was analyzed for ICP. Calibration verification criteria were met for all ICV and CCV standards. The RL standards were analyzed and met method criteria for all analytes with the exception of Se which was high- no qualifications were required. Interference check standards were analyzed and met criteria in all standards. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if an analyte is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying the criteria.
- Apply the same data validation guidelines to any associated calibration, preparation, and field QC blanks and all associated samples.
- Qualification/Action codes:
  - No Action - The sample result is greater than the CRDL and greater than ten times (10X) the blank value.
  - U - The sample result is greater than or equal to the MDL but less than or equal to the RL, result is reported as non-detect at the RL.
  - R or J+ The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator.

Blank Contamination and Qualification Summaries

Blank ID	Analyte	Concentration	Action Level	Q Flag	Q Code
PBW	antimony	7.897B ug/L	RL	U	MBL
	lead	2.152B ug/L	RL	U	MBL
	zinc	0.953B ug/L	RL	U	MBL
CCB	calcium	26.8B ug/L	RL	U	MBL
	barium	0.2B ug/L	RL	U	MBL
	beryllium	1.3B ug/L	RL	U	MBL
	potassium	16.4B ug/L	RL	U	MBL
IR69-FB01-031910	zinc	0.97B ug/L	RL	U	FBL
IR69-EB01-031410-GW	aluminum	72.9B ug/L	RL	U	EBL
IR69-EB01-031510-GW	beryllium	0.57B ug/L	RL	U	EBL

The concentration noted for the CCBs is the highest concentration in all the CCBs. However, when qualifying samples for CCB contamination, associated samples are those just prior to or just following a CCB. Therefore, not all analytes in all samples are flagged for noted CCB contamination. See worksheets for associations. Samples are qualified for field QC blank contamination based on QC tracking provided by CH2M HILL. Negative contamination in a prep blank or CCB, if less than the analyte CRDL, is qualified based on professional judgment.

Please note that based on the National Functional Guidelines, for contamination above the CRDL, results in the field samples that are greater than the RL up to 10X the blank contamination level should be qualified as estimated and considered biased high or they should be rejected. Associated samples and required qualifications are noted in the following table.

Sample ID	Analyte	Q Flag	Q Code
all field samples	antimony	U at RL	MBL
IR69-SW01-10A, IR69-SW01D-10A, IR69-SW03-10A	lead	U at RL	MBL
IR69-SW01D-10A, IR69-SW02-10A, IR69-SW03-10A	vanadium	U at RL	MBL
IR69-SW02-10A	calcium	U at RL	MBL
all field samples	barium	U at RL	MBL
IR69-SW01-10A, IR69-SW01D-10A	beryllium	U at RL	MBL
IR69-SW01-10A, IR69-SW01D-10A, IR69-SW03-10A	potassium	U at RL	EBL
IR69-SW01D-10A, IR69-SW02-10A	zinc	U at RL	FBL
IR69-SW01-10A, IR69-SW01D-10A	aluminum	U at RL	EBL
IR69-SW02-10A	beryllium	U at RL	EBL

MATRIX SPIKE/DUPLICATE SUMMARY

The MS/MSD sample exhibited a low recovery for Se in both the MS & MSD. All LCS recoveries and RPDs were acceptable. Se was flagged as estimated J/UJ.

SERIAL DILUTIONS

The serial dilution results were OK. No qualifications were required.

SAMPLE CALCULATION

EPA SAMPLE ID: IR69-SW01-10A
ANALYTE: barium
CONCENTRATION: 17.1 ug/L
%Solids – NA

Raw Data result: 17.10298 ug/L. Water results are direct read from the instrument.

FIELD DUPLICATE SAMPLE SUMMARY

Note: Field duplicate results are assessed only if both results are above the CRDL.

Sample ID: **IR69-SW01-10A** **Duplicate Sample ID:** **IR69-SW01D-10A**

Analyte	Sample Conc.	Duplicate Conc.	RPD
manganese	10.7	17.9	50%
sodium	15100	16200	7%

Comments: Flag Mn J in both samples

SAMPLE RESULT VERIFICATION

Specific Comments:

All sample results were reported within the calibration/linear range of the instruments. Detection limits were acceptable. Raw data was verified. All positive results reported at concentrations between the IDL and the RL were qualified as estimated J by the laboratory. All field sample and QC blank IDs were missing either the first 4 or the last four characters. The characters (-10A) were added for the field samples and the characters IR69 were added for the field QC blanks to the Form 1s in the DV reports by the data validator.

Reviewer JACleveland **Date:** 72710

CompuChem
a Division of Liberty Analytical Corp.
501 Madison Avenue
Cary, NC 27513

SDG NARRATIVE
SDG # 1003149

The indicated Sample Delivery Group (SDG) consisting of six (6) dissolved water samples was received into the laboratory information management system (LIMS) on March 17 and 19, 2010 intact and in good condition with Chain of Custody (COC) Records in order, unless otherwise noted in any attachments or Quality Assurance Notices. The temperature of the samples upon receipt was 0.5 to 1.1°C. Sample ID's reported in this data package are noted by the receiving department on the COC if they differ from those listed by the samplers on the COC.

The samples were prepared and analyzed in accordance with SW846 methodology for the requested TAL dissolved metals and mercury.

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (ICV & CCV) and blanks (ICB & CCB) associated with this data were confirmed to be within allowable limits.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verification (PBW & LCSW) was found to be within acceptable ranges and the field samples were analyzed within the specified holding times.

MATRIX RELATED QUALITY CONTROL:

The sample matrix spikes, CCN = 1003149-04 ID IR69-SW02S and IR69-SW02SD were inside control limits for the requested analytes except selenium.

Control limits for matrix spikes recoveries are set at 75% to 125% of the analyte quantity added unless original sample concentrations exceed the true values of these "spikes" by a factor of four or more. In this case, affected analytes are not flagged even if recoveries are outside percentage recovery control limits.

The sample matrix duplicate, CCN = 1003149-04 ID IR69-SW02D was inside control limits for the requested analytes.

CLP control limits for duplicate determinations are +/- 20% Relative Percent Difference (RPD) for concentrations greater than or equal to five times the CRDL in both the original and duplicate samples, and +/- the CRDL for concentrations less than five times the CRDL. The RPD is not calculated if both the original and duplicate values fall below the IDL.

A five-fold serial dilution of sample, CCN = 1003149-04 ID IR69-SW02L was performed in accordance with requirements for ICP and mercury analysis.

The adjusted sample concentration was inside control limits for the requested analytes.

The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice.

Susan W. Bass
Senior Chemist
April 8, 2010

SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003149

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum	200.0	U	200.0	U	200.0	U	65.3	B	200.000	U	P
Antimony	10.0	U	10.0	U	10.0	U	10.0	U	7.897	B	P
Arsenic	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P
Barium	200.0	U	0.2	B	200.0	U	0.2	B	200.000	U	P
Beryllium	5.0	U	5.0	U	5.0	U	1.3	B	5.000	U	P
Cadmium	5.0	U	5.0	U	5.0	U	5.0	U	-0.651	B	P
Calcium	5000.0	U	26.8	B	5000.0	U	5000.0	U	5000.000	U	P
Chromium	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P
Cobalt	5.0	U	5.0	U	-2.2	B	5.0	U	-2.158	B	P
Copper	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P
Iron	100.0	U	100.0	U	100.0	U	100.0	U	100.000	U	P
Lead	-2.3	B	3.0	U	-1.3	B	3.0	U	2.152	B	P
Magnesium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	5000.000	U	P
Manganese	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P
Mercury	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	CV
Nickel	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P
Potassium	5000.0	U	5000.0	U	5000.0	U	16.4	B	5000.000	U	P
Selenium	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P
Silver	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P
Sodium	5000.0	U	5000.0	U	5000.0	U	217.7	B	670.348	B	P
Thallium	10.0	U	10.0	U	10.0	U	3.4	B	-5.041	B	P
Vanadium	20.0	U	1.2	B	1.1	B	1.2	B	0.953	B	P
Zinc	20.0	U	20.0	U	20.0	U	20.0	U	20.000	U	P

SW846 - METALS

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

IR69-SW02S

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003149

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	2077.8100		121.0159	B	2000.00	97.8		P
Antimony	75 - 125	509.2076		6.3317	B	500.00	100.6		P
Arsenic	75 - 125	38.6652		10.0000	U	40.00	96.7		P
Barium	75 - 125	2187.3710		14.2039	B	2000.00	108.7		P
Beryllium	75 - 125	51.1327		1.0715	B	50.00	100.1		P
Cadmium	75 - 125	50.8509		5.0000	U	50.00	101.7		P
Chromium	75 - 125	209.8949		10.0000	U	200.00	104.9		P
Cobalt	75 - 125	500.1270		5.0000	U	500.00	100.0		P
Copper	75 - 125	257.8048		5.0000	U	250.00	103.1		P
Iron	75 - 125	1053.3600		62.3037	B	1000.00	99.1		P
Lead	75 - 125	20.6280		3.0000	U	20.00	103.1		P
Manganese	75 - 125	520.3827		19.2341		500.00	100.2		P
Mercury	75 - 125	1.0500		0.2000	U	1.00	105.0		CV
Nickel	75 - 125	515.6511		5.0000	U	500.00	103.1		P
Selenium	75 - 125	7.0189		5.0000	U	10.00	70.2	N	P
Silver	75 - 125	52.0035		5.0000	U	50.00	104.0		P
Thallium	75 - 125	47.8682		10.0000	U	50.00	95.7		P
Vanadium	75 - 125	519.6238		0.8971	B	500.00	103.7		P
Zinc	75 - 125	516.5556		8.7162	B	500.00	101.6		P

J/UJ

PDS Good

Comments:

SW846 - METALS

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

IR69-SW02SD

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003149

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	2065.9000		121.0159	B	2000.00	97.2		P
Antimony	75 - 125	503.8304		6.3317	B	500.00	99.5		P
Arsenic	75 - 125	37.5200		10.0000	U	40.00	93.8		P
Barium	75 - 125	2178.8080		14.2039	B	2000.00	108.2		P
Beryllium	75 - 125	50.4830		1.0715	B	50.00	98.8		P
Cadmium	75 - 125	49.4072		5.0000	U	50.00	98.8		P
Chromium	75 - 125	202.6993		10.0000	U	200.00	101.3		P
Cobalt	75 - 125	490.3719		5.0000	U	500.00	98.1		P
Copper	75 - 125	255.5862		5.0000	U	250.00	102.2		P
Iron	75 - 125	1011.4330		62.3037	B	1000.00	94.9		P
Lead	75 - 125	20.6758		3.0000	U	20.00	103.4		P
Manganese	75 - 125	505.7142		19.2341		500.00	97.3		P
Mercury	75 - 125	0.9940		0.2000	U	1.00	99.4		CV
Nickel	75 - 125	505.5961		5.0000	U	500.00	101.1		P
Selenium	75 - 125	4.9863	B	5.0000	U	10.00	49.9	N	P
Silver	75 - 125	50.8882		5.0000	U	50.00	101.8		P
Thallium	75 - 125	45.3059		10.0000	U	50.00	90.6		P
Vanadium	75 - 125	505.8496		0.8971	B	500.00	101.0		P
Zinc	75 - 125	501.6424		8.7162	B	500.00	98.6		P

J/UJ

Comments:

SW846 - METALS

5B

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

IR69-SW02A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003149

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Selenium		11.91		5.00	U	10.0	119.1		P

Comments:

DataQual

Environmental Services, LLC

CH2M HILL
5700 Cleveland Street
Suite 101
Virginia Beach, VA 23462

July 30, 2010
SDG# 1003174, CompuChem
MCB Camp Lejeune, CTO-81

Dear Ms. Buckley,

The following Data Validation report is provided as requested for the parameters noted in the table below for SDG # 1003174. The data validation was performed in accordance with the SW846 Method 8260B for volatiles, 8270C and 8270C-SIM for semivolatiles and PAH, 8081A for pesticides and 6010B/7470A/7471A for metals and mercury and good professional judgment. Also used in the validation of these samples were The National Functional Guidelines for Organic Data Review (June, 2008) and the National Functional Guidelines for Inorganic Data Review (October, 2004), as applicable. All areas of concern are discussed in the body of the report and a summary of data qualifications is provided.

Sample ID	Lab ID	Matrix	VOA	SVOA	LL PAH	Pest	PCBs	Metals
IR69-SD02-10A	1003174-01	soil	X	X	X	X	X	X
IR69-SD03-10A	1003174-02	soil	X	X	X	X	X	X
IR69-SB03-04-05-10A	1003174-03	soil	X	X	X	X	X	X
IR69-SD02-10A MS	1003174-01MS	soil	X	X	X	X	X	X
IR69-SD02-10A MSD	1003174-01MSD	soil	X	X	X	X	X	X

The samples were evaluated based on the following criteria:

- Data Completeness *
- Technical Holding Times *
- GC/MS Tunes *
- GC Performance
- Initial/Continuing Calibrations
- CRI Standards *
- Interference Check Sample *
- Blanks
- Internal Standards *
- Surrogates
- Laboratory Control Samples *
- Matrix Spike Recoveries
- Matrix Duplicate RPDs *
- Post Digestion Spike Recoveries *

- Serial Dilutions
- Field Duplicates NA
- Identification/Quantitation
- Reporting Limits *
- Tentatively Identified Compounds NA

* - indicates that no qualifications were required based on this criteria

Overall Evaluation of Data/Potential Usability Issues

A summary of qualifications applied to the sample results are noted below for the fractions validated. Specific details regarding qualification of the data are addressed in the Specific Evaluation section of this narrative. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte the validator has chosen the qualifier that best indicates possible bias in the results and flagged the data accordingly. However, information regarding all quality control issues is provided in the body of the report and on the qualification summary page. Please note that when a compound or analyte is flagged due to blank contamination the BL qualifier code takes precedence over all other qualifier codes except a code that explains rejected data.

VOA

Sample compounds were qualified as estimated based on high %RSD s and %Ds which were exhibited in them initial and continuing calibrations.

Blank contamination was exhibited in the method and/or QC blanks that resulted in qualifications to the data.

Two samples exhibited low surrogate recoveries that resulted in qualifications to the data.

Dilutions were required to obtain results within the calibration range.

SVOA

Several sample compounds were qualified as estimated based on high %Ds which were exhibited in the continuing calibrations.

Blank contamination was exhibited in the method and/or QC blanks that resulted in qualifications to the data.

The matrix spike and matrix spike duplicate exhibited low recoveries for several compounds that resulted in qualifications to the associated sample.

Pesticides/PCBs

The continuing calibration standards exhibited non-compliant %Ds and one standard with a high 4, 4'-DDT breakdown. Qualifications were required in the samples.

Qualifications were required due to non-compliant matrix spike results recoveries.

Reported positive results exhibited column quantitation %Ds greater than 40%. These P flagged results were qualified as estimated J.

All samples were reanalyzed after further clean-up due to calibration issues. These issues were improved in the RE analysis although there were still similar problems. All original analyses were excluded in favor of the results reported from the RE analyses.

Metals

Qualifications were required in the samples due to laboratory and field QC blank contamination.

Three analytes required qualification in the samples due to non-compliant matrix spike recoveries.

One analyte required qualification in the samples due to a non-compliant serial dilution %D.

All results reported between the MDL and the RL (B flagged by the laboratory) were qualified as estimated J.

Specific Evaluation of Data

Data Completeness

The SDG was received complete and intact. Resubmissions were not required. Please note: All field sample and QC blank IDs were missing the first four (IR69) and/or the last four (-10A) characters. The characters were added to the Form 1s in the DV reports by the data validator.

Technical Holding Times

According to chain of custody records, sampling was performed on 3/15-16/10 and samples were received at the laboratory 3/19/10. All sample preparation and analysis was performed within method holding time requirements.

GC Performance

Pesticides/PCBs

One of the breakdown standards was non-compliant (>15%) for 4, 4'-DDT. Reported positive results for 4, 4'-DDD and/or 4, 4'-DDE were qualified as NJ, presumptively present at an estimated concentration in the all field samples. The reported positive results for 4, 4'-DDT were qualified as estimated J and non-detect results for 4, 4'-DDT were rejected R in the all field samples. The qualifier code is OT.

Initial/Continuing Calibration

VOA

Calibration standards exhibited %RSD and %Ds that were non-compliant. A summary of these non-compliances and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	RRF, %RSD, %D	Samples	Q Flag	Q Code
IC 3 26 10	1,2-dichloropropane	17.162	all samples	J/UJ	ICH
CC 3 29 10	bromomethane chloroethane	23.18 23.22	all samples	J/UJ	CCH
	dichlorodifluoromethane	-20.36		J/UJ	CCL

SVOA

Calibration standards exhibited %Ds that were non-compliant. A summary of these non-compliances and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	RRF, %RSD, %D	Samples	Q Flag	Q Code
CC 3 29 10	indeno(1,2,3-cd)pyrene dibenzo(a,h)anthracene	-22.15 -23.56	PAH SIM: all samples	J/UJ	CCL

Pesticides/PCBs

Calibration standards exhibited %Ds that were non-compliant based on the method continuing calibration requirement of +/-20% difference from the initial calibration factors. A summary of these non-compliances and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	%D	Samples	Q Flag	Q Code
054AINDC3AH	delta-BHC 4,4'-DDT* methoxychlor	-28.87 -28.71/-34.06 -93.35/-27.98	all samples	J/UJ	CCL
	endosulfan I	25.89		J	CCH

*4, 4'-DDT was flagged in the samples due to compound breakdown with a qualifier code of OT

Blanks

VOA

The associated method and/or QC blanks exhibited contamination as noted in the following table. Compounds for which there was no action required, are not included in the following table.

Blank ID	Compound	Concentration	Reporting Limit
IR69-EB01-031510-SD	acetone	4.9	2.5
	methylene chloride	5.3	0.5
	toluene	0.94	0.5
IR69-EB01-031610-SB	acetone	3.5	2.5
	methylene chloride	1.2	0.5
	toluene	1.5	0.5

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Q Code
IR69-SD02-10A, IR69-SD03-10A, IR69-SB03-04-05-10A	toluene	U at RL	EBL
IR69-SB03-04-05-10A	methylene chloride	U at RL	EBL

SVOA

The associated method and/or QC blanks exhibited contamination as noted in the following table. Compounds for which there was no action required, are not included in the following table.

Blank ID	Compound	Conc	Reporting Limit	Action Level
VBLKPB-SIM	naphthalene	0.92J ug/Kg	8.3 ug/Kg	all soil samples < RL
IR69-EB01-031510-SD-SIM	naphthalene	0.051J	0.20	all soil samples < RL
IR69-EB01-031610-SB-SIM	naphthalene	0.084J	0.20	all soil samples < RL
	2-methylnaphthalene	0.039J	0.20	all soil samples < RL
	phenanthrene	0.072J	0.20	all soil samples < RL
	pyrene	0.033J	0.20	all soil samples < RL

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Q Code
PAH SIM: IR69-SD02-10A, IR69-SD03-10A, IR69-SB03-04-05-10A	naphthalene	U at RL	MBL
PAH SIM: IR69-SB03-04-05-10A	2-methylnaphthalene	U at RL	EBL
PAH SIM: IR69-SB03-04-05-10A	phenanthrene	U at RL	EBL
PAH SIM: IR69-SB03-04-05-10A	pyrene	U at RL	EBL

Metals

Contamination was noted in associated blanks and qualification was required in the associated samples. Required action is noted in the following tables.

Blank ID	Analyte	Concentration	Action Level	Q Flag	Q Code
ICB	calcium	24.3B ug/L	RL	U	MBL
CCB	beryllium	0.9B ug/L	RL	U	MBL
IR69-FB01-031910	zinc	0.97B ug/L	RL	U	FBL

Associated samples and required qualifications are noted in the following table.

Sample ID	Analyte	Q Flag	Q Code
IR69-SD03-10A, IR69-SB03-04-05-10A	calcium	U at RL	MBL
IR69-SD03-10A, IR69-SB03-04-05-10A	beryllium	U at RL	MBL
IR69-SB03-04-05-10A	zinc	U at RL	FBL

Surrogate Recoveries

VOA

Sample IR69-SD02-10A exhibited low recoveries for toluene-d8 at 58% (QC limit 85-115%) and bromofluorobenzene at 27% (QC limit 85-120%) and sample IR69-SD03-10A exhibited low recovery for bromofluorobenzene at 55% (QC limit 85-120%); therefore all results for these samples were qualified as estimated (J/UJ), qualifier code: SSL.

Matrix Spikes

SVOA

An MS/MSD was submitted for sample IR69-SD02-10A; the following compounds exhibited non-compliant recoveries, qualifications were applied to the associated sample as stated in the table below.

MS/MSD Associated Sample ID	Non-compliant Spiked Compound	MS % Rec	MSD % Rec	QC Limit	Qualifier	Q-Code
IR69-SD02-10A	4-chloroaniline	0	0	26-129	J/R	MSL
	hexachlorocyclopentadiene	0	13	20-134	J/R	
	3-nitroaniline	26	22	43-100	J/UJ	
	4-nitroaniline	27	34	42-100	J/UJ	
	3,3-dichlorobenzidine	0	0	21-100	J/R	

Pesticides/PCBs

The matrix spike pair exhibited non-compliant %Rs for several compounds that required qualification in the samples. The issues in this spike pair appear to be the result of matrix interference issues. Rather than the normal MSL or MSH qualifier code, the review used

a MI qualifier code to indicate matrix interference. Specific action is noted in the following table.

MS/MSD	Compound	Samples Affected	%R	Q Flag	Q Code
IR69-SD02-10A RE	endrin aldehyde	IR69-SD02-10A RE	-1010/-1017	NJ	MI
	methoxychlor		-156/-183	J/R	
	endrin ketone alpha-chlordane		-69/212 0/128	J/UJ	
	endosulfan sulfate		-160/77	J	
	4,4'-DDD		138/158	J	

Metals

The matrix spike analyses exhibited a non-compliant %R for three analytes. Specific action is noted in the following table.

MS/MSD	Analyte	Samples Affected	%R	Q Flag	Q Code
IR69-SD02-10A	antimony selenium thallium	all field samples	71.8/71.7 61.3/61.4 70.6/72.2	J/UJ	MSL

Serial Dilution

Metals

The serial dilution analysis exhibited a non-compliant %D for one analyte. Specific action is noted in the following table.

SD	Analyte	Samples Affected	%D	Q Flag	Q Code
IR69-SD02-10A	barium	all field samples	15.7	J/UJ	SD

Identification/Quantitation

VOA

Sample IR69-SD03-10A required a dilution to obtain results within the calibration range. All E-flagged results are excluded in favor of the corresponding D-flagged results from the dilution analysis. All results except corresponding D-flagged results in the dilution analysis are excluded in favor of the results reported from the undiluted analysis.

Pesticides

All positive results reported with a P flag to indicate column quantitation %Ds greater than 40% are qualified as estimated J with a qualifier code of 2C.

The calibration standards associated with the original analyses exhibited extreme response decreases as the sequence progressed. The samples were taken through a GPC

clean-up procedure in an attempt to minimize the matrix effects. The calibrations surrounding the RE analyses were improved although significant issues were still present and qualifications were required. It is the professional judgment of the validator that the results reported from the RE analyses provide a more accurate assessment of the identity of contaminants present. Therefore, all original analyses results are excluded in favor of the results reported from the RE analyses with a qualifier code of RE. Further, based on the quality control issues and the interferences noted in the analysis of these samples, particularly in the variability of the matrix spike results for certain compounds, the end-user is encouraged to consider re-sampling this site for confirmation of reported results. Please note that the RE of sample IR69-SD02-10A was analyzed at a 1:5 dilution to accurately quantitate the target compound endosulfan sulfate. The RLs were adjusted appropriately.

One compound, endrin aldehyde, was reported in sample IR69-SD02-10A RE at a concentration that was above the calibration range. According to the laboratory this is likely due to matrix interference. It is the professional opinion of the validator that the result be considered suspect; therefore the result is flagged presumptively present at an estimated concentration, NJ, with a qualifier code of MI.

Metals

All mercury results reported between the IDL and the RL (B flagged by laboratory) were qualified as estimated J. No qualification code was required.

A summary of qualifications required is provided on the following page. Please do not hesitate to contact DataQual ES with any questions regarding this validation report.

Sincerely,

Laura Maschhoff
President

Jacqueline Cleveland
Vice-President

Summary of Data Qualifications

VOA

Sample ID	Compound	Results	Q-Flag	Q Code
all samples	1,2-dichloropropane	+ -	J/UJ	ICH
all samples	bromomethane chloroethane	+ -	J/UJ	CCH
all samples	dichlorodifluoromethane	+ -	J/UJ	CCL
IR69-SD02-10A, IR69-SD03-10A, IR69-SB03-04-05-10A	toluene	+	U at RL	EBL
IR69-SB03-04-05-10A	methylene chloride	+	U at RL	EBL
IR69-SD02-10A , IR69-SD03-10A	all results	+ -	J/UJ	SSL
IR69-SD03-10A	all E flagged compounds	+	exclude	DL
IR69-SD03-10ADL	all except corresponding D flagged compounds	+ -	exclude	DL

SVOA

Sample ID	Compound	Results	Q-Flag	Q Code
PAH SIM: all samples	indeno(1,2,3-cd)pyrene dibenzo(a,h)anthracene	+ -	J/UJ	CCL
PAH SIM: IR69-SD02-10A, IR69-SD03-10A, IR69-SB03-04-05-10A	naphthalene	+ -	U at RL	MBL
PAH SIM: IR69-SB03-04-05-10A	2-methylnaphthalene	+/-	U at RL	EBL
PAH SIM: IR69-SB03-04-05-10A	phenanthrene	+/-	U at RL	EBL
PAH SIM: IR69-SB03-04-05-10A	pyrene	+/-	U at RL	EBL
IR69-SD02-10A	4-chloroaniline hexachlorocyclopentadiene 3,3-dichlorobenzidine	+ -	J/R	MSL
IR69-SD02-10A	3-nitroaniline 4-nitroaniline	+ -	J/UJ	MSL

Summary of Data Qualifications

Pesticides/PCBs

Sample ID	Compound	Results	Q-Flag	Q Code
all RE samples	4,4'-DDE 4,4'-DDD'	+	NJ	OT
all RE samples	4,4'-DDT	+/-	J/R	OT
all RE samples	delta-BHC 4,4'-DDT* methoxychlor	+/-	J/UJ	CCL
	endosulfan I	+	J	CCH
IR69-SD02-10A RE	endrin aldehyde	+	NJ	MI
	methoxychlor	+/-	J/R	
	endrin ketone alpha-chlordane	+/-	J/UJ	
	endosulfan sulfate	+	J	
	4,4'-DDD*	+	J	
IR69-SD02-10A RE	endrin aldehyde	+	NJ	MI
all original analyses samples	all compounds	+/-	exclude	RE
all RE samples	all compounds	+P	J	2C**

*4, 4'-DDD and 4, 4,'-DDT were flagged based on compound breakdown with an OT qualifier code
** 2C qualifier code is used only if compound has not already been flagged for another QC issue

Metals

Sample ID	Analyte	Results	Q-Flag	Q Code
IR69-SD03-10A, IR69-SB03-04-05-10A	calcium	+B	U at RL	MBL
IR69-SD03-10A, IR69-SB03-04-05-10A	beryllium	+B	U at RL	MBL
IR69-SB03-04-05-10A	zinc	+B	U at RL	FBL
all samples	antimony selenium thallium	+/-	J/UJ	MSL
all samples	barium	+/-	J/UJ	SD
all samples	all analytes	+B	J	

Glossary of Qualification Flags and Abbreviations

Qualification Flags (Q-Flags)

U	not detected above the reported sample quantitation limit
J	estimated value
UJ	reported quantitation limit is qualified as estimated
R	result is rejected; the presence or absence of the analyte cannot be verified
D	result value is based on dilution analysis result
NJ	analyte has been tentatively identified, estimated value
L	analyte present, biased low
UL	not detected, quantitation limit is probably higher
K	analyte present, biased high

Inorganic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 10X the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL and the result is raised to the RL and flagged U.
R or J+	The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator. (see NFG, Rev. date 10/04, p. 17 for extracted blanks (PB))

Organic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 5X (10X for common laboratory contaminants) the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is raised to the RL and flagged U.
U	The sample result for the blank contaminant is greater than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is flagged U at the reported value.

General Abbreviations

RL / MDL	reporting limit/method detection limit
CRQL	contract required quantitation limit
Q Code	qualifier code
+	positive result
-	non-detect result

QUALIFIER CODE REFERENCE

Qualifier	Description
TN	Tune
BSL	Blank Spike LCS - High Recovery
BSH	Blank Spike LCS - Low Recovery
BD	Blank Spike Blank Spike Duplicate (LCS LCSD) Precision
BRL	Below Reporting Limit
ISL	Internal Standard - Low Recovery
ISH	Internal Standard - High Recovery
MSL	Matrix Spike and or Matrix Spike Duplicate - Low Recovery
MSH	Matrix Spike and or Matrix Spike Duplicate - High Recovery
MI	Matrix interference obscuring the raw data
MDP	Matrix Spike Matrix Spike Duplicate Precision
2S	Second Source - Bad reproducibility between tandem detectors
SSL	Spiked Surrogate - Low Recovery
SSH	Spiked Surrogate - High Recovery
SD	Serial Dilution Reproducibility
ICL	Initial Calibration - Low Relative Response Factors (RRF)
ICH	Initial Calibration - High Relative Response Factors (RRF)
ICB	Initial Calibration - Bad Linearity or Curve Function
CCL	Continuing Calibration - Low Recovery or %Difference
CCH	Continuing Calibration - High Recovery or %Difference
LD	Lab Duplicate Reproducibility
HT	Holding Time
PD	Pesticide Degradation
2C	Second Column - Poor Dual Column Reproducibility
LR	Concentration Exceeds Linear Range
BL	Blank Contamination (MBL, FBL, EBL)
RE	Redundant Result - due to Re-analysis or Re-extraction
DI	Redundant Result - due to Dilution
FD	Field Duplicate
OT	Other - explained in data validation report
%SOL	High moisture content

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD02-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-01

Sample wt/vol: 5.21(g/mL) G Lab File ID: 1003174-0159

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. 76 Date Analyzed: 03/29/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	20	U
74-87-3	Chloromethane	20	U
75-01-4	Vinyl Chloride	20	U
74-83-9	Bromomethane	20	U
75-00-3	Chloroethane	20	U
75-69-4	Trichlorofluoromethane	20	U
75-35-4	1,1-Dichloroethene	20	U
75-15-0	Carbon disulfide	9.2	J
76-13-1	1,1,2-trichloro-1,2,2-triflu	20	U
67-64-1	Acetone	760	
75-09-2	Methylene Chloride	20	U
156-60-5	trans-1,2-Dichloroethene	20	U
1634-04-4	Methyl-tert-butyl ether	20	U
75-34-3	1,1-Dichloroethane	20	U
156-59-2	cis-1,2-Dichloroethene	20	U
78-93-3	2-butanone	66	
67-66-3	Chloroform	20	U
71-55-6	1,1,1-Trichloroethane	20	U
56-23-5	Carbon Tetrachloride	20	U
71-43-2	Benzene	20	U
107-06-2	1,2-Dichloroethane	20	U
79-01-6	Trichloroethene	20	U
78-87-5	1,2-Dichloropropane	20	U
75-27-4	Bromodichloromethane	20	U
10061-01-5	cis-1,3-Dichloropropene	20	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	20 ~~2.3~~	~~U~~
10061-02-6	trans-1,3-Dichloropropene	20	U
79-00-5	1,1,2-Trichloroethane	20	U
127-18-4	Tetrachloroethene	20	U
591-78-6	2-hexanone	50	U
124-48-1	Dibromochloromethane	20	U
106-93-4	1,2-Dibromoethane	20	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD02 - 10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-01

Sample wt/vol: 5.21(g/mL) G Lab File ID: 1003174-0159

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. 76 Date Analyzed: 03/29/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____ ___(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	20	U UJ SSL
100-41-4	Ethylbenzene	20	U
100-42-5	Styrene	20	U
75-25-2	Bromoform	20	U
98-82-8	Isopropyl Benzene	20	U
79-34-5	1,1,2,2-Tetrachloroethane	20	U
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	1.1	J J
95-50-1	1,2-Dichlorobenzene	20	U UJ
96-12-8	1,2-Dibromo-3-Chloropropane	20	U
120-82-1	1,2,4-Trichlorobenzene	20	U
1330-20-7	Xylene (total)	20	U
79-20-9	Methyl acetate	570	J
110-82-7	Cyclohexane	20	U UJ
108-87-2	Methylcyclohexane	20	U
108-38-3	m,p-Xylene (part of total)	40	U
95-47-6	o-Xylene (part of total)	20	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD03

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-03

Sample wt/vol: 7.0 (g/mL) G Lab File ID: 1003174-0359

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. 25 Date Analyzed: 03/29/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
75-71-8	Dichlorodifluoromethane	4.8	~~U~~	UJ CCL
74-87-3	Chloromethane	4.8	U	UJ EJL
75-01-4	Vinyl Chloride	4.8	U	UJ EJL
74-83-9	Bromomethane	4.8	~~U~~	UJ CCH
75-00-3	Chloroethane	4.8	~~U~~	UJ CCH
75-69-4	Trichlorofluoromethane	4.8	U	UJ EJL
75-35-4	1,1-Dichloroethene	4.8	U	
75-15-0	Carbon disulfide	4.8	U	
76-13-1	1,1,2-trichloro-1,2,2-triflu	4.8	U	
67-64-1	Acetone	110	J	
75-09-2	Methylene Chloride	4.8	U	UJ
156-60-5	trans-1,2-Dichloroethene	4.8	U	
1634-04-4	Methyl-tert-butyl ether	4.8	U	
75-34-3	1,1-Dichloroethane	4.8	U	
156-59-2	cis-1,2-Dichloroethene	4.8	U	
78-93-3	2-butanone	12	U	
67-66-3	Chloroform	4.8	U	
71-55-6	1,1,1-Trichloroethane	4.8	U	
56-23-5	Carbon Tetrachloride	4.8	U	
71-43-2	Benzene	4.8	U	
107-06-2	1,2-Dichloroethane	4.8	U	
79-01-6	Trichloroethene	4.8	U	
78-87-5	1,2-Dichloropropane	4.8	~~U~~	UJ ICH
75-27-4	Bromodichloromethane	4.8	U	UJ EJL
10061-01-5	cis-1,3-Dichloropropene	4.8	U	
108-10-1	4-Methyl-2-pentanone	12	U	
108-88-3	Toluene	4.8 ~~0.80~~	~~J~~	U EBL
10061-02-6	trans-1,3-Dichloropropene	4.8	U	
79-00-5	1,1,2-Trichloroethane	4.8	U	UJ EJL
127-18-4	Tetrachloroethene	4.8	U	
591-78-6	2-hexanone	12	U	
124-48-1	Dibromochloromethane	4.8	U	
106-93-4	1,2-Dibromoethane	4.8	U	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD03

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-03

Sample wt/vol: 7.0 (g/mL) G Lab File ID: 1003174-0359

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. 25 Date Analyzed: 03/29/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	4.8	U UJ SSL
100-41-4	Ethylbenzene	4.8	U
100-42-5	Styrene	4.8	U
75-25-2	Bromoform	4.8	U
98-82-8	Isopropyl Benzene	4.8	U
79-34-5	1,1,2,2-Tetrachloroethane	4.8	U
541-73-1	1,3-Dichlorobenzene	4.8	U
106-46-7	1,4-Dichlorobenzene	4.8	U
95-50-1	1,2-Dichlorobenzene	4.8	U
96-12-8	1,2-Dibromo-3-Chloropropane	4.8	U
120-82-1	1,2,4-Trichlorobenzene	4.8	U
1330-20-7	Xylene (total)	4.8	U
79-20-9	Methyl acetate	350	~~E~~ RDL
110-82-7	Cyclohexane	4.8	U UJ SSL
108-87-2	Methylcyclohexane	4.8	U
108-38-3	m,p-Xylene (part of total)	9.6	U
95-47-6	o-Xylene (part of total)	4.8	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD03RE

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-03RE1

Sample wt/vol: 7.1 (g/mL) G Lab File ID: 1003174-03R59

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. 25 Date Analyzed: 03/29/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	4.7	U RDV
74-87-3	Chloromethane	4.7	U
75-01-4	Vinyl Chloride	4.7	U
74-83-9	Bromomethane	4.7	U
75-00-3	Chloroethane	4.7	U
75-69-4	Trichlorofluoromethane	4.7	U
75-35-4	1,1-Dichloroethene	4.7	U
75-15-0	Carbon disulfide	4.7	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	4.7	U
67-64-1	Acetone	79	
75-09-2	Methylene Chloride	4.7	U
156-60-5	trans-1,2-Dichloroethene	4.7	U
1634-04-4	Methyl-tert-butyl ether	4.7	U
75-34-3	1,1-Dichloroethane	4.7	U
156-59-2	cis-1,2-Dichloroethene	4.7	U
78-93-3	2-butanone	12	U
67-66-3	Chloroform	4.7	U
71-55-6	1,1,1-Trichloroethane	4.7	U
56-23-5	Carbon Tetrachloride	4.7	U
71-43-2	Benzene	4.7	U
107-06-2	1,2-Dichloroethane	4.7	U
79-01-6	Trichloroethene	4.7	U
78-87-5	1,2-Dichloropropane	4.7	U
75-27-4	Bromodichloromethane	4.7	U
10061-01-5	cis-1,3-Dichloropropene	4.7	U
108-10-1	4-Methyl-2-pentanone	12	U
108-88-3	Toluene	1.5	U
10061-02-6	trans-1,3-Dichloropropene	4.7	U
79-00-5	1,1,2-Trichloroethane	4.7	U
127-18-4	Tetrachloroethene	4.7	U
591-78-6	2-hexanone	12	U
124-48-1	Dibromochloromethane	4.7	U
106-93-4	1,2-Dibromoethane	4.7	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD03RE

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-03RE1

Sample wt/vol: 7.1 (g/mL) G Lab File ID: 1003174-03R59

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. 25 Date Analyzed: 03/29/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	4.7	U
100-41-4	Ethylbenzene	4.7	U
100-42-5	Styrene	4.7	U
75-25-2	Bromoform	4.7	U
98-82-8	Isopropyl Benzene	4.7	U
79-34-5	1,1,2,2-Tetrachloroethane	4.7	U
541-73-1	1,3-Dichlorobenzene	4.7	U
106-46-7	1,4-Dichlorobenzene	4.7	U
95-50-1	1,2-Dichlorobenzene	4.7	U
96-12-8	1,2-Dibromo-3-Chloropropane	4.7	U
120-82-1	1,2,4-Trichlorobenzene	4.7	U
1330-20-7	Xylene (total)	4.7	U
79-20-9	Methyl acetate	65	
110-82-7	Cyclohexane	4.7	U
108-87-2	Methylcyclohexane	4.7	U
108-38-3	m,p-Xylene (part of total)	9.4	U
95-47-6	o-Xylene (part of total)	4.7	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IF69-SB03-04-05-10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-04

Sample wt/vol: 6.1 (g/mL) G Lab File ID: 1003174-04R59

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. 20 Date Analyzed: 03/29/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	5.1	~~U~~ UJCCL
74-87-3	Chloromethane	5.1	U
75-01-4	Vinyl Chloride	5.1	U
74-83-9	Bromomethane	5.1	~~U~~ UJCCH
75-00-3	Chloroethane	5.1	~~U~~ UJCCH
75-69-4	Trichlorofluoromethane	5.1	U
75-35-4	1,1-Dichloroethene	5.1	U
75-15-0	Carbon disulfide	0.53	J
76-13-1	1,1,2-trichloro-1,2,2-triflu	5.1	U
67-64-1	Acetone	44	
75-09-2	Methylene Chloride	5.1 ~~0.54~~	~~J~~ UEBL
156-60-5	trans-1,2-Dichloroethene	5.1	U
1634-04-4	Methyl-tert-butyl ether	5.1	U
75-34-3	1,1-Dichloroethane	5.1	U
156-59-2	cis-1,2-Dichloroethene	5.1	U
78-93-3	2-butanone	13	U
67-66-3	Chloroform	5.1	U
71-55-6	1,1,1-Trichloroethane	5.1	U
56-23-5	Carbon Tetrachloride	5.1	U
71-43-2	Benzene	5.1	U
107-06-2	1,2-Dichloroethane	5.1	U
79-01-6	Trichloroethene	5.1	U
78-87-5	1,2-Dichloropropane	5.1	~~U~~ UJ ICH
75-27-4	Bromodichloromethane	5.1	U
10061-01-5	cis-1,3-Dichloropropene	5.1	U
108-10-1	4-Methyl-2-pentanone	13	U
108-88-3	Toluene	5.1 ~~0.85~~	~~J~~ UEBL
10061-02-6	trans-1,3-Dichloropropene	5.1	U
79-00-5	1,1,2-Trichloroethane	5.1	U
127-18-4	Tetrachloroethene	5.1	U
591-78-6	2-hexanone	13	U
124-48-1	Dibromochloromethane	5.1	U
106-93-4	1,2-Dibromoethane	5.1	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB03-04-05

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-04

Sample wt/vol: 6.1 (g/mL) G Lab File ID: 1003174-04R59

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: not dec. 20 Date Analyzed: 03/29/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	5.1	U
100-41-4	Ethylbenzene	5.1	U
100-42-5	Styrene	5.1	U
75-25-2	Bromoform	5.1	U
98-82-8	Isopropyl Benzene	5.1	U
79-34-5	1,1,2,2-Tetrachloroethane	5.1	U
541-73-1	1,3-Dichlorobenzene	5.1	U
106-46-7	1,4-Dichlorobenzene	5.1	U
95-50-1	1,2-Dichlorobenzene	5.1	U
96-12-8	1,2-Dibromo-3-Chloropropane	5.1	U
120-82-1	1,2,4-Trichlorobenzene	5.1	U
1330-20-7	Xylene (total)	5.1	U
79-20-9	Methyl acetate	63	
110-82-7	Cyclohexane	5.1	U
108-87-2	Methylcyclohexane	5.1	U
108-38-3	m,p-Xylene (part of total)	10	U
95-47-6	o-Xylene (part of total)	5.1	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD02MS

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 0032925-MS1

Sample wt/vol: 5.43(g/mL) G Lab File ID: 0032925-MS159

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. 76 Date Analyzed: 03/29/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	180	
74-87-3	Chloromethane	300	
75-01-4	Vinyl Chloride	300	
74-83-9	Bromomethane	290	
75-00-3	Chloroethane	300	
75-69-4	Trichlorofluoromethane	250	
75-35-4	1,1-Dichloroethene	190	
75-15-0	Carbon disulfide	200	
76-13-1	1,1,2-trichloro-1,2,2-triflu	200	
67-64-1	Acetone	980	
75-09-2	Methylene Chloride	200	
156-60-5	trans-1,2-Dichloroethene	180	
1634-04-4	Methyl-tert-butyl ether	220	
75-34-3	1,1-Dichloroethane	210	
156-59-2	cis-1,2-Dichloroethene	190	
78-93-3	2-butanone	830	
67-66-3	Chloroform	210	
71-55-6	1,1,1-Trichloroethane	200	
56-23-5	Carbon Tetrachloride	180	
71-43-2	Benzene	210	
107-06-2	1,2-Dichloroethane	240	
79-01-6	Trichloroethene	170	
78-87-5	1,2-Dichloropropane	230	
75-27-4	Bromodichloromethane	220	
10061-01-5	cis-1,3-Dichloropropene	220	
108-10-1	4-Methyl-2-pentanone	610	
108-88-3	Toluene	180	
10061-02-6	trans-1,3-Dichloropropene	200	
79-00-5	1,1,2-Trichloroethane	190	
127-18-4	Tetrachloroethene	150	
591-78-6	2-hexanone	740	
124-48-1	Dibromochloromethane	180	
106-93-4	1,2-Dibromoethane	190	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD02MS

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 0032925-MS1

Sample wt/vol: 5.43(g/mL) G Lab File ID: 0032925-MS159

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. 76 Date Analyzed: 03/29/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	180	
100-41-4	Ethylbenzene	180	
100-42-5	Styrene	180	
75-25-2	Bromoform	180	
98-82-8	Isopropyl Benzene	180	
79-34-5	1,1,2,2-Tetrachloroethane	220	
541-73-1	1,3-Dichlorobenzene	180	
106-46-7	1,4-Dichlorobenzene	180	
95-50-1	1,2-Dichlorobenzene	180	
96-12-8	1,2-Dibromo-3-Chloropropane	200	
120-82-1	1,2,4-Trichlorobenzene	140	
1330-20-7	Xylene (total)	530	
79-20-9	Methyl acetate	840	E
110-82-7	Cyclohexane	220	
108-87-2	Methylcyclohexane	190	
108-38-3	m,p-Xylene (part of total)	360	
95-47-6	o-Xylene (part of total)	180	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD02MSD

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 0032925-MSD1

Sample wt/vol: 5.35(g/mL) G Lab File ID: 0032925-MSD159

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. 76 Date Analyzed: 03/29/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	160	
74-87-3	Chloromethane	260	
75-01-4	Vinyl Chloride	270	
74-83-9	Bromomethane	260	
75-00-3	Chloroethane	270	
75-69-4	Trichlorofluoromethane	210	
75-35-4	1,1-Dichloroethene	180	
75-15-0	Carbon disulfide	190	
76-13-1	1,1,2-trichloro-1,2,2-triflu	160	
67-64-1	Acetone	1000	
75-09-2	Methylene Chloride	170	
156-60-5	trans-1,2-Dichloroethene	160	
1634-04-4	Methyl-tert-butyl ether	170	
75-34-3	1,1-Dichloroethane	180	
156-59-2	cis-1,2-Dichloroethene	160	
78-93-3	2-butanone	550	
67-66-3	Chloroform	170	
71-55-6	1,1,1-Trichloroethane	160	
56-23-5	Carbon Tetrachloride	140	
71-43-2	Benzene	160	
107-06-2	1,2-Dichloroethane	170	
79-01-6	Trichloroethene	130	
78-87-5	1,2-Dichloropropane	170	
75-27-4	Bromodichloromethane	140	
10061-01-5	cis-1,3-Dichloropropene	150	
108-10-1	4-Methyl-2-pentanone	410	
108-88-3	Toluene	140	
10061-02-6	trans-1,3-Dichloropropene	140	
79-00-5	1,1,2-Trichloroethane	130	
127-18-4	Tetrachloroethene	110	
591-78-6	2-hexanone	450	
124-48-1	Dibromochloromethane	110	
106-93-4	1,2-Dibromoethane	130	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD02MSD

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 0032925-MSD1

Sample wt/vol: 5.35(g/mL) G Lab File ID: 0032925-MSD159

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. 76 Date Analyzed: 03/29/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-90-7	Chlorobenzene	110	
100-41-4	Ethylbenzene	120	
100-42-5	Styrene	90	
75-25-2	Bromoform	85	
98-82-8	Isopropyl Benzene	110	
79-34-5	1,1,2,2-Tetrachloroethane	120	
541-73-1	1,3-Dichlorobenzene	77	
106-46-7	1,4-Dichlorobenzene	72	
95-50-1	1,2-Dichlorobenzene	67	
96-12-8	1,2-Dibromo-3-Chloropropane	76	
120-82-1	1,2,4-Trichlorobenzene	36	
1330-20-7	Xylene (total)	340	
79-20-9	Methyl acetate	290	
110-82-7	Cyclohexane	150	
108-87-2	Methylcyclohexane	120	
108-38-3	m,p-Xylene (part of total)	230	
95-47-6	o-Xylene (part of total)	110	

FORM I VOA

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD02-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003174-01A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: 76 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	400	J
108-95-2	Phenol	1400	U
111-44-4	Bis(2-chloroethyl)ether	710	U
95-57-8	2-Chlorophenol	1400	U
95-48-7	2-Methylphenol	1400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	710	U
98-86-2	Acetophenone	710	U
106-44-5	4-Methylphenol	1400	U
621-64-7	N-Nitroso-di-N-propylamine	710	U
67-72-1	Hexachloroethane	710	U
98-95-3	Nitrobenzene	710	U
78-59-1	Isophorone	710	U
88-75-5	2-Nitrophenol	1400	U
105-67-9	2,4-Dimethylphenol	1400	U
111-91-1	Bis(2-chloroethoxy)methane	710	U
120-83-2	2,4-Dichlorophenol	1400	U
91-20-3	Naphthalene	710	U
106-47-8	4-Chloroaniline	1400	~~U~~ R MSL
87-68-3	Hexachlorobutadiene	710	U
105-60-2	Caprolactam	710	U
59-50-7	4-Chloro-3-methylphenol	1400	U
91-57-6	2-Methylnaphthalene	710	U
77-47-4	Hexachlorocyclopentadiene	710	~~U~~ R MSL
88-06-2	2,4,6-Trichlorophenol	1400	U
95-95-4	2,4,5-Trichlorophenol	1400	U
92-52-4	1,1'-Biphenyl	710	U
91-58-7	2-Chloronaphthalene	710	U
88-74-4	2-Nitroaniline	1400	U
131-11-3	Dimethylphthalate	710	U
606-20-2	2,6-Dinitrotoluene	710	U
208-96-8	Acenaphthylene	710	U
99-09-2	3-Nitroaniline	1400	~~U~~ US MSL
83-32-9	Acenaphthene	710	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD02 -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003174-01A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: 76 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1400	U
100-02-7	4-Nitrophenol	1400	U
121-14-2	2,4-Dinitrotoluene	710	U
132-64-9	Dibenzofuran	710	U
84-66-2	Diethylphthalate	710	U
7005-72-3	4-Chlorophenyl-phenylether	710	U
86-73-7	Fluorene	710	U
100-01-6	4-Nitroaniline	1400	~~U~~ UJ MSL
534-52-1	4,6-Dinitro-2-methylphenol	1400	U
86-30-6	N-Nitrosodiphenylamine (1)	710	U
101-55-3	4-Bromophenyl-phenylether	710	U
118-74-1	Hexachlorobenzene	710	U
1912-24-9	Atrazine	710	U
87-86-5	Pentachlorophenol	1400	U
85-01-8	Phenanthrene	710	U
120-12-7	Anthracene	710	U
86-74-8	Carbazole	710	U
84-74-2	Di-n-butylphthalate	710	U
206-44-0	Fluoranthene	710	U
129-00-0	Pyrene	710	U
85-68-7	Butylbenzylphthalate	710	U
91-94-1	3,3'-Dichlorobenzidine	710	~~U~~ R MSL
117-81-7	bis(2-ethylhexyl)Phthalate	710	U
56-55-3	Benzo(a)anthracene	710	U
218-01-9	Chrysene	710	U
117-84-0	Di-n-octylphthalate	710	U
205-99-2	Benzo(b)fluoranthene	710	U
207-08-9	Benzo(k)fluoranthene	710	U
50-32-8	Benzo(a)pyrene	710	U
193-39-5	Indeno(1,2,3-cd)pyrene	710	U
53-70-3	Dibenzo(a,h)anthracene	710	U
191-24-2	Benzo(g,h,i)perylene	710	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD02-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003174-01C60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: 76 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	35 ~~6.3~~	~~J~~ UMBL
91-57-6	2-Methylnaphthalene	8.5	J
208-96-8	Acenaphthylene	35	U
83-32-9	Acenaphthene	35	U
86-73-7	Fluorene	2.4	J
85-01-8	Phenanthrene	8.4	J
120-12-7	Anthracene	3.8	J
206-44-0	Fluoranthene	6.9	J
129-00-0	Pyrene	5.3	J
56-55-3	Benzo(a)anthracene	2.9	J
218-01-9	Chrysene	4.9	J
205-99-2	Benzo(b)fluoranthene	7.0	J
207-08-9	Benzo(k)fluoranthene	4.7	J
50-32-8	Benzo(a)pyrene	18	J
193-39-5	Indeno(1,2,3-cd)pyrene	3.1	~~J~~ J CCL
53-70-3	Dibenzo(a,h)anthracene	35	~~U~~ UJ CCL
191-24-2	Benzo(g,h,i)perylene	5.9	J

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD03-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003174-03A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: 25 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	230	U
108-95-2	Phenol	440	U
111-44-4	Bis(2-chloroethyl)ether	230	U
95-57-8	2-Chlorophenol	440	U
95-48-7	2-Methylphenol	440	U
108-60-1	2,2'-oxybis(1-Chloropropane)	230	U
98-86-2	Acetophenone	230	U
106-44-5	4-Methylphenol	440	U
621-64-7	N-Nitroso-di-N-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	440	U
105-67-9	2,4-Dimethylphenol	440	U
111-91-1	Bis(2-chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	440	U
91-20-3	Naphthalene	230	U
106-47-8	4-Chloroaniline	440	U
87-68-3	Hexachlorobutadiene	230	U
105-60-2	Caprolactam	230	U
59-50-7	4-Chloro-3-methylphenol	440	U
91-57-6	2-Methylnaphthalene	230	U
77-47-4	Hexachlorocyclopentadiene	230	U
88-06-2	2,4,6-Trichlorophenol	440	U
95-95-4	2,4,5-Trichlorophenol	440	U
92-52-4	1,1'-Biphenyl	230	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	440	U
131-11-3	Dimethylphthalate	230	U
606-20-2	2,6-Dinitrotoluene	230	U
208-96-8	Acenaphthylene	230	U
99-09-2	3-Nitroaniline	440	U
83-32-9	Acenaphthene	230	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD03-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003174-03A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: 25 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	440	U
100-02-7	4-Nitrophenol	440	U
121-14-2	2,4-Dinitrotoluene	230	U
132-64-9	Dibenzofuran	230	U
84-66-2	Diethylphthalate	230	U
7005-72-3	4-Chlorophenyl-phenylether	230	U
86-73-7	Fluorene	230	U
100-01-6	4-Nitroaniline	440	U
534-52-1	4,6-Dinitro-2-methylphenol	440	U
86-30-6	N-Nitrosodiphenylamine (1)	230	U
101-55-3	4-Bromophenyl-phenylether	230	U
118-74-1	Hexachlorobenzene	230	U
1912-24-9	Atrazine	230	U
87-86-5	Pentachlorophenol	440	U
85-01-8	Phenanthrene	230	U
120-12-7	Anthracene	230	U
86-74-8	Carbazole	230	U
84-74-2	Di-n-butylphthalate	230	U
206-44-0	Fluoranthene	230	U
129-00-0	Pyrene	230	U
85-68-7	Butylbenzylphthalate	230	U
91-94-1	3,3'-Dichlorobenzidine	230	U
117-81-7	bis(2-ethylhexyl)Phthalate	230	U
56-55-3	Benzo(a)anthracene	230	U
218-01-9	Chrysene	230	U
117-84-0	Di-n-octylphthalate	230	U
205-99-2	Benzo(b)fluoranthene	230	U
207-08-9	Benzo(k)fluoranthene	230	U
50-32-8	Benzo(a)pyrene	230	U
193-39-5	Indeno(1,2,3-cd)pyrene	230	U
53-70-3	Dibenzo(a,h)anthracene	230	U
191-24-2	Benzo(g,h,i)perylene	230	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD03-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003174-03C60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: 25 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	11 ~~1.3~~	J UMBL
91-57-6	2-Methylnaphthalene	1.3	J
208-96-8	Acenaphthylene	11	U
83-32-9	Acenaphthene	11	U
86-73-7	Fluorene	11	U
85-01-8	Phenanthrene	2.0	J
120-12-7	Anthracene	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	0.76	J
56-55-3	Benzo(a)anthracene	11	U
218-01-9	Chrysene	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)fluoranthene	11	U
50-32-8	Benzo(a)pyrene	0.84	J
193-39-5	Indeno(1,2,3-cd)pyrene	11	~~U~~ UJCCL
53-70-3	Dibenzo(a,h)anthracene	11	~~U~~ UJCCL
191-24-2	Benzo(g,h,i)perylene	11	U

WM 072810

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB03-04-05-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003174-04A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: 20 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	210	U
108-95-2	Phenol	410	U
111-44-4	Bis(2-chloroethyl)ether	210	U
95-57-8	2-Chlorophenol	410	U
95-48-7	2-Methylphenol	410	U
108-60-1	2,2'-oxybis(1-Chloropropane)	210	U
98-86-2	Acetophenone	210	U
106-44-5	4-Methylphenol	410	U
621-64-7	N-Nitroso-di-N-propylamine	210	U
67-72-1	Hexachloroethane	210	U
98-95-3	Nitrobenzene	210	U
78-59-1	Isophorone	210	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	Bis(2-chloroethoxy)methane	210	U
120-83-2	2,4-Dichlorophenol	410	U
91-20-3	Naphthalene	210	U
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	210	U
105-60-2	Caprolactam	210	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	210	U
77-47-4	Hexachlorocyclopentadiene	210	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	410	U
92-52-4	1,1'-Biphenyl	210	U
91-58-7	2-Chloronaphthalene	210	U
88-74-4	2-Nitroaniline	410	U
131-11-3	Dimethylphthalate	210	U
606-20-2	2,6-Dinitrotoluene	210	U
208-96-8	Acenaphthylene	210	U
99-09-2	3-Nitroaniline	410	U
83-32-9	Acenaphthene	210	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB03-04-05-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003174-04A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: 20 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	410	U
100-02-7	4-Nitrophenol	410	U
121-14-2	2,4-Dinitrotoluene	210	U
132-64-9	Dibenzofuran	210	U
84-66-2	Diethylphthalate	210	U
7005-72-3	4-Chlorophenyl-phenylether	210	U
86-73-7	Fluorene	210	U
100-01-6	4-Nitroaniline	410	U
534-52-1	4,6-Dinitro-2-methylphenol	410	U
86-30-6	N-Nitrosodiphenylamine (1)	210	U
101-55-3	4-Bromophenyl-phenylether	210	U
118-74-1	Hexachlorobenzene	210	U
1912-24-9	Atrazine	210	U
87-86-5	Pentachlorophenol	410	U
85-01-8	Phenanthrene	210	U
120-12-7	Anthracene	210	U
86-74-8	Carbazole	210	U
84-74-2	Di-n-butylphthalate	210	U
206-44-0	Fluoranthene	210	U
129-00-0	Pyrene	210	U
85-68-7	Butylbenzylphthalate	210	U
91-94-1	3,3'-Dichlorobenzidine	210	U
117-81-7	bis(2-ethylhexyl)Phthalate	210	U
56-55-3	Benzo(a)anthracene	210	U
218-01-9	Chrysene	210	U
117-84-0	Di-n-octylphthalate	210	U
205-99-2	Benzo(b)fluoranthene	210	U
207-08-9	Benzo(k)fluoranthene	210	U
50-32-8	Benzo(a)pyrene	210	U
193-39-5	Indeno(1,2,3-cd)pyrene	210	U
53-70-3	Dibenzo(a,h)anthracene	210	U
191-24-2	Benzo(g,h,i)perylene	210	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB03-04-05-10

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003174-04C60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: 20 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	10 ~~1.3~~	~~J~~ U MBL
91-57-6	2-Methylnaphthalene	10 ~~1.5~~	~~J~~ U EBL
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10 ~~2.1~~	~~J~~ U EBL
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10 ~~1.2~~	~~J~~ U EBL
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	0.79	J
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	~~U~~ U5CCL
53-70-3	Dibenzo(a,h)anthracene	10	~~U~~ U5CCL
191-24-2	Benzo(g,h,i)perylene	10	U

FORM I SV 8270C

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD02MS

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 0032414-MS1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0032414-MS1A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: 76 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	4000	
108-95-2	Phenol	4400	
111-44-4	Bis(2-chloroethyl)ether	2900	
95-57-8	2-Chlorophenol	4200	
95-48-7	2-Methylphenol	5200	
108-60-1	2,2'-oxybis(1-Chloropropane)	3700	
98-86-2	Acetophenone	4100	
106-44-5	4-Methylphenol	5300	
621-64-7	N-Nitroso-di-N-propylamine	4300	
67-72-1	Hexachloroethane	2600	
98-95-3	Nitrobenzene	3600	
78-59-1	Isophorone	4400	
88-75-5	2-Nitrophenol	4200	
105-67-9	2,4-Dimethylphenol	5900	
111-91-1	Bis(2-chloroethoxy)methane	4400	
120-83-2	2,4-Dichlorophenol	4900	
91-20-3	Naphthalene	3700	
106-47-8	4-Chloroaniline	1400	U
87-68-3	Hexachlorobutadiene	4300	
105-60-2	Caprolactam	9200	~~E~~
59-50-7	4-Chloro-3-methylphenol	5600	
91-57-6	2-Methylnaphthalene	4000	
77-47-4	Hexachlorocyclopentadiene	710	U
88-06-2	2,4,6-Trichlorophenol	5200	
95-95-4	2,4,5-Trichlorophenol	5300	
92-52-4	1,1'-Biphenyl	3900	
91-58-7	2-Chloronaphthalene	4000	
88-74-4	2-Nitroaniline	5100	
131-11-3	Dimethylphthalate	4500	
606-20-2	2,6-Dinitrotoluene	4800	
208-96-8	Acenaphthylene	4200	
99-09-2	3-Nitroaniline	1400	
83-32-9	Acenaphthene	4300	

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD02MS 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 0032414-MS1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0032414-MS1A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: 76 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	4900	
100-02-7	4-Nitrophenol	4600	
121-14-2	2,4-Dinitrotoluene	4600	
132-64-9	Dibenzofuran	4500	
84-66-2	Diethylphthalate	4800	
7005-72-3	4-Chlorophenyl-phenylether	4400	
86-73-7	Fluorene	4600	
100-01-6	4-Nitroaniline	1500	
534-52-1	4,6-Dinitro-2-methylphenol	4800	
86-30-6	N-Nitrosodiphenylamine (1)	6300	
101-55-3	4-Bromophenyl-phenylether	5500	
118-74-1	Hexachlorobenzene	5000	
1912-24-9	Atrazine	3400	
87-86-5	Pentachlorophenol	5700	
85-01-8	Phenanthrene	4800	
120-12-7	Anthracene	4900	
86-74-8	Carbazole	4900	
84-74-2	Di-n-butylphthalate	4800	
206-44-0	Fluoranthene	4900	
129-00-0	Pyrene	5200	
85-68-7	Butylbenzylphthalate	5500	
91-94-1	3,3'-Dichlorobenzidine	710	U
117-81-7	bis(2-ethylhexyl)Phthalate	5000	
56-55-3	Benzo(a)anthracene	5100	
218-01-9	Chrysene	4800	
117-84-0	Di-n-octylphthalate	6400	
205-99-2	Benzo(b)fluoranthene	5700	
207-08-9	Benzo(k)fluoranthene	5400	
50-32-8	Benzo(a)pyrene	5100	
193-39-5	Indeno(1,2,3-cd)pyrene	4100	
53-70-3	Dibenzo(a,h)anthracene	4200	
191-24-2	Benzo(g,h,i)perylene	3700	

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD02MSD 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 0032414-MSD1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0032414-MSD1A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: 76 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	4000	
108-95-2	Phenol	4400	
111-44-4	Bis(2-chloroethyl)ether	3500	
95-57-8	2-Chlorophenol	4200	
95-48-7	2-Methylphenol	5300	
108-60-1	2,2'-oxybis(1-Chloropropane)	3700	
98-86-2	Acetophenone	4100	
106-44-5	4-Methylphenol	5200	
621-64-7	N-Nitroso-di-N-propylamine	4500	
67-72-1	Hexachloroethane	2700	
98-95-3	Nitrobenzene	4000	
78-59-1	Isophorone	4400	
88-75-5	2-Nitrophenol	4500	
105-67-9	2,4-Dimethylphenol	6200	
111-91-1	Bis(2-chloroethoxy)methane	4700	
120-83-2	2,4-Dichlorophenol	5300	
91-20-3	Naphthalene	3800	
106-47-8	4-Chloroaniline	1400	U
87-68-3	Hexachlorobutadiene	4400	
105-60-2	Caprolactam	8200	
59-50-7	4-Chloro-3-methylphenol	5800	
91-57-6	2-Methylnaphthalene	4100	
77-47-4	Hexachlorocyclopentadiene	710	
88-06-2	2,4,6-Trichlorophenol	5300	
95-95-4	2,4,5-Trichlorophenol	4900	
92-52-4	1,1'-Biphenyl	3900	
91-58-7	2-Chloronaphthalene	4000	
88-74-4	2-Nitroaniline	5000	
131-11-3	Dimethylphthalate	4200	
606-20-2	2,6-Dinitrotoluene	4700	
208-96-8	Acenaphthylene	4400	
99-09-2	3-Nitroaniline	1200	J
83-32-9	Acenaphthene	4200	

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD02MSD

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 0032414-MSD1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 0032414-MSD1A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: 76 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	5100	
100-02-7	4-Nitrophenol	4700	
121-14-2	2,4-Dinitrotoluene	4700	
132-64-9	Dibenzofuran	4300	
84-66-2	Diethylphthalate	4400	
7005-72-3	4-Chlorophenyl-phenylether	4500	
86-73-7	Fluorene	4400	
100-01-6	4-Nitroaniline	1900	
534-52-1	4,6-Dinitro-2-methylphenol	5500	
86-30-6	N-Nitrosodiphenylamine (1)	5900	
101-55-3	4-Bromophenyl-phenylether	5700	
118-74-1	Hexachlorobenzene	5100	
1912-24-9	Atrazine	3400	
87-86-5	Pentachlorophenol	5600	
85-01-8	Phenanthrene	4900	
120-12-7	Anthracene	4700	
86-74-8	Carbazole	4800	
84-74-2	Di-n-butylphthalate	4900	
206-44-0	Fluoranthene	4900	
129-00-0	Pyrene	5000	
85-68-7	Butylbenzylphthalate	5100	
91-94-1	3,3'-Dichlorobenzidine	710	U
117-81-7	bis(2-ethylhexyl)Phthalate	5300	
56-55-3	Benzo(a)anthracene	4700	
218-01-9	Chrysene	4600	
117-84-0	Di-n-octylphthalate	7100	
205-99-2	Benzo(b)fluoranthene	5200	
207-08-9	Benzo(k)fluoranthene	4500	
50-32-8	Benzo(a)pyrene	4800	
193-39-5	Indeno(1,2,3-cd)pyrene	4400	
53-70-3	Dibenzo(a,h)anthracene	4300	
191-24-2	Benzo(g,h,i)perylene	3900	

(1) - Cannot be separated from Diphenylamine

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SD02-10A

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 76 decanted: (Y/N) N Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/31/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	~~3.3~~	~~JP~~ exclude PE
319-85-7	beta-BHC	2.8	JP
319-84-6	alpha-BHC	7.1	U
319-86-8	delta-BHC	2.0	JP
58-89-9	gamma-BHC (Lindane)	7.1	U
72-54-8	4,4'-DDD	13	JP
72-55-9	4,4'-DDE	12	J
50-29-3	4,4'-DDT	4.7	J
60-57-1	Dieldrin	15	P
959-98-8	Endosulfan I	7.1	U
33213-65-9	Endosulfan II	14	U
1031-07-8	Endosulfan sulfate	120	EP
72-20-8	Endrin	14	U
7421-93-4	Endrin Aldehyde	13	J
76-44-8	Heptachlor	2.1	JP
1024-57-3	Heptachlor Epoxide	7.1	U
72-43-5	Methoxychlor	71	U
8001-35-2	Toxaphene	350	U
12674-11-2	Aroclor-1016	100	U
11104-28-2	Aroclor-1221	140	U
11141-16-5	Aroclor-1232	71	U
53469-21-9	Aroclor-1242	71	U
12672-29-6	Aroclor-1248	71	U
11097-69-1	Aroclor-1254	71	U
11096-82-5	Aroclor-1260	71	U
53494-70-5	Endrin Ketone	93	P
5103-74-2	gamma-Chlordane	7.1	U
5103-71-9	alpha-Chlordane	~~7.1~~	~~U~~

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SD02RE -1A

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-01RE1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 76 decanted: (Y/N) N Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/02/10

Injection Volume: 1.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
309-00-2	Aldrin	35	U	
319-85-7	beta-BHC	18	U	
319-84-6	alpha-BHC	35	U	
319-86-8	delta-BHC	35	~~U~~ UJ	CCL
58-89-9	gamma-BHC (Lindane)	35	U	
72-54-8	4,4'-DDD	13	~~JP~~ NJ	OT
72-55-9	4,4'-DDE	14	~~JP~~ NJ	OT
50-29-3	4,4'-DDT	69	~~U~~ R	OT
60-57-1	Dieldrin	69	U	
959-98-8	Endosulfan I	35	U	
33213-65-9	Endosulfan II	69	U	
1031-07-8	Endosulfan sulfate	170	~~P~~ J	M1
72-20-8	Endrin	69	U	
7421-93-4	Endrin Aldehyde	560	~~EP~~ NJ	M1
76-44-8	Heptachlor	35	U	
1024-57-3	Heptachlor Epoxide	35	U	
72-43-5	Methoxychlor	150	~~JP~~ J	M1
8001-35-2	Toxaphene	1700	U	
12674-11-2	Aroclor-1016	500	U	
11104-28-2	Aroclor-1221	710	U	
11141-16-5	Aroclor-1232	350	U	
53469-21-9	Aroclor-1242	350	U	
12672-29-6	Aroclor-1248	350	U	
11097-69-1	Aroclor-1254	350	U	
11096-82-5	Aroclor-1260	350	U	
53494-70-5	Endrin Ketone	130	~~P~~ J	M1
5103-74-2	gamma-Chlordane	4.5	~~JP~~ J	2C
5103-71-9	alpha-Chlordane	35	~~U~~ UJ	M1

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SD03-10A

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 25 decanted: (Y/N) N Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/31/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	~~2.3~~	~~U~~
319-85-7	beta-BHC	2.3	U
319-84-6	alpha-BHC	2.3	U
319-86-8	delta-BHC	2.3	U
58-89-9	gamma-BHC (Lindane)	0.72	JP
72-54-8	4,4'-DDD	4.4	U
72-55-9	4,4'-DDE	0.49	JP
50-29-3	4,4'-DDT	1.8	U
60-57-1	Dieldrin	0.44	JP
959-98-8	Endosulfan I	2.3	U
33213-65-9	Endosulfan II	4.4	U
1031-07-8	Endosulfan sulfate	4.4	U
72-20-8	Endrin	4.4	U
7421-93-4	Endrin Aldehyde	4.4	U
76-44-8	Heptachlor	2.3	U
1024-57-3	Heptachlor Epoxide	2.3	U
72-43-5	Methoxychlor	23	U
8001-35-2	Toxaphene	110	U
12674-11-2	Aroclor-1016	32	U
11104-28-2	Aroclor-1221	45	U
11141-16-5	Aroclor-1232	23	U
53469-21-9	Aroclor-1242	23	U
12672-29-6	Aroclor-1248	23	U
11097-69-1	Aroclor-1254	23	U
11096-82-5	Aroclor-1260	23	U
53494-70-5	Endrin Ketone	4.4	U
5103-74-2	gamma-Chlordane	2.3	U
5103-71-9	alpha-Chlordane	~~0.64~~	~~JP~~

exclude RE

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SD03RE-10A

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-03RE1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 25 decanted: (Y/N) N Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/02/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
309-00-2	Aldrin	2.3	U	
319-85-7	beta-BHC	0.48	~~JP~~ J	2C
319-84-6	alpha-BHC	2.3	U	
319-86-8	delta-BHC	2.3	~~U~~ UJ	CCL
58-89-9	gamma-BHC (Lindane)	2.0	~~JP~~ J	2C
72-54-8	4,4'-DDD	4.4	U	
72-55-9	4,4'-DDE	0.65	~~JP~~ NJ	OT
50-29-3	4,4'-DDT	4.5	J	OT
60-57-1	Dieldrin	1.1	J	
959-98-8	Endosulfan I	0.99	~~JP~~ J	CCH
33213-65-9	Endosulfan II	4.4	U	
1031-07-8	Endosulfan sulfate	2.9	J	
72-20-8	Endrin	0.97	~~JP~~ J	2C
7421-93-4	Endrin Aldehyde	4.4	U	
76-44-8	Heptachlor	0.34	~~JP~~ J	2C
1024-57-3	Heptachlor Epoxide	2.3	U	
72-43-5	Methoxychlor	23	~~U~~ UJ	CCL
8001-35-2	Toxaphene	110	U	
12674-11-2	Aroclor-1016	32	U	
11104-28-2	Aroclor-1221	45	U	
11141-16-5	Aroclor-1232	23	U	
53469-21-9	Aroclor-1242	23	U	
12672-29-6	Aroclor-1248	23	U	
11097-69-1	Aroclor-1254	23	U	
11096-82-5	Aroclor-1260	23	U	
53494-70-5	Endrin Ketone	1.3	~~JP~~ J	2C
5103-74-2	gamma-Chlordane	1.1	~~JP~~ J	2C
5103-71-9	alpha-Chlordane	0.98	~~JP~~ J	2C

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SB03-04-05-10A

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 20 decanted: (Y/N) N Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/31/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	~~2.1~~	~~U~~
319-85-7	beta-BHC	2.1	U
319-84-6	alpha-BHC	2.1	U
319-86-8	delta-BHC	2.1	U
58-89-9	gamma-BHC (Lindane)	2.1	U
72-54-8	4,4'-DDD	4.1	U
72-55-9	4,4'-DDE	4.1	U
50-29-3	4,4'-DDT	4.1	U
60-57-1	Dieldrin	4.1	U
959-98-8	Endosulfan I	2.1	U
33213-65-9	Endosulfan II	4.1	U
1031-07-8	Endosulfan sulfate	4.1	U
72-20-8	Endrin	4.1	U
7421-93-4	Endrin Aldehyde	4.1	U
76-44-8	Heptachlor	2.1	U
1024-57-3	Heptachlor Epoxide	2.1	U
72-43-5	Methoxychlor	21	U
8001-35-2	Toxaphene	100	U
12674-11-2	Aroclor-1016	30	U
11104-28-2	Aroclor-1221	43	U
11141-16-5	Aroclor-1232	21	U
53469-21-9	Aroclor-1242	21	U
12672-29-6	Aroclor-1248	21	U
11097-69-1	Aroclor-1254	21	U
11096-82-5	Aroclor-1260	21	U
53494-70-5	Endrin Ketone	4.1	U
5103-74-2	gamma-Chlordane	2.1	U
5103-71-9	alpha-Chlordane	~~2.1~~	~~U~~

exclude RE

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

1RG9-SB03-04-05RE-10A

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-04RE1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 20 decanted: (Y/N) N Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/02/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
309-00-2	Aldrin	2.1	U	
319-85-7	beta-BHC	1.1	U	
319-84-6	alpha-BHC	2.1	U	
319-86-8	delta-BHC	2.1	~~U~~ UJ	CCL
58-89-9	gamma-BHC (Lindane)	2.1	U	
72-54-8	4,4'-DDD	0.60	~~JP~~ NJ	OT
72-55-9	4,4'-DDE	4.1	U	
50-29-3	4,4'-DDT	4.1	~~U~~ R	OT
60-57-1	Dieldrin	4.1	U	
959-98-8	Endosulfan I	2.1	U	
33213-65-9	Endosulfan II	4.1	U	
1031-07-8	Endosulfan sulfate	0.85	~~JP~~ J	2C
72-20-8	Endrin	4.1	U	
7421-93-4	Endrin Aldehyde	4.1	U	
76-44-8	Heptachlor	0.32	J	
1024-57-3	Heptachlor Epoxide	2.1	U	
72-43-5	Methoxychlor	21	~~U~~ UJ	CCL
8001-35-2	Toxaphene	100	U	
12674-11-2	Aroclor-1016	30	U	
11104-28-2	Aroclor-1221	43	U	
11141-16-5	Aroclor-1232	21	U	
53469-21-9	Aroclor-1242	21	U	
12672-29-6	Aroclor-1248	21	U	
11097-69-1	Aroclor-1254	21	U	
11096-82-5	Aroclor-1260	21	U	
53494-70-5	Endrin Ketone	4.1	U	
5103-74-2	gamma-Chlordane	0.49	~~JP~~ J	2C
5103-71-9	alpha-Chlordane	0.32	~~JP~~ J	2C

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SD02MS -10A

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 0032417-MS1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 76 decanted: (Y/N) N Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/31/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	13	
319-85-7	beta-BHC	13	
319-84-6	alpha-BHC	15	
319-86-8	delta-BHC	15	
58-89-9	gamma-BHC (Lindane)	13	
72-54-8	4,4'-DDD	57	
72-55-9	4,4'-DDE	46	
50-29-3	4,4'-DDT	27	P
60-57-1	Dieldrin	41	
959-98-8	Endosulfan I	24	P
33213-65-9	Endosulfan II	34	P
1031-07-8	Endosulfan sulfate	49	P
72-20-8	Endrin	37	
7421-93-4	Endrin Aldehyde	21	P
76-44-8	Heptachlor	18	
1024-57-3	Heptachlor Epoxide	15	
72-43-5	Methoxychlor	32	JP
8001-35-2	Toxaphene	350	U
12674-11-2	Aroclor-1016	100	U
11104-28-2	Aroclor-1221	140	U
11141-16-5	Aroclor-1232	71	U
53469-21-9	Aroclor-1242	71	U
12672-29-6	Aroclor-1248	71	U
11097-69-1	Aroclor-1254	71	U
11096-82-5	Aroclor-1260	71	U
53494-70-5	Endrin Ketone	59	
5103-74-2	gamma-Chlordane	14	
5103-71-9	alpha-Chlordane	19	P

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SD02MSD -10A

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 0032417-MSD1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 76 decanted: (Y/N) N Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/31/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	14	
319-85-7	beta-BHC	13	P
319-84-6	alpha-BHC	16	
319-86-8	delta-BHC	17	
58-89-9	gamma-BHC (Lindane)	14	
72-54-8	4,4'-DDD	50	
72-55-9	4,4'-DDE	44	
50-29-3	4,4'-DDT	21	P
60-57-1	Dieldrin	43	
959-98-8	Endosulfan I	14	P
33213-65-9	Endosulfan II	34	P
1031-07-8	Endosulfan sulfate	230	E
72-20-8	Endrin	34	
7421-93-4	Endrin Aldehyde	19	
76-44-8	Heptachlor	17	P
1024-57-3	Heptachlor Epoxide	16	
72-43-5	Methoxychlor	19	JP
8001-35-2	Toxaphene	350	U
12674-11-2	Aroclor-1016	100	U
11104-28-2	Aroclor-1221	140	U
11141-16-5	Aroclor-1232	71	U
53469-21-9	Aroclor-1242	71	U
12672-29-6	Aroclor-1248	71	U
11097-69-1	Aroclor-1254	71	U
11096-82-5	Aroclor-1260	71	U
53494-70-5	Endrin Ketone	60	
5103-74-2	gamma-Chlordane	14	
5103-71-9	alpha-Chlordane	16	P

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SD02PCBMS -10A

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 0032417-MS2

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 76 decanted: (Y/N) N Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/31/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	7.1	U
319-85-7	beta-BHC	6.4	JP
319-84-6	alpha-BHC	7.1	U
319-86-8	delta-BHC	7.1	U
58-89-9	gamma-BHC (Lindane)	7.1	U
72-54-8	4,4'-DDD	28	P
72-55-9	4,4'-DDE	13	JP
50-29-3	4,4'-DDT	14	P
60-57-1	Dieldrin	4.3	JP
959-98-8	Endosulfan I	7.1	U
33213-65-9	Endosulfan II	14	U
1031-07-8	Endosulfan sulfate	140	EP
72-20-8	Endrin	11	J
7421-93-4	Endrin Aldehyde	32	
76-44-8	Heptachlor	7.1	
1024-57-3	Heptachlor Epoxide	7.1	U
72-43-5	Methoxychlor	71	U
8001-35-2	Toxaphene	350	U
12674-11-2	Aroclor-1016	600	
11104-28-2	Aroclor-1221	140	U
11141-16-5	Aroclor-1232	71	U
53469-21-9	Aroclor-1242	71	U
12672-29-6	Aroclor-1248	71	U
11097-69-1	Aroclor-1254	71	U
11096-82-5	Aroclor-1260	410	
53494-70-5	Endrin Ketone	16	P
5103-74-2	gamma-Chlordane	7.1	U
5103-71-9	alpha-Chlordane	7.1	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SD02PCBMSD -10A

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 0032417-MSD2

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 76 decanted: (Y/N) N Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/31/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	8.4	~~P~~
319-85-7	beta-BHC	15	
319-84-6	alpha-BHC	7.1	U
319-86-8	delta-BHC	9.4	~~P~~
58-89-9	gamma-BHC (Lindane)	7.1	U
72-54-8	4,4'-DDD	37	~~P~~
72-55-9	4,4'-DDE	11	J~~P~~
50-29-3	4,4'-DDT	18	P
60-57-1	Dieldrin	2.3	J~~P~~
959-98-8	Endosulfan I	7.1	U
33213-65-9	Endosulfan II	14	U
1031-07-8	Endosulfan sulfate	200	~~EP~~
72-20-8	Endrin	7.7	J~~P~~
7421-93-4	Endrin Aldehyde	54	
76-44-8	Heptachlor	9.6	~~P~~
1024-57-3	Heptachlor Epoxide	2.4	J~~P~~
72-43-5	Methoxychlor	71	U
8001-35-2	Toxaphene	350	U
12674-11-2	Aroclor-1016	790	
11104-28-2	Aroclor-1221	140	U
11141-16-5	Aroclor-1232	71	U
53469-21-9	Aroclor-1242	71	U
12672-29-6	Aroclor-1248	71	U
11097-69-1	Aroclor-1254	71	U
11096-82-5	Aroclor-1260	400	
53494-70-5	Endrin Ketone	120	~~EP~~
5103-74-2	gamma-Chlordane	7.1	U
5103-71-9	alpha-Chlordane	1.6	J~~P~~

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SD02REMS-10A

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 0032417-MS1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 76 decanted: (Y/N) N Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/02/10

Injection Volume: 1.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	22	J
319-85-7	beta-BHC	23	J
319-84-6	alpha-BHC	24	J
319-86-8	delta-BHC	27	J
58-89-9	gamma-BHC (Lindane)	24	J
72-54-8	4,4'-DDD	85	
72-55-9	4,4'-DDE	80	
50-29-3	4,4'-DDT	64	J
60-57-1	Dieldrin	68	J
959-98-8	Endosulfan I	23	J
33213-65-9	Endosulfan II	58	J
1031-07-8	Endosulfan sulfate	87	
72-20-8	Endrin	68	J
7421-93-4	Endrin Aldehyde	31	J
76-44-8	Heptachlor	28	J
1024-57-3	Heptachlor Epoxide	26	J
72-43-5	Methoxychlor	69	J
8001-35-2	Toxaphene	1700	U
12674-11-2	Aroclor-1016	500	U
11104-28-2	Aroclor-1221	710	U
11141-16-5	Aroclor-1232	350	U
53469-21-9	Aroclor-1242	350	U
12672-29-6	Aroclor-1248	350	U
11097-69-1	Aroclor-1254	350	U
11096-82-5	Aroclor-1260	350	U
53494-70-5	Endrin Ketone	94	
5103-74-2	gamma-Chlordane	29	J
5103-71-9	alpha-Chlordane	35	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SD02REMSD-16A

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 0032417-MSD1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 76 decanted: (Y/N) N Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/02/10

Injection Volume: 1.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	19	J
319-85-7	beta-BHC	19	J
319-84-6	alpha-BHC	18	J
319-86-8	delta-BHC	21	J
58-89-9	gamma-BHC (Lindane)	17	J
72-54-8	4,4'-DDD	95	
72-55-9	4,4'-DDE	54	J
50-29-3	4,4'-DDT	46	J
60-57-1	Dieldrin	50	J
959-98-8	Endosulfan I	19	JP
33213-65-9	Endosulfan II	76	P
1031-07-8	Endosulfan sulfate	210	P
72-20-8	Endrin	56	J
7421-93-4	Endrin Aldehyde	35	J
76-44-8	Heptachlor	22	J
1024-57-3	Heptachlor Epoxide	29	J
72-43-5	Methoxychlor	55	JP
8001-35-2	Toxaphene	1700	U
12674-11-2	Aroclor-1016	500	U
11104-28-2	Aroclor-1221	710	U
11141-16-5	Aroclor-1232	350	U
53469-21-9	Aroclor-1242	350	U
12672-29-6	Aroclor-1248	350	U
11097-69-1	Aroclor-1254	350	U
11096-82-5	Aroclor-1260	350	U
53494-70-5	Endrin Ketone	240	
5103-74-2	gamma-Chlordane	34	J
5103-71-9	alpha-Chlordane	27	JP

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SD0
2REPCBMS -10A

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 0032417-MS2

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 76 decanted: (Y/N) N Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/02/10

Injection Volume: 1.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	35	U
319-85-7	beta-BHC	35	U
319-84-6	alpha-BHC	35	U
319-86-8	delta-BHC	35	U
58-89-9	gamma-BHC (Lindane)	35	U
72-54-8	4,4'-DDD	22	JP
72-55-9	4,4'-DDE	22	JP
50-29-3	4,4'-DDT	26	JP
60-57-1	Dieldrin	69	U
959-98-8	Endosulfan I	35	U
33213-65-9	Endosulfan II	69	U
1031-07-8	Endosulfan sulfate	69	U
72-20-8	Endrin	69	U
7421-93-4	Endrin Aldehyde	69	U
76-44-8	Heptachlor	35	U
1024 57-3	Heptachlor Epoxide	35	U
72-43-5	Methoxychlor	350	U
8001-35-2	Toxaphene	1700	U
12674-11-2	Aroclor-1016	830	
11104-28-2	Aroclor-1221	710	U
11141-16-5	Aroclor-1232	350	U
53469-21-9	Aroclor-1242	350	U
12672-29-6	Aroclor-1248	350	U
11097-69-1	Aroclor-1254	350	U
11096-82-5	Aroclor-1260	880	
53494-70-5	Endrin Ketone	69	U
5103-74-2	gamma-Chlordane	20	J
5103-71-9	alpha-Chlordane	35	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-SD0
2REPCBMSD

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 0032417-MSD2

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 76 decanted: (Y/N) N Date Received: 03/19/10

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 03/24/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 04/02/10

Injection Volume: 1.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
309-00-2	Aldrin	35	U
319-85-7	beta-BHC	35	U
319-84-6	alpha-BHC	35	U
319-86-8	delta-BHC	35	U
58-89-9	gamma-BHC (Lindane)	35	U
72-54-8	4,4'-DDD	16	J
72-55-9	4,4'-DDE	14	J
50-29-3	4,4'-DDT	30	J
60-57-1	Dieldrin	69	U
959-98-8	Endosulfan I	35	U
33213-65-9	Endosulfan II	69	U
1031-07-8	Endosulfan sulfate	69	U
72-20-8	Endrin	69	U
7421-93-4	Endrin Aldehyde	69	U
76-44-8	Heptachlor	35	U
1024-57-3	Heptachlor Epoxide	35	U
72-43-5	Methoxychlor	350	U
8001-35-2	Toxaphene	1700	U
12674-11-2	Aroclor-1016	590	
11104-28-2	Aroclor-1221	710	U
11141-16-5	Aroclor-1232	350	U
53469-21-9	Aroclor-1242	350	U
12672-29-6	Aroclor-1248	350	U
11097-69-1	Aroclor-1254	350	U
11096-82-5	Aroclor-1260	540	
53494-70-5	Endrin Ketone	69	U
5103-74-2	gamma-Chlordane	5.1	J
5103-71-9	alpha-Chlordane	35	U

FORM I PEST

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-SD02 -10A

JAC 72310

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix (soil/water): SOIL Lab Sample ID: 1003174-01

Level (low/med): LOW Date Received: 3/19/2010

% Solids: 24.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	8650			P	
7440-36-0	Antimony	5.3		~~N~~ J	P	MSL
7440-38-2	Arsenic	4.1	U		P	
7440-39-3	Barium	18.6	~~B~~	~~E~~ J	P	SD
7440-41-7	Beryllium	0.67	~~B~~	J	P	
7440-43-9	Cadmium	2.1	U		P	
7440-70-2	Calcium	2350			P	
7440-47-3	Chromium	9.0			P	
7440-48-4	Cobalt	2.1	U		P	
7440-50-8	Copper	4.2			P	
7439-89-6	Iron	2000			P	
7439-92-1	Lead	13.7			P	
7439-95-4	Magnesium	1320 ~~1320~~	~~B~~	J	P	XICORR JAC 72310
7439-96-5	Manganese	9.4			P	
7439-97-6	Mercury	0.14	U		CV	
7440-02-0	Nickel	4.3			P	
7440-09-7	Potassium	520	~~B~~	J	P	
7782-49-2	Selenium	0.94	~~B~~	~~N~~ J	P	MSL
7440-22-4	Silver	2.1	U		P	
7440-23-5	Sodium	1400	~~B~~	J	P	
7440-28-0	Thallium	4.1	~~B~~	~~N~~ UJ	P	MSL
7440-62-2	Vanadium	10.2			P	
7440-66-6	Zinc	17.0			P	

JAC 72310

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

052

SW846 - METALS
-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-SD03-10A

JAC 12310

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix (soil/water): SOIL Lab Sample ID: 1003174-03

Level (low/med): LOW Date Received: 3/19/2010

% Solids: 74.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	469			P	
7440-36-0	Antimony	1.5		~~N~~ J	P	MSL
7440-38-2	Arsenic	1.3	U		P	
7440-39-3	Barium	1.8	~~B~~	~~E~~ J	P	SD
7440-41-7	Beryllium	0.64 ~~0.08~~	~~B~~	U	P	MSL
7440-43-9	Cadmium	0.64	U		P	
7440-70-2	Calcium	643 ~~64.3~~	~~B~~	U	P	MSL
7440-47-3	Chromium	0.75	~~B~~	J	P	
7440-48-4	Cobalt	0.64	U		P	
7440-50-8	Copper	0.95			P	
7439-89-6	Iron	114			P	
7439-92-1	Lead	1.7			P	
7439-95-4	Magnesium	21.8	~~B~~	J	P	
7439-96-5	Manganese	0.81	~~B~~	J	P	
7439-97-6	Mercury	0.04	U		CV	
7440-02-0	Nickel	0.64	U		P	
7440-09-7	Potassium	24.8	~~B~~	J	P	
7782-49-2	Selenium	0.64	~~U~~	~~N~~ UJ	P	MSL
7440-22-4	Silver	0.64	U		P	
7440-23-5	Sodium	69.7	~~B~~	J	P	
7440-28-0	Thallium	1.3	~~U~~	~~N~~ UJ	P	MSL
7440-62-2	Vanadium	0.70	~~B~~	J	P	
7440-66-6	Zinc	11.6			P	

JAC 12310

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

053

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

1R69-SB03-04-05-10A

JAC 7230

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix (soil/water): SOIL Lab Sample ID: 1003174-04

Level (low/med): LOW Date Received: 3/19/2010

% Solids: 80.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	3490			P	
7440-36-0	Antimony	1.4		~~N~~ J	P	MSL
7440-38-2	Arsenic	1.2	U		P	
7440-39-3	Barium	1.6	~~B~~	~~E~~ J	P	SD
7440-41-7	Beryllium	0.60 ~~0.08~~	~~B~~	U	P	MBL
7440-43-9	Cadmium	0.60	U		P	
7440-70-2	Calcium	597 ~~27.9~~	~~B~~	U	P	MBL
7440-47-3	Chromium	3.8			P	
7440-48-4	Cobalt	0.60	U		P	
7440-50-8	Copper	0.31	~~B~~	J	P	
7439-89-6	Iron	262			P	
7439-92-1	Lead	2.7			P	
7439-95-4	Magnesium	32.4	~~B~~	J	P	
7439-96-5	Manganese	0.98	~~B~~	J	P	
7439-97-6	Mercury	0.03	~~B~~	J	CV	
7440-02-0	Nickel	0.43	~~B~~	J	P	
7440-09-7	Potassium	59.6	~~B~~	J	P	
7782-49-2	Selenium	0.60	~~U~~	~~N~~ UJ	P	MSL
7440-22-4	Silver	0.60	U		P	
7440-23-5	Sodium	73.2	~~B~~	J	P	
7440-28-0	Thallium	1.2	~~U~~	~~N~~ UJ	P	MSL
7440-62-2	Vanadium	1.5	~~B~~	J	P	
7440-66-6	Zinc	2.4 ~~1.0~~	~~B~~	U	P	FBL

JAC 7231U

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

054

20533

CHAIN OF CUSTODY

CompuChem
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501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Page _____ of _____

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Information

Project Name: CTO-081
Sampling Location: MCB Camp Lejeune Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch.
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Requested Analyses (Include method number)

Lab ID	Field ID	Date	Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other Nabisulfite	8260B (WATER = 3-40ml w/HCl; SOIL = 1-5g, 1-25ml DI, 1-10ml MeOH)	8270C/8270C-SIM (2-1L Amber)	RSK 175 MEE (2-40ml VOAs HCl)	3550B/8081A/8082 (2-1L Amber)	TOC (2-40ml VOAs H2SO4)	CN/S-AIK (1-250ml poly, none)	Sulfide (1-500ml poly, Zn Ace 6N NaOH)	TAL 6010B metals (1-500ml poly, HNO3)	Dissolved metals 6010B (1-500ml poly HNO3 Field Filtered)		
1003136-14	IR69-GW19IW-10A	3/16/10	1130	GW	3	3						3										
-16	IR69-EB-031610-GW	3/16/10	1330	RI	3	3						3										
-19	IR69-TB-031710	3/17/10	1200	TB	3	3						3										
-15	IR69-GW19UW-10A	3/16/10	1200	GW	3	3						3										
1003174-01	IR69-SD02-10A	3/15/10	1200	SO	4	~~3~~ 2				1	2	4										
-	IR69-SD02-10A-MS	3/15/10	1200	SO	4	~~3~~ 2				1	2	4										
-	IR69-SD02-10A-SD	3/15/10	1200	SO	4					1	2	4										
1003174-02	IR69-SD03-10A	3/15/10	1600	SO	4					1	2	4										
1003136-09	IR69-EB-031610-SB	3/16/10	1630	RI	3	3						3										
1003174-04	IR69-SB03-04-05-10A	3/16/10	1530	SO	4					1	2	4										

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Yr 03.19.10

Sample Unpacked By: Dean Bend
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Relinquished by:	Date/Time:	Received by: Dean Bend	Date/Time: 3/19/10 1315
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 5.9 °C

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer

055

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CHAIN OF CUSTODY

501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

№ 01759

Page 1 of 1

Courier
Airbill No.
Sampling Complete? Y or N

Company Name: CH2M Hill	Project Name: CTO-081
Address: 11301 Carmel Commons Blvd Ste 304	Sampling Location: MCB Camp Lej Site 69
City: Charlotte State: NC Zip: 28226	Turnaround time: Standard
Project Contact: Gwen Buckley	Batch QC or Project Specific? If Specific, which Sample ID? Batch
Phone #: 757-671-6292	Are aqueous samples field filtered for metals? Y or N: IR69-SW03-10A-FF for dissolved metals
Sampler's Name:	Are high concentrations expected? Y or N If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab Sample No.	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other none	8260B	8270C/8270C-SIM (2-L amber)	RSK 175 MEE (10 AGs, HCl 2-40 ml)	3550B/8081A/8082 (2-L amber)	TOC (2-40 ml VOAs, H2SO4)	CN/S-AIK (1-250 ml poly, none)	Sulfide (Zn Ace 6N NaOH 1-500 ml poly)	TAL 6010B/METALS (1-500 ml poly HNO3 Dissolved)	6010B metals (1-500 ml poly HNO3 Field Filtered)	SM5310B-TOC (4 oz jar)					
1003136-10 1003149-05	IR69-SW03-10A	3/15/10	1530	SW	6			2			4		2		2				1	1		<2	<2			
1003174-03	IR69-SD03-10A	3/15/10	1600	SO	3						3		X		X	O			1		1	<2	/			
														1=8oz												
														1-4oz												
														1-4oz TOC?												

sediments need TOC
3/23/10

Residual Chlorine Present?
Yes ____ No ✓

Sample Unpacked By: Diane Byrd	Cyanide samples checked for sulfide & chlorine? Y or NA	For SO: 8270C/8270C-SIM/3550B/8081A/8082 analyses combined in one jar (8oz) 3/19/10
Sample Order Entry By:	625 & Phenol samples checked for chlorine? Y or NA	
Samples Received in Good Condition? Y or N	608 samples checked for pH between 5.0-9.0? Y or NA	
If no, explain:		

Relinquished by: Jeff Martin	Date/Time: 3/19/10 1000	Received by: Diane Byrd	Date/Time: 3-19-10 1315
Relinquished by:	Date/Time:	Received by:	Date/Time:
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 0.7 °C

Samples [illegible] 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer

1005

№ 01812

Page 1 of 1

CHAIN OF CUSTODY

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501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Courier
Airbill No.
Sampling Complete? Y or N

Company Name: CH2M Hill	Project Name: CTO-081
Address: 11301 Carmel Commons Blvd Ste 304	Sampling Location: MCB Camp Lejeune Site 69
City: Charlotte State: NC Zip: 28226	Turnaround time: Standard
Project Contact: Gwen Buckley	Batch QC or Project Specific? If Specific, which Sample ID? Batch
Phone #: 757-671-6292	Are aqueous samples field filtered for metals? Y or N: Yes labeled "-FF"
Sampler's Name	Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other none	8260B	8270C/8270C-SIM (Aqueous) 2-40ml	RSK 175 MEE/VOAs HCl 2-40ml	3550B/8081B/8082 (Aqueous) 2-40ml	TOC / 2-40ml VOAs H2SO4	CNAS-AK 1-250ml poly, none	Sulfide 1-500ml poly 6N NaOH	TPH 1-500ml poly HNO3	6010B/METALS Aqueous 1-500ml poly HNO3	6010B metals Filtered Filtered		GW/WW/SW/SO/TB/RI/WP/O
1003136-11	IR69-EB-031510-SD	3/15/10	1700	RI	7			1	2		4		2		2	~~2~~			1				<2
~~1003136-12~~ 1003149-06	IR69-EB-031510-GW	3/15/10	1715	RI	12	2	1	2	2		~~4~~ 5		2	2	2	2	1	1	1	1			<2 <2 <2 <2 <2
1003174-04	IR69-SB03-04-05-10A	3/16/10	1530	SO	2																		<2
															1-8oz								
															1-2oz MR								

Residual Chlorine Present?
Yes ____ No ✓

Sample Unpacked By:	Cyanide samples checked for sulfide & chlorine? Y or NA	Did receive 2-40ml TOC for IR69-EB-031510-SD
Sample Order Entry By:	625 & Phenol samples checked for chlorine? Y or NA	Received 1-8oz Jar for IR69-SB03-04-05-10A
Samples Received in Good Condition? Y or N	608 samples checked for pH between 5.0-9.0? Y or NA	labeled for 8270C & 8081A.
If no, explain:		

Relinquished by:	Date/Time: 3/19/10 1000	Received by:	Date/Time: 3/19/10 1300
Relinquished by:	Date/Time:	Received by:	Date/Time:
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 0.5°C

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer

69

057

№ 01813

Page 1 of 1

CHAIN OF CUSTODY

CompuChem
a division of Liberty Analytical Corp.

501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Courier
Airbill No.
Sampling Complete? Y or N

Company Name: CH2M Hill
Address: 11301 Carmel Commons Blvd Ste 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Name: CTO-081
Sampling Location: MCB Camp Lej Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

(Laboratory Use Only)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other none	8260B	8270C/8270C-SIM (Amend)	RSK 175 MEE (VOAs HCl)	3550B/8081A/8082 (Amend)	TOC	CN/NS-AIK	Sulfide	TAL 6010B/METALS	6010B/metals (filtered)	SM5310B - 1 4oz jar					
														2-1L	2-40ml 2-40ml VOAs HCl	2-40ml VOAs H2SO4	1-250ml poly, none	1-500ml poly 2g NaOH	1-500ml poly, HNO3 to pH<2	1-500ml poly HNO3						
1003136-1	IR69-EB-031610-GW	3/16/10	1330	RI	11	2	1	1	2		5		X	2	2	2	1	1	1			×2	×2	×2		
1003174-01	IR69-SD02-10A	3/15/10	1200	SO	3						3		X		X				1		1			×2		
	IR69-SD02-10A-MS	3/15/10	1200	SO	3						3		X		X				1		1			×2		
	IR69-SD02-10A-SD	3/15/10	1200	SO	3						3		X		X				1		1			×2		

3-8oz Sediments need TOC
3-4oz
3-4oz TOC

Residual Chlorine Present?
Yes ____ No ✓

Sample Unpacked By: [signature]
Sample Order Entry By: [signature]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

For SD02, method 8270C/8270C-SIM were combined in one 8oz jar with 3550B/8081A/8082.

Relinquished by: [signature]	Date/Time: 3/19/10 1000	Received by: [signature]	Date/Time: 3/19/10 1315
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 0.9 °C

Samples stored 60 days after date report mailed at no extra charge.

White & Yellow copy to lab • Pink copy for customer

058

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015

CompuChem
A Division Of
Liberty Analytical Corp.

Sample ID Cross Reference

LAB WO	Project	Sample #	Field ID	Sample Date	Receive Date	DueDate	Chain of Custody ID
1003174	CTO-081 SITE 69/289017.SA.DM/N624	1003174-01	IR69-SD02	03/15/2010	03/19/2010		IR69-SD02-10A
1003174	CTO-081 SITE 69/289017.SA.DM/N624	1003174-01	IR69-SD02	03/15/2010	03/19/2010	04/13/2010	IR69-SD02-10A
1003174	CTO-081 SITE 69/289017.SA.DM/N624	1003174-02	IR69-SD02	03/15/2010	03/19/2010		created by accident
1003174	CTO-081 SITE 69/289017.SA.DM/N624	1003174-02	IR69-SD02	03/15/2010	03/19/2010	04/13/2010	✓ 3/26/10
1003174	CTO-081 SITE 69/289017.SA.DM/N624	1003174-03	IR69-SD03	03/15/2010	03/19/2010	04/13/2010	IR69-SD03-10A
1003174	CTO-081 SITE 69/289017.SA.DM/N624	1003174-04	SB03-04-05	03/16/2010	03/19/2010	04/13/2010	IR69-SB03-04-05-10A

Data Completeness

The data package was received complete and intact. Resubmissions were not required. (SW846 Method 8260B)
All field sample and QC blank IDs were missing the first four (IR69) and or the last four (-10A) characters. The characters were added to the Form 1s in the DV reports by the data validator.

Laboratory: CompuChem

Holding Times

Sampling Date: 3/15-16/10
Received Date: 3/19/10
Analysis Dates: 3/29/10
Cooler Temp: 5.9°C

All prep and analysis holding time requirements were met.

Calibrations

Mass assignments were verified by the injection of BFB.

The initial and continuing calibrations required qualifications due to high %D values; see attached FormVI and VIIs.

Internal Standards

All criteria met.

Blank Summary

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying criteria.
- Qualification/Action codes where applied as stated in table below:
-

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Storage, Field, Trip, Instrument	Detects	Not detected	No qualifications
	< CRQL*	< CRQL*	Report CRQL value with a U
		∃ CRQL*	Use professional judgment
	≥ CRQL*	< CRQL*	Report CRQL value with a U
		∃ CRQL* and < blank concentration	Report the concentration for the sample with a U, or qualify the data as unusable R
		∃ CRQL* and ∃ blank concentration	Use professional judgment
	CRQL*	< CRQL*	Report CRQL value with a U
		∃ CRQL*	Use professional judgment
	Gross contamination	Detects	Qualify results as unusable R

*2x the CRQL for methylene chloride, 2-butanone and acetone

Method blank contamination was not exhibited- qualifications were not required. The associated field QC for this data package was: IR69-TB01-031910- trip blank; IR69-EB-031510-SD and IR69-EB01-031610-SB-equipment blanks; IR69-FB01-031910 - field blank.

Blank Contamination and Qualification Summaries

Blank ID	Compound	Concentration	Reporting Limit
IR69-TB01-031910	cis-1,2-dichloroethene	0.033J	0.5
IR69-EB01-031510-SD	acetone	4.9	2.5
	methylene chloride	5.3	0.5
	2-butanone	2.2J	0.5
	chloroform	1.2	2.5
	benzene	0.044J	0.5
	toluene	0.94	0.5
IR69-EB01-031610-SB	acetone	3.5	2.5
	methylene chloride	1.2	0.5
	2-butanone	1.5j	2.5
	chloroform	1.9	0.5
	benzene	0.073J	0.5
	toluene	1.5	0.5
	m,p-xylene	0.11J	0.5
	o-xylene	0.043J	0.5
	xylene (total)	0.16J	0.5
IR69-FB01-031910	acetone	7.8	2.5
	methylene chloride	1.4	0.5
	2-butanone	1.8J	0.5
	chloroform	2.4	0.5
	benzene	0.17J	0.5
	toluene	2.1	0.5
	ethylbenzene	0.076J	0.5
	m,p-xylene	0.16J	0.5
	o-xylene	0.068J	0.5
	xylene (total)	0.24J	0.5

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Qual Code
IR69-SD01-10A, IR69-SD03-10A, IR69-SB03-04-05-10A	toluene	U at RL	EBL
IR69-SB03-04-05-10A	methylene chloride	U at RL	EBL

Surrogates

All criteria were met with the exception of sample IR69-SD02-10A which exhibited low recoveries for toluene-d8 at 58% (QC limit 85-115%) and bromofluorobenzene at 27% (QC limit 85-120%) and sample IR69-SD03-10A which exhibited low recovery for bromofluorobenzene at 55% (QC limit 85-120%); therefore results for these samples were qualified as estimated (J/UJ).

Laboratory Control Sample

All criteria were met.

Matrix Spike/Spike Duplicate Samples

An MS/MSD was submitted for sample IR69-SD02-10A; several results were non-compliant in the MS or MSD but not both therefore no qualifications were required.

Field Duplicate Sample

A field duplicate was not submitted for this data package.

Specific Comments:

All sample results were reported within the calibration range of the instruments. Dilutions were required for sample IR69-SD03-10A to obtain results within the calibration range.

Detection limits were acceptable. Raw data and calculations were verified.

We have limited the supporting documentation, found with these worksheets, to those forms that indicate qualifications were required.

Validator Signature: _____ **Date:** 7 28 10

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Lab File ID: 0C25010-TUN159 BFB Injection Date: 03/26/10

Instrument ID: 5972HP59 BFB Injection Time: 2208

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.6
75	30.0 - 60.0% of mass 95	49.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	63.0
175	5.0 - 9.0% of mass 174	4.4 (7.0)1
176	95.0 - 101.0% of mass 174	62.3 (98.8)1
177	5.0 - 9.0% of mass 176	4.2 (6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD200	0C25010-CAL	0C25010-CAL659	03/26/10	2352
02	VSTD100	0C25010-CAL	0C25010-CAL559	03/27/10	0019
03	VSTD050	0C25010-CAL	0C25010-CAL459	03/27/10	0047
04	VSTD005	0C25010-CAL	0C25010-CAL1R5	03/27/10	0114
05	VSTD010	0C25010-CAL	0C25010-CAL2R5	03/27/10	0142
06	VSTD020	0C25010-CAL	0C25010-CAL3R5	03/27/10	0210
07					
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22					

FORM V VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Instrument ID: 5972HP59 Calibration Date(s): 03/26/10 03/27/10

Column: SPB-624 ID: 0.32 (mm) Calibration Time(s): 2352 0210

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2	MAX %RSD OR R^2
Dichlorodifluoromethane	AVRG		0.51820380	5.581	15.000
Chloromethane	AVRG		0.37702126	9.435	15.000
Vinyl Chloride	AVRG		0.25708033	2.483	30.000
Bromomethane	AVRG		0.18161517	8.741	15.000
Chloroethane	AVRG		0.09856814	6.006	15.000
Trichlorofluoromethane	AVRG		0.41858055	6.027	15.000
1,1-Dichloroethene	AVRG		0.22996042	10.056	30.000
Carbon disulfide	AVRG		0.92711824	10.796	15.000
1,1,2-trichloro-1,2,2-triflu	AVRG		0.34725409	10.573	15.000
Acetone	LINR	-0.1340364	16.9087539	0.9996434	0.9900000
Methylene Chloride	AVRG		0.27795817	9.260	15.000
trans-1,2-Dichloroethene	AVRG		0.27486339	10.406	15.000
Methyl-tert-butyl ether	AVRG		0.66675442	8.919	15.000
1,1-Dichloroethane	AVRG		0.52689540	11.559	15.000
cis-1,2-Dichloroethene	AVRG		0.29526595	10.419	15.000
2-butanone	LINR	-0.3069493	12.0596228	0.9986056	0.9900000
loroform	AVRG		0.55651973	9.690	30.000
,1,1-Trichloroethane	AVRG		0.50015232	10.000	15.000
Carbon Tetrachloride	AVRG		0.45959609	9.360	15.000
Benzene	AVRG		0.96641580	10.977	15.000
1,2-Dichloroethane	AVRG		0.37297373	7.737	15.000
Trichloroethene	AVRG		0.27987520	6.383	15.000
1,2-Dichloropropane	AVRG		0.24033387	17.162	30.000
Bromodichloromethane	AVRG		0.42066680	8.757	15.000
cis-1,3-Dichloropropene	AVRG		0.44197560	6.792	15.000
4-Methyl-2-pentanone	AVRG		0.31862127	14.078	15.000
Toluene	AVRG		0.83095022	8.785	30.000
trans-1,3-Dichloropropene	AVRG		0.54096801	11.953	15.000
1,1,2-Trichloroethane	AVRG		0.27682038	7.495	15.000
Tetrachloroethene	AVRG		0.28070995	5.820	15.000
2-hexanone	LINR	-0.3623155	5.83188772	0.9981515	0.9900000
Dibromochloromethane	AVRG		0.40174647	5.467	15.000
1,2-Dibromoethane	AVRG		0.31687817	6.128	15.000
Chlorobenzene	AVRG		0.86379619	7.304	15.000
Ethylbenzene	AVRG		1.15339892	9.652	30.000
Styrene	AVRG		0.90182149	9.874	15.000
Bromoform	AVRG		0.23000130	6.434	15.000
Isopropyl Benzene	AVRG		1.57089917	13.378	15.000
1,1,2,2-Tetrachloroethane	AVRG		0.72744854	10.304	15.000
1,3-Dichlorobenzene	AVRG		1.37567382	9.042	15.000
1,4-Dichlorobenzene	AVRG		1.33447595	7.053	15.000
1,2-Dichlorobenzene	AVRG		1.26234240	7.087	15.000
1,2-Dibromo-3-Chloropropane	AVRG		0.13508753	4.146	15.000
1,2,4-Trichlorobenzene	AVRG		0.86216931	3.468	15.000

J/UJ

FORM VI VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Lab File ID: 0C29005-TUN159 BFB Injection Date: 03/29/10

Instrument ID: 5972HP59 BFB Injection Time: 1413

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.2
75	30.0 - 60.0% of mass 95	44.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	70.2
175	5.0 - 9.0% of mass 174	5.2 (7.5)1
176	95.0 - 101.0% of mass 174	70.1 (99.9)1
177	5.0 - 9.0% of mass 176	4.7 (6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	0C29005-CCV	0C29005-CCV159	03/29/10	1437
02	VBLKIE	0032925-BLK	0032925-BLK159	03/29/10	1514
03	VIELCS	0032925-BS1	0032925-BS1R59	03/29/10	1722
04	IR69-SD02	1003174-01	1003174-0159	03/29/10	1818
05	IR69-SD03	1003174-03	1003174-0359	03/29/10	1845
06	SB03-04-05	1003174-04	1003174-04R59	03/29/10	2122
07	IR69-SD02MS	0032925-MS1	0032925-MS159	03/29/10	2204
08	IR69-SD02MSD	0032925-MSD	0032925-MSD159	03/29/10	2232
09	IR69-SD03RE	1003174-03R	1003174-03R59	03/29/10	2259
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Instrument ID: 5972HP59 Calibration Date: 03/29/10 Time: 1437

Lab File ID: 0C29005-CCV159 Init. Calib. Date(s): 03/26/10 03/27/10

Init. Calib. Times: 2352 0210

GC Column: SPB-624 ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF50 or AMOUNT	CCAL RRF50	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dichlorodifluoromethane	0.5182000	0.4126796	0.4126796	0.001	-20.36	25.00	AVRG
Chloromethane	0.3770200	0.3876243	0.3876243	0.1	2.81	25.00	AVRG
Vinyl Chloride	0.2570800	0.2836358	0.2836358	0.001	10.33	20.00	AVRG
Bromomethane	0.1816200	0.2237152	0.2237152	0.001	-23.18	25.00	AVRG
Chloroethane	0.0985600	0.1214496	0.1214496	0.001	23.22	25.00	AVRG
Trichlorofluoromethane	0.4185800	0.4151988	0.4151988	0.001	-0.81	25.00	AVRG
1,1-Dichloroethene	0.2299600	0.2200196	0.2200196	0.001	-4.32	20.00	AVRG
Carbon disulfide	0.9271200	0.8878866	0.8878866	0.001	-4.23	25.00	AVRG
1,1,2-trichloro-1,2,2-triflu	0.3472500	0.3310162	0.3310162	0.001	-4.67	25.00	AVRG
Acetone	614.12739	625.00000	0.0612830	0.001	-1.74	90.00	LINR
Methylene Chloride	0.2779600	0.2500316	0.2500316	0.001	-10.05	25.00	AVRG
trans-1,2-Dichloroethene	0.2748600	0.2598644	0.2598644	0.001	-5.46	25.00	AVRG
Methyl-tert-butyl ether	0.6667500	0.6246012	0.6246012	0.001	-6.32	25.00	AVRG
1-Dichloroethane	0.5269000	0.5061397	0.5061397	0.1	-3.94	25.00	AVRG
cis-1,2-Dichloroethene	0.2952600	0.2806548	0.2806548	0.001	-4.95	25.00	AVRG
2-butanone	656.20173	625.00000	0.0972421	0.001	4.99	90.00	LINR
Chloroform	0.5565200	0.5157575	0.5157575	0.001	-7.32	20.00	AVRG
1,1,1-Trichloroethane	0.5001500	0.4346584	0.4346584	0.001	-13.09	25.00	AVRG
Carbon Tetrachloride	0.4596000	0.3794487	0.3794487	0.001	-17.44	25.00	AVRG
Benzene	0.9664200	0.9298654	0.9298654	0.001	-3.78	25.00	AVRG
1,2-Dichloroethane	0.3729700	0.3652882	0.3652882	0.001	-2.06	25.00	AVRG
Trichloroethene	0.2798800	0.2514201	0.2514201	0.001	-10.17	25.00	AVRG
1,2-Dichloropropane	0.2403300	0.2279463	0.2279463	0.001	-5.15	20.00	AVRG
Bromodichloromethane	0.4206600	0.3840820	0.3840820	0.001	-8.70	25.00	AVRG
cis-1,3-Dichloropropene	0.4419800	0.4256318	0.4256318	0.001	-3.70	25.00	AVRG
4-Methyl-2-pentanone	0.3186200	0.2774482	0.2774482	0.001	-12.92	25.00	AVRG
Toluene	0.8309500	0.7857118	0.7857118	0.001	-5.44	20.00	AVRG
trans-1,3-Dichloropropene	0.5409700	0.4849954	0.4849954	0.001	-10.35	25.00	AVRG
1,1,2-Trichloroethane	0.2768200	0.2532009	0.2532009	0.001	-8.53	25.00	AVRG
Tetrachloroethene	0.2807100	0.2325610	0.2325610	0.001	-17.15	25.00	AVRG
2-hexanone	614.92195	625.00000	0.1935568	0.001	-1.61	90.00	LINR
Dibromochloromethane	0.4017400	0.3480328	0.3480328	0.001	-13.37	25.00	AVRG
1,2-Dibromoethane	0.3168800	0.2817266	0.2817266	0.001	-11.09	25.00	AVRG
Chlorobenzene	0.8638000	0.7993585	0.7993585	0.3	-7.46	25.00	AVRG
Ethylbenzene	1.1534000	1.0753333	1.0753333	0.001	-6.77	20.00	AVRG
Styrene	0.9018200	0.8423949	0.8423949	0.001	-6.59	25.00	AVRG
Bromoform	0.2300000	0.1963343	0.1963343	0.1	-14.64	25.00	AVRG
Isopropyl Benzene	1.5709000	1.4177354	1.4177354	0.001	-9.75	25.00	AVRG
1,1,2,2-Tetrachloroethane	0.7274500	0.6851022	0.6851022	0.3	-5.82	25.00	AVRG
1,3-Dichlorobenzene	1.3756700	1.2706664	1.2706664	0.001	-7.63	25.00	AVRG
1,4-Dichlorobenzene	1.3344800	1.2654474	1.2654474	0.001	-5.17	25.00	AVRG
1,2-Dichlorobenzene	1.2623400	1.1752261	1.1752261	0.001	-6.90	25.00	AVRG

JWJ

FORM VII VOA

FORM 2
SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Level:(low/med) LOW

	CLIENT SAMPLE NO.	SMC1 (DBF) #	SMC2 (DCE) #	SMC3 (TOL) #	SMC4 (BFB) #	TOT OUT	
01	VBLKIE	99	97	97	96	0	
02	VIELCS	102	104	101	103	0	
03	IR69-SD02	72	76	58*	27*	2	J/UJ
04	IR69-SD03	98	105	89	55*	1	J/UJ
05	SB03-04-05	102	118	97	106	0	
06	IR69-SD02MS	99	117	90	99	0	
07	IR69-SD02MSD	80	82	73*	52*	2	
08	IR69-SD03RE	91	96	88	82*	1	ma
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		QC LIMITS
SMC1 (DBF)	= Dibromofluoromethane	(71-141)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(70-139)
SMC3 (TOL)	= Toluene-d8	(85-115)
SMC4 (BFB)	= Bromofluorobenzene	(85-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

CompuChem

A division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1003174
PROTOCOL: SW-846
SAMPLE IDENTIFICATIONS: IR69-SD02, IR69-SD03, and SB03-04-05
REVISED

The 3 soil samples listed above were received intact, refrigerated at 5.9°C, with proper documentation, in sealed shipping containers, on March 19th, 2010. Soil samples were received from field/client in closed, pre-preserved VOA vials (sodium bisulfate/MeOH). The samples were scheduled for the requested analysis of the volatile fraction. SW-846, 3rd Edition, Update 3, 8260B was used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices for SDG 1003174 included in the sample data sections.

Analysis holding time requirements were met for the samples. The percent moisture values of these samples were between 20 and 76. There were volatile Project/Target Compound List (TCL) analytes above the Contract Required Quantitation Limit (CRQL) identified in all of the samples. In the initial analysis of the sample, IR69-SD02, the responses of the system monitoring compounds, Toluene-d8 and Bromofluorobenzene, failed quality control criteria. The samples were reported as is due to insufficient sample for reanalysis. In the initial analysis of the sample, IR69-SD03, the response of the system monitoring compound, Bromofluorobenzene, failed quality control criteria. The sample was reanalyzed and the SMC again failed recovery criteria. We have attributed the failing SMC recoveries to the particular matrix of the sample. Therefore we have reported both analyses of IR69-SD. The system monitoring compounds met recovery criteria for the sample SB03-04-05. All of the internal standards met response and retention time criteria in the analyses of the samples.

In the initial analysis of sample IR69-SD03, the on-column amount, Methyl Acetate, exceeded the instrument's analytical range as defined by the highest concentration level of the Initial Calibration. The sample was reanalyzed using same amount of raw sample and the on-column amount for Methyl Acetate was within the range. The sample was very inhomogeneous and therefore, we have reported results as is. We have reported both analyses of the sample IR69-SD03.

All Bromofluorobenzene (BFB) abundance criteria were met for tunes associated to this SDG. Overall QC criteria were met for all initial and continuing calibration standards associated to this SDG. Manual integrations were performed on ICAL file 0C25010-CAL1R59. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG. The associated method blank met all quality control criteria. The associated Laboratory Control Samples, VEILCS, met all accuracy criteria. Sample IR69-SD02 was requested for matrix spike/matrix spike duplicate (MS/MSD) for the volatile fraction with this SDG.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

L. Tomasto for Preeti Khare

Preeti Khare
Analyst II
April 7th, 2010

Data Completeness

The data package was received complete and intact. Resubmissions were not required. (SW846 Method 8270C) *All field sample and QC blank IDs were missing the first four (IR69) and or the last four (-10A) characters. The characters were added to the Form 1s in the DV reports by the data validator*

Laboratory: CompuChem

Holding Times

Sampling Date: 3/15-16/10
Received Date: 3/19/10
Extraction Date: 3/24/10
Analysis Dates: 3/29-4/01/10
Cooler Temp: 5.9°C

All prep and analysis holding time requirements were met.

Calibrations

Mass assignments were verified by the injection of DFTPP.

The continuing calibrations required qualifications due to high %D values; see attached Form VIIs.

Internal Standards

All criteria met.

Blank Summary
Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying criteria.
- Qualification/Action codes where applied as stated in table below:

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Field	Detects	Not detected	No qualifications
	< CRQL*	< CRQL*	Report CRQL value with a U
		≥ CRQL*	Use professional judgment
	≥ CRQL*	< CRQL*	Report CRQL value with a U
		≥ CRQL* and < blank concentration	Report the concentration for the sample with a U, or qualify the data as unusable R
		≥ CRQL* and ≥ blank concentration	Use professional judgment
	≥ CRQL*	< CRQL*	Report CRQL value with a U
		≥ CRQL*	Use professional judgment
	Gross contamination	Detects	Qualify results as unusable R

*5x the CRQL for bis(2-ethylhexyl)phthalate

Method blank contamination was exhibited- qualifications were required. The associated field QC for this data package was: IR69-EB01-031510-SD and IR69-EB01-031610-SB-equipment blanks; IR69-FB01-031910 (no positive results) - field blank.

Blank Contamination and Qualification Summaries

Blank ID	Compound	Conc	Reporting Limit	Action Level	Qualifier
VBLKPB-SIM	naphthalene	0.92J ug/Kg	8.3 ug/Kg	all soil samples < RL	U at RL
IR69-EB01-031510-SD	bis(2-ethylhexyl)phthalate	2.0J ug/L	5.0 ug/L	all soil samples < RL	U at RL
IR69-EB01-031510-SD-SIM	naphthalene	0.051J	0.20	all soil samples < RL	U at RL
IR69-EB01-031610-SB-SIM	naphthalene	0.084J	0.20	all soil samples < RL	U at RL
	2-methylnaphthalene	0.039J	0.20	all soil samples < RL	U at RL
	phenanthrene	0.072J	0.20	all soil samples < RL	U at RL
	anthracene	0.021J	0.20	all soil samples < RL	U at RL
	fluoranthene	0.022J	0.20	all soil samples < RL	U at RL
	pyrene	0.033J	0.20	all soil samples < RL	U at RL

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Qual Code
IR69-SD02-10A, IR69-SD03-10A, IR69-SB03-04-05-10A	naphthalene	U at RL	MBL
IR69-SB03-04-05-10A	2-methylnaphthalene	U at RL	EBL
IR69-SB03-04-05-10A	phenanthrene	U at RL	EBL
IR69-SB03-04-05-10A	pyrene	U at RL	EBL

Surrogates

All criteria were met.

Laboratory Control Sample

No qualifications were required.

Matrix Spike/Spike Duplicate Samples

An MS/MSD was submitted for sample IR69-SD02-10A; the following compounds exhibited non-compliant recoveries, qualifications were applied to the associated sample as stated in the table below.

MS/MSD Associated Sample ID	Non-compliant Spiked Compound	MS % Rec	MSD % Rec	QC Limit	Qualifier	Q-Code
IR69-SD02-10A	4-chloroaniline	0	0	26-129	J/R	MSL
	hexachlorocyclopentadiene	0	13	20-134	J/R	
	3-nitroaniline	26	22	43-100	J/UJ	
	4-nitroaniline	27	34	42-100	J/UJ	
	3,3-dichlorobenzidine	0	0	21-100	J/R	

Field Duplicate Sample

A field duplicate was not submitted for this data package.

Specific Comments:

All sample results were reported within the calibration range of the instruments.

Detection limits were acceptable. Raw data and calculations were verified.

We have limited the supporting documentation, found with these worksheets, to those forms that indicate qualifications were required.

Validator Signature: _____ **Date:** 7/28/10

COMPUCHEM a Division of Liberty Analytical Corp
GC/MS SEMIVOLATILE RUN LOG
COMPUCHEM LOGBOOK 4 V (4) 21 (5972hp60)

DATE 3/29/10 INITIAL TIME OF TUNE 0054 SHIFT/S (A)____ (B)____ (C) ✓
TIME TUNE EXPIRES 1254
METHOD: 625 8270C 8270D OLC03.2 OLM04.3 SOM01.2 (Circle One) or Other: PAH/SIM SIM: (Y)/N)
PREVENTIVE MAINTENANCE none

	SEQUENCE#		FILENAME		DATE	TIME	FOLDER ID	SDG#	AMOUNT INJECTED	CHEMIST	COMMENTS
1	OC29001		~~OC29001~~ mw 3/29 N/A	/	3/29/10	0054	FC43	—	N/A	9000	SCD=LCD
2			OC29001-CCV1	/	/ /	0100	SSTD8.00BF	—	2µL		
3			1003136-02JC60	/	/ /	0151	IR69-GW04DW	1003136			
4			03J	/	/ /	0242	-SW01				
5			04	/	/ /	0333	-SW01D				
6			0031802-BLK1C60	/	/ /	0424	SBLKOC	1003103			
7			BS2C60	/	/ /	0515	SODLCS				
8			BSD2C60	/	/ /	0606	SODLCSD				
9			B0324H4-BLK1C60	/	/ /	0705	SBLKPB	VARIOUS			
10			BS2C60	/	/ /	0756	SPBLCS				
11			BSD2C60	/	/ /	0847	SPBLCSD				
12			1003174-01C60	/	/ /	0938	IR69-SD02	1003174			
13			03C60	/	/ /	1029	IR69-SD03				
14			04C60	/	/ /	1120	SB03-04-05				
15					/ /						
16					/ /						
17					/ /						
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19					/ /						
20					/ /						
21					/ /						
22					/ /						
23					/ /						
24					/ /						

DFTPP Lot #/Exp. Date: N/A
Calibration STD Lot#/Exp. Date: ~~OC25065~~ 26 FULL SIM mw 3/29 6/25/10
Internal STD Lot#/Exp. Date: 040 62510 4/21/10
Methylene Chloride Lot#/Exp. Date: H53500 2/18/13
Column Type: RTX-5MS 0.32mm

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

REVIEWED BY: DAP DATE 3/29/10

5/19/09:

347

073

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Instrument ID: 5972HP60 Calibration Date: 03/29/10 Time: 0100

Lab File ID: 0C29001-CCV1C6 Init. Calib. Date(s): 03/22/10 03/22/10

Init. Calib. Times: 1314 1731

GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF3.0000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Naphthalene	0.8480000	0.9182876	0.01	8.29	50.00	AVRG
2-Methylnaphthalene	0.9140000	0.9979847	0.01	9.19	50.00	AVRG
Acenaphthylene	1.6520000	1.7987638	0.01	8.88	50.00	AVRG
Acenaphthene	0.9460000	1.0121602	0.01	6.99	20.00	AVRG
Fluorene	0.6610000	0.7277527	0.01	10.10	50.00	AVRG
Phenanthrene	0.9510000	0.9822144	0.01	3.28	50.00	AVRG
Anthracene	0.8630000	0.9034669	0.01	4.69	50.00	AVRG
Fluoranthene	0.9950000	1.1579052	0.01	16.37	20.00	AVRG
Pyrene	1.0590000	1.2355217	0.01	16.67	50.00	AVRG
Benzo(a)anthracene	0.8790000	0.9395865	0.01	6.89	50.00	AVRG
Chrysene	0.9260000	0.9884306	0.01	6.74	50.00	AVRG
Benzo(b)fluoranthene	0.9040000	0.9816787	0.01	8.59	50.00	AVRG
Benzo(k)fluoranthene	1.0260000	1.2235406	0.01	19.25	50.00	AVRG
Benzo(a)pyrene	0.8800000	0.9246416	0.01	5.07	20.00	AVRG
Indeno(1,2,3-cd)pyrene	0.7900000	0.6150422	0.01	-22.15	50.00	AVRG
Dibenzo(a,h)anthracene	0.8040000	0.6145525	0.01	-23.56	50.00	AVRG
Benzo(g,h,i)perylene	0.9010000	0.7593465	0.01	-15.72	50.00	AVRG

FORM VII SV

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO

SBLKPB

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Lab File ID: 0032414-BLK1C60 Lab Sample ID: 0032414-BLK1

Instrument ID: 5972HP60 Date Extracted: 03/24/10

Matrix: (soil/water) SOIL Date Analyzed: 03/29/10

Level:(low/med) LOW Time Analyzed: 0705

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	SPCLCS	0032414-BS2	0032414-BS2C	03/29/10
02	SPCLCSD	0032414-BSD2	0032414-BSD2	03/29/10
03	IR69-SD02	1003174-01	1003174-01C6	03/29/10
04	IR69-SD03	1003174-03	1003174-03C6	03/29/10
05	SB03-04-05	1003174-04	1003174-04C6	03/29/10
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COMMENTS: naphthalene 0.92J µg/Kg (8.3)

FORM IV SV

FORM 3
SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix Spike - Sample No.: IR69-SD02 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Benzaldehyde	5556	397.4	4005	65	20-100
Phenol	5556	0	4357	78	38-112
Bis(2-chloroethyl)ether	5556	0	2878	52	30-112
2-Chlorophenol	5556	0	4165	75	30-100
2-Methylphenol	5556	0	5156	93	42-110
2,2'-oxybis(1-Chloropro	5556	0	3672	66	24-107
Acetophenone	5556	0	4091	74	32-105
4-Methylphenol	5556	0	5266	95	38-114
N-Nitroso-di-N-prop.(1)	5556	0	4315	78	23-130
Hexachloroethane	5556	0	2577	46	20-105
Nitrobenzene	5556	0	3560	64	20-135
Isophorone	5556	0	4367	79	39-114
2-Nitrophenol	5556	0	4202	76	33-119
2,4-Dimethylphenol	5556	0	5898	106	43-117
Bis(2-chloroethoxy)meth	5556	0	4447	80	39-107
2,4-Dichlorophenol	5556	0	4900	88	42-119
Naphthalene	5556	0	3693	66	38-118
4-Chloroaniline	5556	0	0	0*	26-129
Hexachlorobutadiene	5556	0	4347	78	31-118
Caprolactam	5556	0	9240	166*	45-122
4-Chloro-3-methylphenol	5556	0	5603	101	46-120
2-Methylnaphthalene	5556	0	4020	72	39-111
Hexachlorocyclopentadie	5556	0	0	0*	20-134
2,4,6-Trichlorophenol	5556	0	5187	93	46-127
2,4,5-Trichlorophenol	5556	0	5341	96	52-122
1,1'-Biphenyl	5556	0	3856	69	42-116
2-Chloronaphthalene	5556	0	3951	71	11-112
2-Nitroaniline	5556	0	5099	92	50-109

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS:

FORM 3
SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix Spike - Sample No.: IR69-SD02 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Dimethylphthalate	5556	0	4520	81	50-120
2,6-Dinitrotoluene	5556	0	4770	86	47-119
Acenaphthylene	5556	0	4241	76	50-125
3-Nitroaniline	5556	0	1444	26*	43-100
Acenaphthene	5556	0	4260	77	50-126
2,4-Dinitrophenol	5556	0	4874	88	20-121
4-Nitrophenol	5556	0	4605	83	26-145
2,4-Dinitrotoluene	5556	0	4636	83	50-125
Dibenzofuran	5556	0	4507	81	47-116
Diethylphthalate	5556	0	4835	87	51-123
4-Chlorophenyl-phenylet	5556	0	4422	80	52-123
Fluorene	5556	0	4621	83	52-128
4-Nitroaniline	5556	0	1501	27*	42-100
4,6-Dinitro-2-methylphe	5556	0	4791	86	32-127
N-Nitrosodiphenylamine	5556	0	6251	113	46-125
4-Bromophenyl-phenyleth	5556	0	5493	99	53-122
Hexachlorobenzene	5556	0	5010	90	49-126
Atrazine	5556	0	3368	61	22-100
Pentachlorophenol	5556	0	5716	103	35-132
Phenanthrene	5556	0	4849	87	51-129
Anthracene	5556	0	4859	87	53-136
Carbazole	5556	0	4913	88	45-135
Di-n-butylphthalate	5556	0	4813	87	49-121
Fluoranthene	5556	0	4890	88	56-134
Pyrene	5556	0	5245	94	48-136
Butylbenzylphthalate	5556	0	5463	98	42-137
3,3'-Dichlorobenzidine	5556	0	0	0*	21-100
bis(2-ethylhexyl)Phthal	5556	0	5011	90	37-133

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS:

FORM 3
SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix Spike - Sample No.: IR69-SD02 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzaldehyde	5556	3971	64	1	30	20-100
Phenol	5556	4431	80	2	30	38-112
Bis(2-chloroethyl)ether	5556	3456	62	18	30	30-112
2-Chlorophenol	5556	4186	75	0	30	30-100
2-Methylphenol	5556	5258	95	2	30	42-110
2,2'-oxybis(1-Chloropro	5556	3693	66	0	30	24-107
Acetophenone	5556	4106	74	0	30	32-105
4-Methylphenol	5556	5160	93	2	30	38-114
N-Nitroso-di-N-prop.(1)	5556	4504	81	4	30	23-130
Hexachloroethane	5556	2657	48	3	30	20-105
Nitrobenzene	5556	4031	73	12	30	20-135
Isophorone	5556	4368	79	0	30	39-114
2-Nitrophenol	5556	4466	80	6	30	33-119
2,4-Dimethylphenol	5556	6230	112	5	30	43-117
Bis(2-chloroethoxy)meth	5556	4652	84	4	30	39-107
2,4-Dichlorophenol	5556	5258	95	7	30	42-119
Naphthalene	5556	3810	69	3	30	38-118
4-Chloroaniline	5556	0	0*		30	26-129
Hexachlorobutadiene	5556	4358	78	0	30	31-118
Caprolactam	5556	8200	148*	12	30	45-122
4-Chloro-3-methylphenol	5556	5818	105	4	30	46-120
2-Methylnaphthalene	5556	4129	74	3	30	39-111
Hexachlorocyclopentadie	5556	708.3	13*		30	20-134
2,4,6-Trichlorophenol	5556	5302	95	2	30	46-127
2,4,5-Trichlorophenol	5556	4929	89	8	30	52-122
1,1'-Biphenyl	5556	3931	71	2	30	42-116
2-Chloronaphthalene	5556	4028	72	2	30	11-112
2-Nitroaniline	5556	5043	91	1	30	50-109

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS:

FORM 3
SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix Spike - Sample No.: IR69-SD02 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Dimethylphthalate	5556	4211	76	7	30	50-120
2,6-Dinitrotoluene	5556	4658	84	2	30	47-119
Acenaphthylene	5556	4355	78	3	30	50-125
3-Nitroaniline	5556	1238	22*	15	30	43-100
Acenaphthene	5556	4170	75	2	30	50-126
2,4-Dinitrophenol	5556	5080	91	4	30	20-121
4-Nitrophenol	5556	4664	84	1	30	26-145
2,4-Dinitrotoluene	5556	4681	84	1	30	50-125
Dibenzofuran	5556	4335	78	4	30	47-116
Diethylphthalate	5556	4440	80	8	30	51-123
4-Chlorophenyl-phenylet	5556	4477	81	1	30	52-123
Fluorene	5556	4425	80	4	30	52-128
4-Nitroaniline	5556	1863	34*	22	30	42-100
4,6-Dinitro-2-methylphe	5556	5505	99	14	30	32-127
N-Nitrosodiphenylamine	5556	5927	107	5	30	46-125
4-Bromophenyl-phenyleth	5556	5728	103	4	30	53-122
Hexachlorobenzene	5556	5058	91	1	30	49-126
Atrazine	5556	3368	61	0	30	22-100
Pentachlorophenol	5556	5595	101	2	30	35-132
Phenanthrene	5556	4879	88	1	30	51-129
Anthracene	5556	4726	85	3	30	53-136
Carbazole	5556	4835	87	2	30	45-135
Di-n-butylphthalate	5556	4888	88	2	30	49-121
Fluoranthene	5556	4940	89	1	30	56-134
Pyrene	5556	4989	90	5	30	48-136
Butylbenzylphthalate	5556	5121	92	6	30	42-137
3,3'-Dichlorobenzidine	5556	0	0*		30	21-100
bis(2-ethylhexyl)Phthal	5556	5340	96	6	30	37-133

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS:

CompuChem

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SDG NARRATIVE
SDG #1003174
PROTOCOL: SW-846
SAMPLE IDENTIFICATIONS: IR69-SD02, IR69-SD03, and SB03-04-05

The 3 solid samples listed above were received at 0.5°C, 0.7°C, and 0.9°C with proper documentation, in sealed shipping container, on March 19th, 2010. The samples were scheduled for the requested analysis of the semivolatile fraction. SW-846, 3rd Edition, Update 3, Separatory Funnel extraction (Method 3510C), and Method 8270C were used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. This portion of the SDG narrative deals with the semivolatile fraction only.

Semivolatiles
Extraction and analysis holding time requirements were met for the samples.

The percent moisture values of the samples were 20, 25, and 76.

There were no semivolatile target compound list (TCL) analytes identified above the Contract Required Quantitation Limit (CRQL) identified in the samples.

Manual integrations were performed on one sample files 1003174-01A70, 1003174-03A70, 1003174-04A70; ICAL files 0C16003-CAL1A70, 0C16003-CAL2A70, 0C16003-CAL3A70, 0C16003-CAL4A70, 0C16003-CAL5A70; CCAL files 0C31008-CCV1A70, 0D01002-CCV1A70; and QC files 0032414-BLK1A70, 0032414-BS1A70, 0032414-BSD1A70, 0032414-MS1A70 0032414-MSD1A70. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.

All decafluorotriphenylphosphine (DFTPP) abundance criteria were met for tunes associated to this SDG. Tailing factor criteria were met for pentachlorophenol and benzidine. The breakdown criterion was met for DDT. These three compounds have been added to the DFTPP solution and analyzed together.

Overall QC criteria were met for all initial and continuing calibration standards associated to this SDG.

The surrogates met recovery criteria in the analyses of the samples.

All of the internal standards met response and retention time criteria in the analyses of the samples.

The associated method blank met all quality control criteria.

The associated Laboratory Control Samples (SPBLCS/SPBLCSD) failed both %Recovery for Caprolactam; %RPD was met for all compounds. There were no detects for the compound in the associated samples.

Sample IR69-SD02 was requested for matrix spike/matrix spike duplicate (MS/MSD) for the semi-volatile fraction with this SDG.

An uncertainty of these test results may be estimated from the recovery of the surrogates added to the sample prior to sample preparation or from the recovery of spiked compound(s) in the associated laboratory control sample. Further information is available upon request.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Preeti Khare
Data Reviewer I
April 19, 2010

CompuChem

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501 Madison Avenue
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Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1003174
PROTOCOL: SW-846
SAMPLE IDENTIFICATIONS: IR69-SD02, IR69-SD03, and SB03-04-05

The 3 solid samples listed above were received at 0.5°C, 0.7°C, and 0.9°C with proper documentation, in sealed shipping container, on March 19th, 2010. The samples were scheduled for the requested analysis of the semivolatile fraction. SW-846, 3rd Edition, Update 3, Separatory Funnel extraction (Method 3510C), and Method 8270C-SIM was used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. This portion of the SDG narrative deals with the semivolatile fraction (SIM) only.

Semivolatiles
Extraction and analysis holding time requirements were met for the samples.

The percent moisture values of the samples were 20, 25, and 76.

There were no semivolatile target compound list (TCL) analytes identified above the Quantitation Limit (QL) for the SIM analysis in the samples.

Manual integrations were performed on sample files 1003174-01C60, 1003174-03C60, 1003174-04C60 and QC file 0032414-BLK1C60. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.

Mass assignments were verified by the injections of perfluorotributylamine for the SIM analysis.

Overall QC criteria were met for all initial and continuing standards associated to this SDG.

All of the internal standards met response and retention time criteria in the analyses of the samples.

The associated method blank met all quality control criteria.

The associated Laboratory Control Samples (SPCLCS/SPCLCSD) bias high %Recovery for Benzo(b)fluoranthene and Benzo(k)fluoranthene.

An uncertainty of these test results may be estimated from the recovery of the surrogates added to the samples prior to sample preparation or from the recovery of spiked compound(s) in the associated laboratory control sample. Further information is available upon request.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Preeti Khare
Data Reviewer I
April 19th, 2010

Holding Times

Sampling Date: 3/15, 3/16
Received Date: 3/19
Extraction Date: 3/24
Analysis Dates: 3/31, 4/2

All extraction and analysis holding times were met for the samples in this SDG. No qualifications were required. Sample receipt data is in order. Cooler temperature was within acceptable range.

Calibrations

Initial calibrations were performed according to the method with a five-point curve for the single component pesticides, toxaphene, chlordane and the PCB target compounds 1016 & 1660. Single points were included for the other Aroclors. Calibration factors were calculated. %RSDs were within QC limits. Continuing calibration standards were analyzed per the SW-846 methods requested. All PEM breakdown criteria were not met. Some continuing calibration criteria were outside QC limits for target compounds in associated standards in both the initial run of the samples and the RE run. The initial run of the samples was excluded in favor of the RE run so all qualifications were based on the RE run. Information from the initial run is included in the project file for reference as needed. Column resolution was acceptable. The correct analytical sequence was run. All required instrument blanks were analyzed. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Any compound detected in the sample, and the associated blank, must be qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than five (5) times the blank concentration.
- Sample weight, volume or dilution factor must be taken into consideration when applying the 5X criteria.
- Apply the same data validation guidelines to any associated rinse and field blanks and all associated samples.
- Qualification Action codes:
-

No Action -	The sample result is greater than the RL and greater than five times (5X) the blank value.
U at RL-	The sample result is less than the RL when the blank contamination level is less than the RL.

No contamination that resulted in qualification of the data was noted in the associated method or instrument blanks or the submitted field QC blanks.

SURROGATE RECOVERIES

Some surrogates were outside of the QC recovery criteria but no qualifications were required.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

The MS MSD exhibited several non-compliant recoveries. These recoveries were variable, ranging from slightly

high to significantly negative. It is the professional opinion of the validator that there is significant matrix interference present in the extract. For this reason the reported results in sample IR69-SD02-10A RE were flagged as based on their recoveries but with an MI qualifier code rather than the normal MSL or MSH qualifier code. Compounds that showed variable recoveries were flagged. 4,4'-DDD – J, endrin aldehyde – NJ, endrin ketone, alpha-chlordane – J/UJ, methoxychlor-J/R, and endosulfan sulfate-J.

LABORATORY CONTROL SAMPLES

The submitted LCS samples exhibited acceptable recoveries with a few minor exceptions. No qualifications were required.

FIELD DUPLICATE SAMPLE SUMMARY

Please note that results aren't assessed for field duplicate reproducibility unless both results are above the compound reporting limit.

Sample ID: none **Duplicate ID:**

Compound	Sample Conc.	Duplicate Conc.	RPD
4,4'-DDE			#DIV/0!
4,4'-DDT			#DIV/0!

Comments: No qualifications were required

SAMPLE RESULT VERIFICATION

Calculations were verified. All P flagged results were qualified as estimated J (column quantitation %Ds >40.)

The calibration standards associated with the original analyses exhibited extreme response decreases as the sequence progressed. The samples were taken through a GPC clean-up procedure in an attempt to minimize the matrix effects. The calibrations surrounding the RE analyses were improved although qualifications were required. It is the professional judgment of the validator that the results reported from the RE analyses provide a more accurate assessment of the identity and concentration of compounds present. Therefore, all original analyses results are excluded in favor of the results reported from the RE analyses with a qualifier code of RE. Please note that the RE of sample IR69-SD02-10A was analyzed at a 1:5 dilution to accurately quantitate the target compound endosulfan sulfate. The RLs were adjusted appropriately. Based on the level of matrix interferences noted in the analysis of these samples caution should be used in the application of the results.

One compound, endrin aldehyde, was reported in sample IR69-SD02-10A RE at a concentration that was above the calibration range. According to the laboratory this is likely due to matrix interference. It is the professional opinion of the validator that the result be considered suspect; therefore the result is flagged presumptively present at an estimated concentration, NJ, with a qualifier code of MI.

Reviewer JACleveland **Date:** 7/28/10

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SDG NARRATIVE
SDG # 1003174
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS: IR69-SD02, IR69-SD03, SB03-04-05

The three water samples listed above were received intact, refrigerated at 5.9, 0.7, 0.5, and 0.9°C, with proper documentation, in sealed shipping containers, on March 19, 2010. The samples were scheduled for the requested analysis of the Pesticide/PCB fraction. SW-846, 3rd Edition, Update 4, Method 8081B and 8082A were used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section and all pertinent Laboratory notices for SDG # 1003174 are included in the sample data sections.

Pesticide/PCB

Extraction and analysis holding time requirements were met for the samples. The samples in this SDG were furthered processed through GPC clean up. Due to continuous continuing calibration standard failures, the SDG was analyzed twice. Both analysis are reported, with the second analysis reported with the "RE" suffix.

Target analytes confirmed above the reporting limits in samples IR69-SD02, IR69-SD02RE, and IR69-SD03RE. Sample IR69-SD02RE was analyzed and reported at a dilution due to Endosulfan Sulfate exceeding the calibration range. In the dilution analysis, Endrin Aldehyde exceeds the calibration range, which is attributed to matrix interference.

All QC criteria were met for all initial and continuing calibration standards associated to this SDG.

All surrogate recoveries were with the method specified limits, with exceptions in samples IR69-SD02MS, IR69-SD02PCBMS, IR69-SD02MSD, IR69-SD02PCBMSD, IR69-SD03, SB03-04-05, PBLKDP, PDPLCS, PDPLCSD, PEPLCS, PEPLCSD, and IR69-SD03RE..

The method blank associated with the samples met all quality control criteria.

Duplicate matrix spikes were performed with sample IR69-SD02, and did not meet all recovery and precision criteria. The Laboratory Control Sample (LCS) prepared and analyzed with the samples and did not meet recovery and precision criteria.

An uncertainty of these test results may be estimated from the recovery of the surrogates added to the sample prior to sample preparation or from the recovery of spiked compound(s) in the associated laboratory control sample. Further information is available upon request.

I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on CD has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Teresa Amentt Jennings

Teresa Amentt Jennings
GC/HPLC Data Reviewer
April 16, 2010

7F

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

GC Column: CLPEST2 ID: 0.32 (mm) Init. Calib. Date(s): 04/01/10 04/02/10

EPA Sample No.(PIBLK): PIBLKAH Date Analyzed :04/02/10

Lab Sample ID (PIBLK): PIBLKAH Time Analyzed :1722

EPA Sample No.(PEM): PEMAH Date Analyzed :04/02/10

Lab Sample ID (PEM): PEMAH Time Analyzed :1849

PEM COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	AREA
4,4'-DDD	15.73	15.59	15.73	1336
4,4'-DDE	14.48	14.35	14.49	448
4,4'-DDT	16.36	16.25	16.39	9178
Endrin	15.40	15.32	15.46	9130
Endrin Aldehyde				
Endrin Ketone	18.32	18.21	18.36	304

4,4'-DDT % breakdown (1): 16.3 Endrin % breakdown (1): 3.22

QC LIMITS:

+ DDD & DDE NJ

+/- DDT J/R

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

all assoc

FORM VII PEST-1

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Instrument ID: TRACEGC84 Calibration Date: 04/02/10 Time: 1751

Lab File ID: 053AAR16603AH Init. Calib. Date(s): 04/01/10 04/01/10

Init. Calib. Times: 2135 2330

GC Column: CLPEST ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF0.0100 or AMOUNT	CCAL RRF0.0100	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aroclor-1016	9126.7500	8322.5000	8322.5000	0.01	-8.81	20.00	AVRG	
(2)	16266.750	16697.500	16697.500	0.01	2.65	20.00	AVRG	
(3)	22321.500	23365.000	23365.000	0.01	4.67	20.00	AVRG	
(4)	10187.625	9872.5000	9872.5000	0.01	-3.09	20.00	AVRG	
(5)	11206.375	9500.0000	9500.0000	0.01	-15.23	20.00	AVRG	
Aroclor-1260	22914.375	21835.000	21835.000	0.01	-4.71	20.00	AVRG	
(2)	42526.125	50922.500	50922.500	0.01	19.74	20.00	AVRG	
(3)	23808.250	21990.000	21990.000	0.01	-7.64	20.00	AVRG	
(4)	50580.750	46390.000	46390.000	0.01	-8.28	20.00	AVRG	
(5)	24776.625	19360.000	19360.000	0.01	-21.86	20.00	AVRG	<- NQ
Decachlorobiphenyl	0.0406840	0.0400000	314575.00	0.01	-1.71		LINR	
Tetrachloro-m-Xylene	502882.50	513700.00	513700.00	0.01	2.15	20.00	AVRG	

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Instrument ID: TRACEGC85 Calibration Date: 04/02/10 Time: 1751

Lab File ID: 053AAR16603AH Init. Calib. Date(s): 04/01/10 04/01/10

Init. Calib. Times: 2135 2330

GC Column: CLPEST2 ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aroclor-1016	7464.7500	7187.5000	0.01	-3.71	20.00	AVRG	
(2)	20677.875	20587.500	0.01	-0.44	20.00	AVRG	NQ
(3)	12853.375	10442.500	0.01	-18.76	20.00	AVRG	NQ
(4)	8790.8750	7187.5000	0.01	-18.24	20.00	AVRG	NQ
(5)	10129.750	7492.5000	0.01	-26.03	20.00	AVRG	<- NQ
Aroclor-1260	22080.625	17325.000	0.01	-21.54	20.00	AVRG	<- NQ
(2)	37234.250	36522.500	0.01	-1.91	20.00	AVRG	NQ
(3)	29058.750	26602.500	0.01	-8.45	20.00	AVRG	NQ
(4)	24897.500	30825.000	0.01	23.81	20.00	AVRG	<- NQ
(5)	56241.500	50145.000	0.01	-10.84	20.00	AVRG	NQ
Decachlorobiphenyl	374466.25	341793.75	0.01	-8.72	20.00	AVRG	
Tetrachloro-m-Xylene	439020.00	400390.00	0.01	-8.80	20.00	AVRG	

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Instrument ID: TRACEGC84 Calibration Date: 04/02/10 Time: 1820

Lab File ID: 054AINDC3AH Init. Calib. Date(s): 04/01/10 04/01/10

Init. Calib. Times: 1812 2008

GC Column: CLPEST ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF0.0100 or AMOUNT	CCAL RRF0.0100	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Aldrin	574470.00	594450.00	594450.00	0.01	3.48	20.00	AVRG	
alpha-BHC	700455.00	738850.00	738850.00	0.01	5.48	20.00	AVRG	
beta-BHC	295852.50	251850.00	251850.00	0.01	-14.87	20.00	AVRG	
delta-BHC	634725.00	594100.00	594100.00	0.01	-6.40	20.00	AVRG	
gamma-BHC (Lindane)	676227.50	689450.00	689450.00	0.01	1.96	20.00	AVRG	
4,4'-DDD	349607.50	417000.00	417000.00	0.01	19.28	20.00	AVRG	
4,4'-DDE	465088.75	429975.00	429975.00	0.01	-7.55	20.00	AVRG	
4,4'-DDT	400351.25	285400.00	285400.00	0.01	-28.71	20.00	AVRG	<- J/UJ
Dieldrin	460346.25	470225.00	470225.00	0.01	2.14	20.00	AVRG	
Endosulfan I	500250.00	629750.00	629750.00	0.01	25.89	20.00	AVRG	<- J+
Endosulfan II	405497.50	406225.00	406225.00	0.01	0.18	20.00	AVRG	
Endosulfan sulfate	347042.50	331500.00	331500.00	0.01	-4.48	20.00	AVRG	
Endrin	431858.75	422675.00	422675.00	0.01	-2.13	20.00	AVRG	
Endrin Aldehyde	301297.50	322250.00	322250.00	0.01	6.95	20.00	AVRG	
Heptachlor	636675.00	647800.00	647800.00	0.01	1.75	20.00	AVRG	
Heptachlor Epoxide	544140.00	530200.00	530200.00	0.01	-2.56	20.00	AVRG	
Methoxychlor	163562.00	10870.000	10870.000	0.01	-93.35	20.00	AVRG	<- J/UJ
Endrin Ketone	392343.75	395550.00	395550.00	0.01	0.82	20.00	AVRG	
gamma-Chlordane	553342.50	530500.00	530500.00	0.01	-4.13	20.00	AVRG	
alpha-Chlordane	476535.00	466350.00	466350.00	0.01	-2.14	20.00	AVRG	
Decachlorobiphenyl	0.0435076	0.0400000	331550.00	0.01	-8.77		LINR	
Tetrachloro-m-Xylene	502882.50	541900.00	541900.00	0.01	7.76	20.00	AVRG	

all assoc

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Instrument ID: TRACEGC85 Calibration Date: 04/02/10 Time: 1820

Lab File ID: 054AINDC3AH Init. Calib. Date(s): 04/01/10 04/01/10

Init. Calib. Times: 1812 2008

GC Column: CLPEST2 ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF0.0100 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE	
Aldrin	527887.50	521152.50	0.01	-1.28	20.00	AVRG	
beta-BHC	256570.00	225525.00	0.01	-12.10	20.00	AVRG	
alpha-BHC	595185.00	589035.00	0.01	-1.03	20.00	AVRG	
delta-BHC	543867.50	386837.50	0.01	-28.87	20.00	AVRG	<- JW
gamma-BHC (Lindane)	577750.00	562715.00	0.01	-2.60	20.00	AVRG	
4,4'-DDD	333588.75	341891.25	0.01	2.49	20.00	AVRG	
4,4'-DDE	461905.00	460615.00	0.01	-0.28	20.00	AVRG	
4,4'-DDT	400368.75	263990.00	0.01	-34.06	20.00	AVRG	<- JW
Dieldrin	456618.75	435337.50	0.01	-4.66	20.00	AVRG	
Endosulfan I	473795.00	484162.50	0.01	2.19	20.00	AVRG	
Endosulfan II	402916.25	420493.75	0.01	4.36	20.00	AVRG	
Endosulfan sulfate	359637.50	377635.00	0.01	5.00	20.00	AVRG	
Endrin	412278.75	385535.00	0.01	-6.49	20.00	AVRG	
ndrin Aldehyde	307781.25	292236.25	0.01	-5.05	20.00	AVRG	
ptachlor	561600.23	629095.00	0.01	12.02	20.00	AVRG	
Heptachlor Epoxide	508862.50	491605.00	0.01	-3.39	20.00	AVRG	
Methoxychlor	172663.00	124347.50	0.01	-27.98	20.00	AVRG	<- JW
Endrin Ketone	410382.50	401752.50	0.01	-2.10	20.00	AVRG	
gamma-Chlordane	511715.00	484520.00	0.01	-5.31	20.00	AVRG	
alpha-Chlordane	446262.50	417945.00	0.01	-6.34	20.00	AVRG	
Decachlorobiphenyl	374466.25	367863.75	0.01	-1.76	20.00	AVRG	
Tetrachloro-m-Xylene	439020.00	421610.00	0.01	-3.96	20.00	AVRG	

FORM VII PEST

Initial Calibration Date: 4 1 2010

RRF and %RSD Calculations:

Compound Name: 4,4'-DDT in Level 2 on CLPEST
Lab Value: 426700.0000

Area of Compound	8534
Conc. of Compound	0.02
Calculated RRF	426700.0000

Compound Name: 4,4'-DDT
Lab Value: 12.7

RRF of STD 1	472400.0000
RRF of STD 2	426700.0000
RRF of STD 3	393125.0000
RRF of STD 4	366737.5000
RRF of STD 5	342793.7500
RRF of STD 6	
Calculated % RSD	12.72

Continuing Calibration File ID: 054AINDC3AH

RRF and %D Calculations:

Compound Name: methoxychlor
Lab Value: 10870.00000

Area of compound	2174
Conc. Of compound	0.2
Calculated CF	10870.000

Compound Name: methoxychlor
Lab Value: -93.4

Avg. CF from ICAL	163562.00000
CF of CCV	10870.00000
Calculated % D	93.4

2F
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

GC Column(1): CLPEST ID: 0.32 (mm) GC Column(2): CLPEST2 ID: 0.32 (mm)

	EPA SAMPLE NO.	S1 1 %REC #	S1 2 %REC #	TCX 1 %REC #	TCX 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT	
01	PBLKPD	73	73	71	70			0	
02	PPDLCS	70	71	76	77			0	
03	PPELCS	73	74	84	91			0	
04	PPDLCSD	73	72	85	85			0	
05	PPELCSD	75	76	78	81			0	NQ
06	IR69-SD02MS	79	60	70 *	63*			2	
07	IR69-SD02PCB	84	69	77	64*			1	
08	IR69-SD02MSD	110	90	77	67*			1	
09	IR69-SD02PCB	120	97	99	67*			1	
10	IR69-SD02	98	126	83	72			0	
11	IR69-SD03	65	65	91	60*			1	NQ
12	SB03-04-05	67	67	82	65*			1	
13	PBLKDP	150 *	94	81	83			1	
14	PDPLCS	240 *	89	96	92			1	
15	PDPLCSD	140 *	114	110	126*			2	
16	PEPLCS	160 *	98	98	107			1	
17	PEPLCSD	140 *	109	92	108			1	
18	IR69-SD02REM	160 D	144D	120	104			0	
19	IR69-SD02REM	230 D	129	100	87			0	
20	IR69-SD02REP	190 D	153D	150 D	118			0	
21	IR69-SD02REP	110	95	79	74			0	
22	IR69-SD02RE	170 D	164D	95	64D			0	
23	IR69-SD03RE	160 *	90	87	72			1	NQ
24	SB03-04-05RE	120	82	85	71			0	
25									
26									
27									
28									
29									
30									

ADVISORY
QC LIMITS

S1 = Decachlorobiphenyl (55-130)
S2 (TCX) = Tetrachloro-m-Xylene (70-125)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

3F
SOIL PESTICIDE LAB CONTROL SAMPLE

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

LCS ID: PDPLCS Matrix Spike - EPA Sample No.: PDPLCS

COMPOUND	SPIKE ADDED (ug/Kg	SAMPLE CONCENTRATION (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC #	QC. LIMITS REC.
Aldrin	5.0		3.0	60	45-140
beta-BHC	5.0		4.6	92	60-125
alpha-BHC	5.0		5.3	106	60-125
delta-BHC	5.0		5.8	116	55-130
gamma-BHC (Lindane)	5.0		4.5	90	60-125
4,4'-DDD	13		15	115	30-135
4,4'-DDE	13		12	92	70-125
4,4'-DDT	13		13	100	45-140
Dieldrin	13		13	100	65-125
Endosulfan I	5.0		4.2	84	15-135
Endosulfan II	13		13	100	35-140
Endosulfan sulfate	13		12	92	60-135
Endrin	13		13	100	60-135
Endrin Aldehyde	13		4.9	38	35-145
Heptachlor	5.0		5.3	106	50-140
Heptachlor Epoxide	5.0		4.8	96	65-130
Methoxychlor	13		15	115	55-145
Endrin Ketone	13		14	108	65-135
gamma-Chlordane	5.0		5.0	100	65-125
alpha-Chlordane	5.0		4.4	88	65-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

3F
SOIL PESTICIDE LAB CONTROL SAMPLE

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

LCS ID: PDPLCS Matrix Spike - EPA Sample No.: PDPLCS

COMPOUND	SPIKE ADDED (ug/Kg	LCSD CONCENTRATION (ug/Kg	LCSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aldrin	5.0	4.6	92	42*	40	45-140
beta-BHC	5.0	5.5	110	18	40	60-125
alpha-BHC	5.0	6.2	124	16	40	60-125
delta-BHC	5.0	6.6	132*	13	40	55-130
gamma-BHC (Lindane)	5.0	5.7	114	24	40	60-125
4,4'-DDD	13	16	123	6	40	30-135
4,4'-DDE	13	15	115	22	40	70-125
4,4'-DDT	13	15	115	14	40	45-140
Dieldrin	13	16	123	21	40	65-125
Endosulfan I	5.0	5.5	110	27	40	15-135
Endosulfan II	13	16	123	21	40	35-140
Endosulfan sulfate	13	15	115	22	40	60-135
Endrin	13	15	115	14	40	60-135
Endrin Aldehyde	13	5.9	45	18	40	35-145
Heptachlor	5.0	6.9	138	26	40	50-140
Heptachlor Epoxide	5.0	6.7	134*	33	40	65-130
Methoxychlor	13	19	146*	24	40	55-145
Endrin Ketone	13	17	131	19	40	65-135
gamma-Chlordane	5.0	5.8	116	15	40	65-125
alpha-Chlordane	5.0	5.9	118	29	40	65-120

No Quals

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 1 out of 20 outside limits
Spike Recovery: 3 out of 40 outside limits

COMMENTS:

3F
SOIL PESTICIDE LAB CONTROL SAMPLE

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

LCS ID: PPDLCS Matrix Spike - EPA Sample No.: PPDLCS

COMPOUND	SPIKE ADDED (ug/Kg	SAMPLE CONCENTRATION (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC #	QC. LIMITS REC.
Aldrin	5.0		2.9	58	45-140
beta-BHC	5.0		3.4	68	60-125
alpha-BHC	5.0		4.0	80	60-125
delta-BHC	5.0		3.9	78	55-130
gamma-BHC (Lindane)	5.0		3.7	74	60-125
4,4'-DDD	13		8.9	68	30-135
4,4'-DDE	13		8.6	66*	70-125 JHE
4,4'-DDT	13		8.6	66	45-140 NQ
Dieldrin	13		11	85	65-125
Endosulfan I	5.0		3.6	72	15-135
Endosulfan II	13		10	77	35-140
Endosulfan sulfate	13		9.3	72	60-135
Endrin	13		10	77	60-135
Endrin Aldehyde	13		4.3	33*	35-145 NQ
Heptachlor	5.0		4.6	92	50-140
Heptachlor Epoxide	5.0		4.3	86	65-130
Methoxychlor	13		10	77	55-145
Endrin Ketone	13		10	77	65-135
gamma-Chlordane	5.0		3.9	78	65-125
alpha-Chlordane	5.0		4.4	88	65-120

See cal issues for flags

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

3F
SOIL PESTICIDE LAB CONTROL SAMPLE

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

LCS ID: PPDLCS Matrix Spike - EPA Sample No.: PPDLCS

COMPOUND	SPIKE ADDED (ug/Kg	LCSD CONCENTRATION (ug/Kg	LCSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aldrin	5.0	3.1	62	7	40	45-140
beta-BHC	5.0	3.5	70	3	40	60-125
alpha-BHC	5.0	4.2	84	5	40	60-125
delta-BHC	5.0	4.0	80	2	40	55-130
gamma-BHC (Lindane)	5.0	3.8	76	3	40	60-125
4,4'-DDD	13	9.0	69	1	40	30-135
4,4'-DDE	13	8.7	67*	1	40	70-125
4,4'-DDT	13	8.6	66	0	40	45-140
Dieldrin	13	11	85	0	40	65-125
Endosulfan I	5.0	3.7	74	3	40	15-135
Endosulfan II	13	10	77	0	40	35-140
Endosulfan sulfate	13	9.5	73	2	40	60-135
Endrin	13	10	77	0	40	60-135
Endrin Aldehyde	13	4.5	35	4	40	35-145
Heptachlor	5.0	4.8	96	4	40	50-140
Heptachlor Epoxide	5.0	4.4	88	2	40	65-130
Methoxychlor	13	10	77	0	40	55-145
Endrin Ketone	13	11	85	10	40	65-135
gamma-Chlordane	5.0	4.0	80	2	40	65-125
alpha-Chlordane	5.0	4.4	88	0	40	65-120

FLAG NQ

see cal issues for flags

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 20 outside limits
Spike Recovery: 3 out of 40 outside limits

COMMENTS:

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix Spike - EPA Sample No.: IR69-SD02RE

COMPOUND	SPIKE ADDED (ug/Kg	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.	
Aldrin	21	0.0	22	105	45-140	
beta-BHC	21	0.0	23	110	60-125	
alpha-BHC	21	0.0	24	114	60-125	
delta-BHC	21	0.0	27	128	55-130	
gamma-BHC (Lindane)	21	0.0	24	114	60-125	
4,4'-DDD	52	13	85	138*	30-135	J+
4,4'-DDE	52	14	80	127*	70-125	NQ
4,4'-DDT	52	0.0	64	123	45-140	NQ
Dieldrin	52	0.0	68	131*	65-125	
Endosulfan I	21	0.0	23	110	15-135	
Endosulfan II	52	0.0	58	112	35-140	
Endosulfan sulfate	52	170	87	-160*	60-135	
Endrin	52	0.0	68	131	60-135	
Endrin Aldehyde	52	560	31	-1017*	35-145	
Heptachlor	21	0.0	28	133	50-140	
Heptachlor Epoxide	21	0.0	26	124	65-130	
Methoxychlor	52	150	69	-156*	55-145	
Endrin Ketone	52	130	94	-69*	55-135	
gamma-Chlordane	21	4.5	29	117	65-125	
alpha-Chlordane	21	0.0	0.0	0*	65-120	

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: Significant MI noted in variability of MS results. See next page for specific flags

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix Spike - EPA Sample No.: IR69-SD02RE

COMPOUND	SPIKE ADDED (ug/Kg	MSD CONCENTRATION (ug/Kg	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aldrin	21	19	90	15	40	45-140
beta-BHC	21	19	90	19	40	60-125
alpha-BHC	21	18	86	28	40	60-125
delta-BHC	21	21	100	25	40	55-130
gamma-BHC (Lindane)	21	17	81	34	40	60-125
4,4'-DDD	52	95	158* J+	11	40	30-135
4,4'-DDE	52	54	77	39	40	70-125
4,4'-DDT	52	46	88	33	40	45-140
Dieldrin	52	50	96	30	40	65-125
Endosulfan I	21	19	90	19	40	15-135
Endosulfan II	52	76	146* NQ	27	40	35-140
Endosulfan sulfate	52	210	77	83* J	40	60-135
Endrin	52	56	108	19	40	60-135
Endrin Aldehyde	52	35	-1010* NJ	12	40	35-145
Heptachlor	21	22	105	24	40	50-140
Heptachlor Epoxide	21	29	138* NQ	11	40	65-130
Methoxychlor	52	55	-183*	22 JR	40	55-145
Endrin Ketone	52	240	212* J	87*	40	65-135
gamma-Chlordane	21	34	140* NQ	16	40	65-125
alpha-Chlordane	21	27	128* J		40	65-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 2 out of 20 outside limits
Spike Recovery: 16 out of 40 outside limits

Flag using M1 qual code to indicate matrix interferences

COMMENTS:

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix Spike - EPA Sample No.: IR69-SD02REP

COMPOUND	SPIKE ADDED (ug/Kg	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Aroclor-1016	690	0.0	830	120	60-130
Aroclor-1260	690	0.0	880	128	40-140

COMPOUND	SPIKE ADDED (ug/Kg	MSD CONCENTRATION (ug/Kg	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor-1016	690	590	86	34*	20	60-130
Aroclor-1260	690	540	78	48*	20	40-140

no Quals

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 2 out of 2 outside limits
Spike Recovery: 0 out of 4 outside limits

COMMENTS:

FORM III PEST-2

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix Spike - EPA Sample No.: IR69-SD02

COMPOUND	SPIKE ADDED (ug/Kg	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Aldrin	21	3.3	13	46	45-140
beta-BHC	21	2.8	13	48*	60-125
alpha-BHC	21	0.0	15	71	60-125
delta-BHC	21	2.0	15	62	55-130
gamma-BHC (Lindane)	21	0.0	13	62	60-125
4,4'-DDD	52	13	57	85	30-135
4,4'-DDE	52	12	46	65*	70-125
4,4'-DDT	52	4.7	27	43*	45-140
Dieldrin	52	15	41	50*	65-125
Endosulfan I	21	0.0	24	114	15-135
Endosulfan II	52	0.0	34	65	35-140
Endosulfan sulfate	52	120	49	-136*	60-135
Endrin	52	0.0	37	71	60-135
Endrin Aldehyde	52	13	21	15*	35-145
Heptachlor	21	2.1	18	76	50-140
Heptachlor Epoxide	21	0.0	15	71	65-130
Methoxychlor	52	0.0	32	62	55-145
Endrin Ketone	52	93	59	-65*	65-135
gamma-Chlordane	21	0.0	14	67	65-125
alpha-Chlordane	21	0.0	19	90	65-120

See RE results

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix Spike - EPA Sample No.: IR69-SD02

COMPOUND	SPIKE ADDED (ug/Kg	MSD CONCENTRATION (ug/Kg	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aldrin	21	14	51	7	40	45-140
beta-BHC	21	13	48*	0	40	60-125
alpha-BHC	21	16	76	6	40	60-125
delta-BHC	21	17	71	12	40	55-130
gamma-BHC (Lindane)	21	14	67	7	40	60-125
4,4'-DDD	52	50	71	13	40	30-135
4,4'-DDE	52	44	62*	4	40	70-125
4,4'-DDT	52	21	31*	25	40	45-140
Dieldrin	52	43	54*	5	40	65-125
Endosulfan I	21	14	67	53*	40	15-135
Endosulfan II	52	34	65	0	40	35-140
Endosulfan sulfate	52	230	212*	130*	40	60-135
Endrin	52	34	65	8	40	60-135
Endrin Aldehyde	52	19	12*	10	40	35-145
Heptachlor	21	17	71	6	40	50-140
Heptachlor Epoxide	21	16	76	6	40	65-130
Methoxychlor	52	19	36*	51*	40	55-145
Endrin Ketone	52	60	63*	2	40	65-135
gamma-Chlordane	21	14	67	0	40	65-125
alpha-Chlordane	21	16	76	17	40	65-120

See RE results

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 3 out of 20 outside limits
Spike Recovery: 15 out of 40 outside limits

COMMENTS:

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix Spike - EPA Sample No.: IR69-SD02PCB

COMPOUND	SPIKE ADDED (ug/Kg	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Aroclor-1016	690	0.0	600	87	60-130
Aroclor-1260	690	0.0	410	59	40-140

COMPOUND	SPIKE ADDED (ug/Kg	MSD CONCENTRATION (ug/Kg	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor-1016	690	790	114	27*	20	60-130
Aroclor-1260	690	400	58	2	20	40-140

NQ

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 1 out of 2 outside limits
Spike Recovery: 0 out of 4 outside limits

COMMENTS:

FORM III PEST-2

10A

PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-SD02

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Lab Sample ID: 1003174-01 Date(s) Analyzed: 03/31/10 03/31/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Aldrin	1	12.02	11.96	12.10	6.5	
	2	11.66	11.63	11.78	3.3	65.3
beta-BHC	1	10.39	10.31	10.46	6.6	
	2	10.22	10.09	10.23	2.8	80.8
delta-BHC	1	10.85	10.74	10.88	5.8	
	2	10.86	10.78	10.92	2.0	97.4
4,4'-DDD	1	15.52	15.44	15.58	13	
	2	15.47	15.33	15.47	88	148.5
4,4'-DDE	1	14.22	14.14	14.28	16	
	2	14.18	14.10	14.24	12	28.6
4,4'-DDT	1	16.13	16.04	16.18	4.7	
	2	16.08	15.99	16.13	5.1	8.2
Dieldrin	1	14.85	14.78	14.92	26	
	2	14.44	14.40	14.54	15	53.6
Endosulfan sulfate	1	17.65	17.62	17.76	120	
	2	16.92	16.81	16.95	480	120.0

FORM X PEST-1

not reported

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-SD02

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Lab Sample ID: 1003174-01 Date(s) Analyzed: 03/31/10 03/31/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Endrin Aldehyde	1	16.82	16.68	16.82	13	
	2	16.26	16.23	16.37	14	7.4
Heptachlor	1	11.29	11.25	11.39	2.1	
	2	10.97	10.89	11.03	3.5	50.0
Endrin Ketone	1	18.26	18.21	18.35	320	
	2	18.06	17.93	18.07	93	109.9
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

not reported

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-SD02RE

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Lab Sample ID: 1003174-01RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD	
4,4'-DDD	1	15.61	15.53	15.67	13		
	2	15.67	15.59	15.73	39	100.0	J
4,4'-DDE	1	14.29	14.22	14.37	94		
	2	14.43	14.35	14.49	14	148.1	J
Endosulfan sulfate	1	17.82	17.72	17.86	170		
	2	17.18	17.09	17.23	700	121.8	J
Endrin Aldehyde	1	16.87	16.78	16.92	5600		
	2	16.60	16.50	16.64	560	163.6	J
Methoxychlor	1	17.18	17.14	17.28	580		
	2	17.75	17.71	17.85	150	117.8	J
Endrin Ketone	1	18.45	18.31	18.45	130		
	2	18.28	18.21	18.36	290	76.2	J
gamma-Chlordane	1	13.74	13.74	13.88	4.5		
	2	13.76	13.63	13.77	19	123.4	J
	1						
	2						

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-SD03

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Lab Sample ID: 1003174-03 Date(s) Analyzed: 03/31/10 03/31/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
gamma-BHC (Lindane)	1	10.14	10.07	10.21	0.72	
	2	9.90	9.85	9.99	3.2	126.5
4,4'-DDE	1	14.17	14.14	14.28	1.5	
	2	14.19	14.10	14.24	0.49	101.5
4,4'-DDT	1	16.15	16.04	16.18	1.8	
	2	16.04	15.99	16.13	2.2	20.0
Dieldrin	1	14.86	14.78	14.92	0.97	
	2	14.44	14.40	14.54	0.44	75.2
alpha-Chlordane	1	14.05	13.95	14.09	2.0	
	2	13.74	13.69	13.83	0.64	103.0
	1					
	2					
	1					
	2					
	1					
	2					

page 1 of 1

FORM X PEST-1

not reported

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-SD03RE

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Lab Sample ID: 1003174-03RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
beta-BHC	1	10.50	10.39	10.54	0.48	
	2	10.38	10.33	10.47	3.5	151.8 J
gamma-BHC (Lindane)	1	10.20	10.16	10.30	2.0	
	2	10.14	10.09	10.23	4.6	78.8 J
4,4'-DDE	1	14.26	14.22	14.37	1.8	
	2	14.44	14.35	14.49	0.65	93.9 J
4,4'-DDT	1	16.19	16.13	16.27	4.5	
	2	16.26	16.25	16.39	4.7	4.3
Dieldrin	1	14.95	14.88	15.02	1.1	
	2	14.69	14.67	14.81	1.4	24.0
Endosulfan I	1	14.41	14.35	14.49	1.7	
	2	14.15	14.07	14.21	0.99	52.8 J
Endosulfan sulfate	1	17.81	17.72	17.86	3.1	
	2	17.20	17.09	17.23	2.9	6.7
Endrin	1	15.41	15.38	15.53	1.9	
	2	15.34	15.32	15.46	0.97	64.8 J

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

IR69-SD03RE

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Lab Sample ID: 1003174-03RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD	
Heptachlor	1	11.37	11.34	11.48	3.5		
	2	11.21	11.14	11.29	0.34	164.6	J
Endrin Ketone	1	18.45	18.31	18.45	1.3		
	2	18.27	18.21	18.36	54	190.6	J
gamma-Chlordane	1	13.87	13.74	13.88	1.1		
	2	13.76	13.63	13.77	5.2	130.2	J
alpha-Chlordane	1	14.07	14.04	14.18	3.7		
	2	14.05	13.96	14.10	0.98	116.2	J
	1						
	2						
	1						
	2						
	1						
	2						
	1						
	2						

FORM X PEST-1

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

SB03-04-05RE

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Lab Sample ID: 1003174-04RE1 Date(s) Analyzed: 04/02/10 04/02/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
4,4'-DDD	1	15.59	15.53	15.67	1.7	
	2	15.68	15.59	15.73	0.60	95.6 J
Endosulfan sulfate	1	17.84	17.72	17.86	72	
	2	17.19	17.09	17.23	0.85	195.3 J
Heptachlor	1	11.38	11.34	11.48	0.32	
	2	11.21	11.14	11.29	0.42	27.0
gamma-Chlordane	1	13.82	13.74	13.88	0.49	
	2	13.76	13.63	13.77	5.6	167.8 J
alpha-Chlordane	1	14.08	14.04	14.18	3.3	
	2	14.03	13.96	14.10	0.32	164.6 J
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

SAMPLE CALCULATION

Sample ID: IR69-SD02-10A
Standard ID: ICAL curve 4/1/10
Compound: endosulfan sulfate
Concnetration: 170P ug/Kg

	Water (ug/L)	Soil (ug/Kg)
Area of Compound		16861
Calibration Factor of Compound		347042
Dilution Factor		5
Weight/Volume of Sample		30
Final Volume extract		5000
% Moisture	NA	0.24
conversion factor	1	1
Concentration	#DIV/0!	168.69756

This SDG contains select metals analysis using SW-846 6010B/7470A/7471A.

HOLDING TIMES

Sampling Date: 3/15, 3/16
Received Date: 3/19 Cooler temps: OK
Prep. Dates: 4/6 ICP, 4/6 Hg
Analysis Dates: 4/7 ICP, 4/8 Hg
All holding time requirements were met.

CALIBRATIONS

All initial calibration criteria were met. Single point calibration was analyzed for ICP. Calibration verification criteria were met for all ICV and CCV standards. The RL standards were analyzed and met method (+/- 30%) or DV (50-150 for Sb, Pb & Tl) criteria for all analytes. Interference check standards were analyzed and met criteria in all standards. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if an analyte is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying the criteria.
- Apply the same data validation guidelines to any associated calibration, preparation, and field QC blanks and all associated samples.
- Qualification Action codes:
  - No Action - The sample result is greater than the CRDL and greater than ten times (10X) the blank value.
  - U - The sample result is greater than or equal to the MDL but less than or equal to the RL, result is reported as non-detect at the RL.
  - R or J. The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator.

Blank Contamination and Qualification Summaries

Blank ID	Analyte	Concentration	Action Level	Q Flag	Q Code
ICB	calcium	24.3B ug/L	RL	U	MBL
CCB	beryllium	0.9B ug/L	RL	U	MBL
IR69-FB01-031910	zinc	0.97B ug/L	RL	U	FBL

The concentration noted for the CCBs is the highest concentration in all the CCBs. However, when qualifying samples for CCB contamination, associated samples are those just prior to or just following a CCB. Therefore, not all analytes in all samples are flagged for noted CCB contamination. See worksheets for associations. Samples are qualified for field QC blank contamination based on QC tracking provided by CH2M HILL. Negative contamination in a prep blank or CCB, if less than the analyte CRDL, is qualified based on professional judgment.

Please note that based on the National Functional Guidelines, for contamination above the CRDL, results in the field samples that are greater than the RL up to 10X the blank contamination level should be qualified as estimated and considered biased high or they should be rejected. Associated samples and required qualifications are noted in the following table.

Sample ID	Analyte	Q Flag	Q Code
IR69-SD03-10A, IR69-SB03-04-05-10A	calcium	U at RL	MBL
IR69-SD03-10A, IR69-SB03-04-05-10A	beryllium	U at RL	MBL
IR69-SB03-04-05-10A	zinc	U at RL	FBL

MATRIX SPIKE/DUPLICATE SUMMARY

The MS MSD pair in this SDG exhibited three analytes with low recoveries and qualifications were required as estimated J/UJ. All LCS recoveries and RPDs were acceptable.

SERIAL DILUTIONS

The serial dilution results were OK with the exception of barium (15.7%). Positive and non-detect results for Ba in the field sample are qualified as estimated J UJ.

FIELD DUPLICATE SAMPLE SUMMARY

Note: Field duplicate results are assessed only if both results are above the CRDL.

Sample ID: none **Duplicate Sample ID:**

Analyte	Sample Conc.	Duplicate Conc.	RPD
aluminum			#DIV/0!
barium			#DIV/0!
calcium			#DIV/0!
chromium			#DIV/0!
copper			#DIV/0!
iron			#DIV/0!
lead			#DIV/0!
magnesium			#DIV/0!
manganese			#DIV/0!
mercury			#DIV/0!
nickel			#DIV/0!
vanadium			#DIV/0!
zinc			#DIV/0!

Comments: flag zinc as estimated J

SAMPLE CALCULATION

EPA SAMPLE ID: IR69-SD02-10A
ANALYTE: chromium
CONCENTRATION: 9.0 mg/Kg
%Solids 24.2
Prep Info - 1.00g to 100ml

Raw Data result: 21.68557 ug/L

21.68557 ug/L *0.10L/1.00g * 1/0.242 = 8.960979ug/g * 1000g/Kg * 1mg/1000ug = 8.96 mg/Kg

SAMPLE RESULT VERIFICATION

Specific Comments:

All sample results were reported within the calibration/linear range of the instruments. Detection limits were acceptable. Raw data was verified. Positive results reported at concentrations between the IDL and the RL were qualified as estimated J by the laboratory. All field sample and QC blank IDs were missing either the first 4 or the last four characters. The characters (-10A) were added for the field sample.

Reviewer JACleveland **Date:** 72910

CompuChem
a Division of Liberty Analytical Corp.
501 Madison Avenue
Cary, NC 27513

SDG NARRATIVE
SDG # 1003174

The indicated Sample Delivery Group (SDG) consisting of three (3) solid samples was received into the laboratory information management system (LIMS) on March 19, 2010 intact and in good condition with Chain of Custody (COC) Records in order, unless otherwise noted in any attachments or Quality Assurance Notices. The temperature of the samples upon receipt was 0.5 to 5.9°C. Sample ID's reported in this data package are noted by the receiving department on the COC if they differ from those listed by the samplers on the COC.

The samples were prepared and analyzed in accordance with SW846 methodology for the requested TAL metals and mercury.

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (ICV & CCV) and blanks (ICB & CCB) associated with this data were confirmed to be within allowable limits.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verification (PBS & LCSS) was found to be within acceptable ranges and field samples were prepared and analyzed within the specified holding times.

MATRIX RELATED QUALITY CONTROL:

The sample matrix spikes, CCN = 1003174-01 ID IR69-SD02S and IR69-SD02SD were inside control limits for the requested analytes except antimony, selenium, and thallium. ✓

The sample matrix duplicate, CCN = 1003174-01 ID IR69-SD02D was inside control limits for the requested analytes.

CLP control limits for duplicate determinations are +/- 20% Relative Percent Difference (RPD) for concentrations greater than or equal to five times the CRDL in both the original and duplicate samples, and +/- the CRDL for concentrations less than five times the CRDL. The RPD is not calculated if both the original and duplicate values fall below the IDL.

A five-fold serial dilution of sample, CCN = 1003174-01 ID IR69-SD02L was performed in accordance with requirements for ICP and mercury analysis.

The adjusted sample concentration was inside control limits for the requested analytes except barium. ✓

Control limits for serial dilution are defined as a deviation less than or equal to 10% in the dilution adjusted concentrations from the original values for all analyte concentrations greater than fifty (50) times their respective Instrument Detection Limit (IDL) in the original sample.

The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice.

Susan W. Bass
Senior Chemist
April 9, 2010

SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum	200.0	U	200.0	U	200.0	U	200.0	U	20.000	U	P
Antimony	10.0	U	10.0	U	10.0	U	10.0	U	1.000	U	P
Arsenic	10.0	U	10.0	U	10.0	U	10.0	U	1.000	U	P
Barium	200.0	U	200.0	U	200.0	U	200.0	U	20.000	U	P
Beryllium	5.0	U	5.0	U	5.0	U	0.9	B	0.500	U	P
Cadmium	5.0	U	5.0	U	5.0	U	5.0	U	0.500	U	P
Calcium	24.3	B	5000.0	U	5000.0	U	5000.0	U	500.000	U	P
Chromium	10.0	U	10.0	U	10.0	U	10.0	U	1.000	U	P
Cobalt	5.0	U	5.0	U	5.0	U	5.0	U	0.500	U	P
Copper	5.0	U	5.0	U	5.0	U	5.0	U	0.500	U	P
Iron	100.0	U	100.0	U	100.0	U	100.0	U	10.000	U	P
Lead	3.0	U	3.0	U	3.0	U	3.0	U	0.300	U	P
Magnesium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	500.000	U	P
Manganese	10.0	U	10.0	U	10.0	U	10.0	U	1.000	U	P
Mercury	0.200	U	0.200	U	0.200	U			0.033	U	CV
Nickel	5.0	U	5.0	U	5.0	U	5.0	U	0.500	U	P
Potassium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	500.000	U	P
Selenium	5.0	U	5.0	U	5.0	U	5.0	U	0.500	U	P
Silver	5.0	U	5.0	U	5.0	U	5.0	U	0.500	U	P
Sodium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	500.000	U	P
Thallium	10.0	U	10.0	U	10.0	U	10.0	U	1.000	U	P
Vanadium	20.0	U	20.0	U	20.0	U	20.0	U	2.000	U	P
Zinc	20.0	U	20.0	U	20.0	U	20.0	U	2.000	U	P

SD02 SD03
SB03-04-05

✓ flag as noted in report

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SW846 - METALS

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

IR69-SD02S

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 24.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M	
Antimony	75 - 125	153.7124		5.3169		206.61	71.8	N	P	J/UJ
Arsenic	75 - 125	15.2857		4.1322	U	16.53	92.5		P	
Barium	75 - 125	870.9872		18.6314	B	826.45	103.1		P	
Beryllium	75 - 125	20.5774		0.6651	B	20.66	96.4		P	
Cadmium	75 - 125	19.4271		2.0661	U	20.66	94.0		P	
Chromium	75 - 125	90.3012		8.9610		82.64	98.4		P	
Cobalt	75 - 125	194.6587		2.0661	U	206.61	94.2		P	
Copper	75 - 125	106.9407		4.2126		103.31	99.4		P	
Lead	75 - 125	20.7648		13.7418		8.26	85.0		P	
Manganese	75 - 125	205.5559		9.4427		206.61	94.9		P	
Mercury	75 - 125	0.8609		0.1377	U	0.69	124.8		CV	
Nickel	75 - 125	198.8469		4.2729		206.61	94.2		P	
Selenium	75 - 125	3.4664		0.9353	B	4.13	61.3	N	P	J/UJ
Silver	75 - 125	19.1660		2.0661	U	20.66	92.8		P	
Thallium	75 - 125	14.5870		4.1322	U	20.66	70.6	N	P	J/UJ
Vanadium	75 - 125	211.4871		10.2177		206.61	97.4		P	
Zinc	75 - 125	212.2978		17.0290		206.61	94.5		P	

Flag in all field samples

Comments:

SW846 - METALS

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

IR69-SD02SD

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 24.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M	
Antimony	75 - 125	152.2766		5.3169		206.61	71.1	N	P	J/UJ
Arsenic	75 - 125	15.4756		4.1322	U	16.53	93.6		P	
Barium	75 - 125	862.5049		18.6314	B	826.45	102.1		P	
Beryllium	75 - 125	20.5123		0.6651	B	20.66	96.1		P	
Cadmium	75 - 125	19.4136		2.0661	U	20.66	94.0		P	
Chromium	75 - 125	90.4637		8.9610		82.64	98.6		P	
Cobalt	75 - 125	192.5622		2.0661	U	206.61	93.2		P	
Copper	75 - 125	106.9512		4.2126		103.31	99.4		P	
Lead	75 - 125	19.9747		13.7418		8.26	75.5		P	
Manganese	75 - 125	203.4571		9.4427		206.61	93.9		P	
Mercury	75 - 125	0.7989		0.1377	U	0.69	115.8		CV	
Nickel	75 - 125	197.8989		4.2729		206.61	93.7		P	
Selenium	75 - 125	3.4701		0.9353	B	4.13	61.4	N	P	J/UJ
Silver	75 - 125	19.3048		2.0661	U	20.66	93.4		P	
Thallium	75 - 125	14.9113		4.1322	U	20.66	72.2	N	P	J/UJ
Vanadium	75 - 125	209.6664		10.2177		206.61	96.5		P	
Zinc	75 - 125	212.7571		17.0290		206.61	94.7		P	

Comments:

SW846 - METALS

5B

POST DIGEST SPIKE SAMPLE RECOVERY

SAMPLE NO.

IR69-SD02A

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added(SA)	%R	Q	M
Antimony		110.67		12.87		120.0	81.5		P
Selenium		6.86		2.26	B	10.0	46.0		P
Thallium		5.26	B	10.00	U	20.0	26.3		P

Cc ıts:

SW846 - METALS

9

ICP SERIAL DILUTIONS

SAMPLE NO.

IR69-SD02L

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	20922.93		22072.01		5.5		P
Antimony	12.87		50.00	U	100.0		P
Arsenic	10.00	U	50.00	U			P
Barium	45.09	B	38.03	B	15.7	E	P J/UJ
Beryllium	1.61	B	5.42	B	236.6		P
Cadmium	5.00	U	25.00	U			P
Calcium	5680.32		5829.87	B	2.6		P
Chromium	21.69		20.91	B	3.6		P
Cobalt	5.00	U	25.00	U			P
Copper	10.19		25.00	U	100.0		P
Iron	4843.29		4962.82		2.5		P
Lead	33.26		32.08		3.5		P
Magnesium	3185.61	B	3415.92	B	7.2		P
Manganese	22.85		22.32	B	2.3		P
Mercury	0.20	U	1.00	U			CV
Nickel	10.34		25.00	U	100.0		P
Potassium	1259.27	B	1231.57	B	2.2		P
Selenium	2.26	B	25.00	U	100.0		P
Silver	5.00	U	25.00	U			P
Sodium	3382.65	B	3738.93	B	10.5		P
Thallium	10.00	U	50.00	U			P
Vanadium	24.73		24.52	B	0.8		P
Zinc	41.21		42.20	B	2.4		P

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD02-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003174-01A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: 76 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	400	J
108-95-2	Phenol	1400	U
111-44-4	Bis(2-chloroethyl)ether	710	U
95-57-8	2-Chlorophenol	1400	U
95-48-7	2-Methylphenol	1400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	710	U
98-86-2	Acetophenone	710	U
106-44-5	4-Methylphenol	1400	U
621-64-7	N-Nitroso-di-N-propylamine	710	U
67-72-1	Hexachloroethane	710	U
98-95-3	Nitrobenzene	710	U
78-59-1	Isophorone	710	U
88-75-5	2-Nitrophenol	1400	U
105-67-9	2,4-Dimethylphenol	1400	U
111-91-1	Bis(2-chloroethoxy)methane	710	U
120-83-2	2,4-Dichlorophenol	1400	U
91-20-3	Naphthalene	710	~~U~~ exclude RE
106-47-8	4-Chloroaniline	1400	~~U~~ R MSL
87-68-3	Hexachlorobutadiene	710	U
105-60-2	Caprolactam	710	U
59-50-7	4-Chloro-3-methylphenol	1400	U
91-57-6	2-Methylnaphthalene	710	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	710	~~U~~ R MSL
88-06-2	2,4,6-Trichlorophenol	1400	U
95-95-4	2,4,5-Trichlorophenol	1400	U
92-52-4	1,1'-Biphenyl	710	U
91-58-7	2-Chloronaphthalene	710	U
88-74-4	2-Nitroaniline	1400	U
131-11-3	Dimethylphthalate	710	U
606-20-2	2,6-Dinitrotoluene	710	U
208-96-8	Acenaphthylene	710	~~U~~ exclude RE
99-09-2	3-Nitroaniline	1400	~~U~~ LS MSL
83-32-9	Acenaphthene	710	~~U~~ exclude RE

WM 072810

WM 080310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD02 -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003174-01A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: 76 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1400	U
100-02-7	4-Nitrophenol	1400	U
121-14-2	2,4-Dinitrotoluene	710	U
132-64-9	Dibenzofuran	710	U
84-66-2	Diethylphthalate	710	U
7005-72-3	4-Chlorophenyl-phenylether	710	U
86-73-7	Fluorene	710	~~U~~ exclude RE
100-01-6	4-Nitroaniline	1400	~~U~~ UJ MSL
534-52-1	4,6-Dinitro-2-methylphenol	1400	U
86-30-6	N-Nitrosodiphenylamine (1)	710	U
101-55-3	4-Bromophenyl-phenylether	710	U
118-74-1	Hexachlorobenzene	710	U
1912-24-9	Atrazine	710	U
87-86-5	Pentachlorophenol	1400	U
85-01-8	Phenanthrene	710	~~U~~ exclude RE
120-12-7	Anthracene	710	~~U~~ exclude RE
86-74-8	Carbazole	710	U
84-74-2	Di-n-butylphthalate	710	U
206-44-0	Fluoranthene	710	~~U~~ exclude RE
129-00-0	Pyrene	710	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	710	U
91-94-1	3,3'-Dichlorobenzidine	710	~~U~~ R MSL
117-81-7	bis(2-ethylhexyl)Phthalate	710	U
56-55-3	Benzo(a)anthracene	710	~~U~~ exclude RE
218-01-9	Chrysene	710	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	710	U
205-99-2	Benzo(b)fluoranthene	710	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	710	U
50-32-8	Benzo(a)pyrene	710	U
193-39-5	Indeno(1,2,3-cd)pyrene	710	U
53-70-3	Dibenzo(a,h)anthracene	710	U
191-24-2	Benzo(g,h,i)perylene	710	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD02 -10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003174-01C60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: 76 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	35 ~~6.3~~	~~J~~ UMBL
91-57-6	2-Methylnaphthalene	8.5	J
208-96-8	Acenaphthylene	35	U
83-32-9	Acenaphthene	35	U
86-73-7	Fluorene	2.4	J
85-01-8	Phenanthrene	8.4	J
120-12-7	Anthracene	3.8	J
206-44-0	Fluoranthene	6.9	J
129-00-0	Pyrene	5.3	J
56-55-3	Benzo(a)anthracene	2.9	J
218-01-9	Chrysene	4.9	J
205-99-2	Benzo(b)fluoranthene	7.0	J
207-08-9	Benzo(k)fluoranthene	4.7	J
50-32-8	Benzo(a)pyrene	18	J
193-39-5	Indeno(1,2,3-cd)pyrene	3.1	~~J~~ J CCL
53-70-3	Dibenzo(a,h)anthracene	35	~~U~~ U CCL
191-24-2	Benzo(g,h,i)perylene	5.9	J

WM 072810

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD03-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003174-03A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: 25 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	230	U
108-95-2	Phenol	440	U
111-44-4	Bis(2-chloroethyl)ether	230	U
95-57-8	2-Chlorophenol	440	U
95-48-7	2-Methylphenol	440	U
108-60-1	2,2'-oxybis(1-Chloropropane)	230	U
98-86-2	Acetophenone	230	U
106-44-5	4-Methylphenol	440	U
621-64-7	N-Nitroso-di-N-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	440	U
105-67-9	2,4-Dimethylphenol	440	U
111-91-1	Bis(2-chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	440	U
91-20-3	Naphthalene	230	~~U~~ exclude RE
106-47-8	4-Chloroaniline	440	U
87-68-3	Hexachlorobutadiene	230	U
105-60-2	Caprolactam	230	U
59-50-7	4-Chloro-3-methylphenol	440	U
91-57-6	2-Methylnaphthalene	230	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	230	U
88-06-2	2,4,6-Trichlorophenol	440	U
95-95-4	2,4,5-Trichlorophenol	440	U
92-52-4	1,1'-Biphenyl	230	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	440	U
131-11-3	Dimethylphthalate	230	U
606-20-2	2,6-Dinitrotoluene	230	U
208-96-8	Acenaphthylene	230	~~U~~ exclude RE
99-09-2	3-Nitroaniline	440	U
83-32-9	Acenaphthene	230	~~U~~ exclude RE

FORM I SV 8270C

WM 072810

WM 081210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD03-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003174-03A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: 25 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/31/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	440	U
100-02-7	4-Nitrophenol	440	U
121-14-2	2,4-Dinitrotoluene	230	U
132-64-9	Dibenzofuran	230	U
84-66-2	Diethylphthalate	230	U
7005-72-3	4-Chlorophenyl-phenylether	230	U
86-73-7	Fluorene	230	~~U~~ exclude RE
100-01-6	4-Nitroaniline	440	U
534-52-1	4,6-Dinitro-2-methylphenol	440	U
86-30-6	N-Nitrosodiphenylamine (1)	230	U
101-55-3	4-Bromophenyl-phenylether	230	U
118-74-1	Hexachlorobenzene	230	U
1912-24-9	Atrazine	230	U
87-86-5	Pentachlorophenol	440	U
85-01-8	Phenanthrene	230	~~U~~ exclude RE
120-12-7	Anthracene	230	~~U~~ exclude RE
86-74-8	Carbazole	230	U
84-74-2	Di-n-butylphthalate	230	U
206-44-0	Fluoranthene	230	~~U~~ exclude RE
129-00-0	Pyrene	230	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	230	U
91-94-1	3,3'-Dichlorobenzidine	230	U
117-81-7	bis(2-ethylhexyl)Phthalate	230	U
56-55-3	Benzo(a)anthracene	230	~~U~~ exclude RE
218-01-9	Chrysene	230	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	230	U
205-99-2	Benzo(b)fluoranthene	230	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	230	U
50-32-8	Benzo(a)pyrene	230	U
193-39-5	Indeno(1,2,3-cd)pyrene	230	U
53-70-3	Dibenzo(a,h)anthracene	230	U
191-24-2	Benzo(g,h,i)perylene	230	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

WM 072810

WM 08/2/10

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-SD03-10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003174-03C60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: 25 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	~~1.3~~ 11	~~J~~ U MBL
91-57-6	2-Methylnaphthalene	1.3	J
208-96-8	Acenaphthylene	11	U
83-32-9	Acenaphthene	11	U
86-73-7	Fluorene	11	U
85-01-8	Phenanthrene	2.0	J
120-12-7	Anthracene	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	0.76	J
56-55-3	Benzo(a)anthracene	11	U
218-01-9	Chrysene	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)fluoranthene	11	U
50-32-8	Benzo(a)pyrene	0.84	J
193-39-5	Indeno(1,2,3-cd)pyrene	11	U UJCCL
53-70-3	Dibenzo(a,h)anthracene	11	U UJCCL
191-24-2	Benzo(g,h,i)perylene	11	U

WM 072810

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB03-04-05-10

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003174-04A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: 20 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	210	U
108-95-2	Phenol	410	U
111-44-4	Bis(2-chloroethyl)ether	210	U
95-57-8	2-Chlorophenol	410	U
95-48-7	2-Methylphenol	410	U
108-60-1	2,2'-oxybis(1-Chloropropane)	210	U
98-86-2	Acetophenone	210	U
106-44-5	4-Methylphenol	410	U
621-64-7	N-Nitroso-di-N-propylamine	210	U
67-72-1	Hexachloroethane	210	U
98-95-3	Nitrobenzene	210	U
78-59-1	Isophorone	210	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	Bis(2-chloroethoxy)methane	210	U
120-83-2	2,4-Dichlorophenol	410	U
91-20-3	Naphthalene	210	~~U~~ exclude RE
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	210	U
105-60-2	Caprolactam	210	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	210	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	210	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	410	U
92-52-4	1,1'-Biphenyl	210	U
91-58-7	2-Chloronaphthalene	210	U
88-74-4	2-Nitroaniline	410	U
131-11-3	Dimethylphthalate	210	U
606-20-2	2,6-Dinitrotoluene	210	U
208-96-8	Acenaphthylene	210	~~U~~ exclude RE
99-09-2	3-Nitroaniline	410	U
83-32-9	Acenaphthene	210	~~U~~ exclude RE

FORM I SV 8270C

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB03-04-05-10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003174-04A70

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: 20 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/01/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	410	U
100-02-7	4-Nitrophenol	410	U
121-14-2	2,4-Dinitrotoluene	210	U
132-64-9	Dibenzofuran	210	U
84-66-2	Diethylphthalate	210	U
7005-72-3	4-Chlorophenyl-phenylether	210	U
86-73-7	Fluorene	210	~~U~~ exclude RE
100-01-6	4-Nitroaniline	410	U
534-52-1	4,6-Dinitro-2-methylphenol	410	U
86-30-6	N-Nitrosodiphenylamine (1)	210	U
101-55-3	4-Bromophenyl-phenylether	210	U
118-74-1	Hexachlorobenzene	210	U
1912-24-9	Atrazine	210	U
87-86-5	Pentachlorophenol	410	U
85-01-8	Phenanthrene	210	~~U~~ exclude RE
120-12-7	Anthracene	210	~~U~~ exclude RE
86-74-8	Carbazole	210	U
84-74-2	Di-n-butylphthalate	210	U
206-44-0	Fluoranthene	210	~~U~~ exclude RE
129-00-0	Pyrene	210	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	210	U
91-94-1	3,3'-Dichlorobenzidine	210	U
117-81-7	bis(2-ethylhexyl)Phthalate	210	U
56-55-3	Benzo(a)anthracene	210	~~U~~ exclude RE
218-01-9	Chrysene	210	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	210	U
205-99-2	Benzo(b)fluoranthene	210	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	210	U
50-32-8	Benzo(a)pyrene	210	U
193-39-5	Indeno(1,2,3-cd)pyrene	210	U
53-70-3	Dibenzo(a,h)anthracene	210	U
191-24-2	Benzo(g,h,i)perylene	210	U

(1) - Cannot be separated from Diphenylamine

LM 081210

LM 072810

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SB03-04-05 10K

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003174

Matrix: (soil/water) SOIL Lab Sample ID: 1003174-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 1003174-04C60

Level: (low/med) LOW Date Received: 03/19/10

% Moisture: 20 decanted: (Y/N) N Date Extracted: 03/24/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/29/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
91-20-3	Naphthalene	10 ~~1.3~~	J UMBL
91-57-6	2-Methylnaphthalene	10 ~~1.5~~	J UEBL
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10 ~~2.1~~	J UEBL
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10 ~~1.2~~	J UEBL
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	0.79	J
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U USCCL
53-70-3	Dibenzo(a,h)anthracene	10	U USCCL
191-24-2	Benzo(g,h,i)perylene	10	U

DataQual

Environmental Services, LLC

CH2M HILL
5700 Cleveland Street
Suite 101
Virginia Beach, VA 23462

July 30, 2010
SDG# 1003181, CompuChem
MCB Camp Lejeune, CTO-81

Dear Ms. Buckley,

The following Data Validation report is provided as requested for the parameters noted in the table below for SDG # 1003181. The data validation was performed in accordance with the SW846 Method 8260B for volatiles, 8270C and 8270C-SIM for semivolatiles and PAH, 8081A for pesticides, 8082 for PCBs, 6010B/7470A/7471A for metals/mercury and good professional judgment. Also used in the validation of these samples were The National Functional Guidelines for Organic Data Review (June, 2008) and the National Functional Guidelines for Inorganic Data Review (October, 2004), as applicable. All areas of concern are discussed in the body of the report and a summary of data qualifications is provided.

Sample ID	Lab ID	Matrix	VOA	SVOA	LL PAH	Pest	PCBs	Metals
IR69-EB01-031810-GW	1003181-03	water	X	X	X	X	X	X
IR69-FB01-031910	1003181-04	water	X	X	X	X	X	X
IR69-GW13DW-10A	1003181-05	water	X	X	X	X	X	X
IR69-GW28DW-10A	1003181-01	water	X	X	X	X	X	X
IR69-GW28IW-10A	1003181-02	water	X	X	X	X	X	X
IR69-TB01-032210	1003181-06	water	X					

The following quality control samples were provided with this SDG: sample IR69-EB01-031810-GW-equipment blank; sample IR69-FB01-031910-field blank; sample IR69-TB01-032210-trip blank.

The samples were evaluated based on the following criteria:

- Data Completeness *
- Technical Holding Times *
- GC/MS Tunes *
- GC Performance *
- Initial/Continuing Calibrations
- CRI Standards
- Interference Check Sample *
- Blanks
- Internal Standards *
- Surrogates *

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- Laboratory Control Samples
- Matrix Spike Recoveries NA
- Matrix Duplicate RPDs NA
- Post Digestion Spike Recoveries *
- Serial Dilutions
- Field Duplicates NA
- Identification/Quantitation
- Reporting Limits *
- Tentatively Identified Compounds NA

* - indicates that no qualifications were required based on this criteria

Overall Evaluation of Data/Potential Usability Issues

A summary of qualifications applied to the sample results are noted below for the fractions validated. Specific details regarding qualification of the data are addressed in the Specific Evaluation section of this narrative. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte the validator has chosen the qualifier that best indicates possible bias in the results and flagged the data accordingly. However, information regarding all quality control issues is provided in the body of the report and on the qualification summary page. Please note that when a compound or analyte is flagged due to blank contamination the BL qualifier code takes precedence over all other qualifier codes except a code that explains rejected data.

VOA

Sample compounds were qualified as estimated based on high %Ds which were exhibited in the continuing calibrations. Qualifications were also added to the data based on low RRF values in the initial calibration.

Blank contamination was exhibited in the method and/or QC blanks that resulted in qualifications to the data.

Due to low recoveries in the LCS and LCSD the results for one compound were qualified as estimated in all samples.

SVOA

No qualifications to the data were required.

Pesticides/PCBs

One reported positive result exhibited a column quantitation %D greater than 40%. This P flagged result was qualified as estimated J.

Metals

The associated CRI standard exhibited one non-compliant recovery. Qualifications were required.

Qualifications were required in the samples due to laboratory and field QC blank contamination.

One analyte required qualification in the samples due to non-compliant serial dilution %Ds.

All results reported between the MDL and the RL (B flagged by the laboratory) were qualified as estimated J.

Specific Evaluation of Data

Data Completeness

The SDG was received complete and intact. Resubmissions were not required. All field sample and QC blank IDs were missing the first four (IR69) and/or the last four (-10A) characters. The characters were added to the Form 1s in the DV reports by the data validator.

Technical Holding Times

According to chain of custody records, sampling was performed on 3/18-22/10 and samples were received at the laboratory 3/23/10. All sample preparation and analysis was performed within method holding time requirements.

Initial/Continuing Calibration

VOA

Calibration standards exhibited %Ds and RRFs that were non-compliant. A summary of these non-compliances and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	RRF, %RSD, %D	Samples	Q Flag	Q Code
IC 3/23/10	acetone 2-butanone	0.0308 0.0438	all samples	J/R	ICL
CC 3/31/10	bromomethane	0.0479	all samples	J/R	CCL

Standard ID	Compound(s)	RRF, %RSD, %D	Samples	Q Flag	Q Code
	dichlorodifluoromethane	-66.27		J/UJ	CCL
	chloromethane	-22.20			
	trans-1,3-dichloropropene	-20.38			
	dibromochloromethane	-24.76			
	1,2-dibromoethane	-22.93			
	bromoform	-30.15			
	1,3-dichlorobenzene	-22.77			
	1,4-dichlorobenzene	-21.67			
	1,2-dibromo-3-chloropropane	-25.16			
	1,2,4-trichlorobenzene	-22.41			
	1,1,2-trichloro-1,2,2-trifluoroethane	22.24		J/UJ	CCH
	methyl acetate	40.15			

CRI Standards

Metals

The CRI standard associated with the samples exhibited a high recovery for thallium (151%). The reported positive result in sample IR69-GW28IW-10A was qualified as estimated J with a qualifier code of OT.

Blanks

VOA

The associated method and/or QC blanks exhibited contamination as noted in the following table. Compounds for which there was no action required, are not included in the following table.

Blank ID	Compound	Concentration	Reporting Limit
VBLKSF	acetone	1.3J ug/L	2.5 ug/L
	methylene chloride	0.13J	0.5
	toluene	0.13J	0.5
IR69-EB01-031810-GW	acetone	11	2.5
	methylene chloride	1.0	0.5
	cis-1,2-dichloroethene	0.043J	0.5
	2-butanone	3.2	2.5
	chloroform	0.57	0.5
	benzene	1.0	0.5
	toluene	3.8	0.5
	ethylbenzene	0.15J	0.5
	m,p-xylene	0.40J	0.5
	o-xylene	0.19J	0.5
	xylene (total)	0.61	0.5
IR69-FB01-031910	acetone	7.8	2.5
	methylene chloride	1.4	0.5
	2-butanone	1.8J	2.5
	chloroform	2.4	0.5

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Q Code
IR69-GW28DW-10A	methylene chloride	U at RL	MBL
IR69-GW13DW-10A, IR69-GW28DW-10A, IR69-GW28IW-10A	toluene	U at RL	MBL
IR69-GW28DW-10A	acetone	U	MBL
IR69-GW13DW-10A	acetone	U	EBL
IR69-GW13DW-10A	methylene chloride	U	FBL
IR69-GW13DW-10A	cis-1,2-dichloroethene	U at RL	EBL
IR69-GW13DW-10A, IR69-GW28IW-10A	2-butanone	U at RL	EBL
IR69-GW13DW-10A	benzene	U at RL	EBL
IR69-GW13DW-10A, IR69-GW28IW-10A	ethylbenzene	U at RL	EBL
IR69-GW13DW-10A	m,p-xylene	U at RL	EBL
IR69-GW13DW-10A	xylene (total)	U at RL	EBL
IR69-GW28DW-10A	chloroform	U	FBL
IR69-GW28IW-10A	methylene chloride	U	EBL

Metals

Contamination was noted in associated blanks and qualification was required in the associated samples. Required action is noted in the following tables.

Blank ID	Analyte	Concentration	Action Level	Q Flag	Q Code
CCB	magnesium	16.7B ug/L	RL	U	MBL
FB01-031910	zinc	0.97B ug/L	RL	U	FBL
EB01-031810-GW	copper	2.2B ug/L	RL	U	EBL

Associated samples and required qualifications are noted in the following table.

Sample ID	Analyte	Q Flag	Q Code
all field samples	magnesium	U at RL	MBL
IR69-GW28IW-10A	zinc	U at RL	FBL
IR69-GW28IW-10A	copper	U at RL	EBL

Laboratory Control Samples

VOA

The LCS/LCSD associated with all samples exhibited low recoveries for bromomethane at 47% and 50% (QC limit 60-135%); therefore the results for this compound were qualified as estimated (J/UJ) in all samples, qualifier code: BSL.

Serial Dilution

Metals

The serial dilution analysis exhibited a non-compliant %D for one analyte. Specific action is noted in the following table.

SD	Analyte	Samples Affected	%D	Q Flag	Q Code
IR69-GW28DW-10A	potassium	all field samples	16.7	J/UJ	SD

Identification/Quantitation

Pesticides/PCBs

All positive results reported with a P flag to indicate column quantitation %Ds greater than 40% are qualified as estimated J with a qualifier code of 2C.

Metals

All results reported between the IDL and the RL (B flagged by laboratory) were qualified as estimated J. No qualification code was required.

A summary of qualifications required is provided on the following page. Please do not hesitate to contact DataQual ES with any questions regarding this validation report.

Sincerely,

Laura Maschhoff
President

Jacqueline Cleveland
Vice-President

Summary of Data Qualifications

VOA

Sample ID	Compound	Results	Q-Flag	Q Code
all samples	acetone 2-butanone	+/-	J/R	ICL
all samples	bromomethane	+/-	J/R	CCL
all samples	dichlorodifluoromethane chloromethane trans-1,3-dichloropropene dibromochloromethane 1,2-dibromoethane bromoform 1,3-dichlorobenzene 1,4-dichlorobenzene 1,2-dibromo-3-chloropropane 1,2,4-trichlorobenzene	+/-	J/UJ	CCL
all samples	1,1,2-trichloro-1,2,2-trifluoroethane methyl acetate	+/-	J/UJ	CCH
IR69-GW28DW-10A	methylene chloride	+	U at RL	MBL
IR69-GW13DW-10A, IR69-GW28DW-10A, IR69-GW28IW-10A	toluene	+	U at RL	MBL
IR69-GW28DW-10A	acetone	+	U	MBL
IR69-GW13DW-10A	acetone	+	U	EBL
IR69-GW13DW-10A	methylene chloride	+	U	EBL
IR69-GW13DW-10A	cis-1,2-dichloroethene	+	U at RL	EBL
IR69-GW13DW-10A, IR69-GW28IW-10A	2-butanone	+	U at RL	EBL
IR69-GW13DW-10A	benzene	+	U at RL	EBL
IR69-GW13DW-10A, IR69-GW28IW-10A	ethylbenzene	+	U at RL	EBL
IR69-GW13DW-10A	m,p-xylene	+	U at RL	EBL
IR69-GW13DW-10A	xylene (total)	+	U at RL	EBL
IR69-GW28DW-10A	chloroform	+	U	EBL
IR69-GW28IW-10A	methylene chloride	+	U	EBL
all samples	bromomethane	+/-	J/UJ	BSL

SVOA

Sample ID	Compound	Results	Q-Flag	Q Code
No qualifications				

Pesticides/PCBs

Sample ID	Compound	Results	Q-Flag	Q Code
all samples	all compounds	+P	J	2C

Summary of Data Qualifications

Metals

Sample ID	Analyte	Results	Q-Flag	Q Code
IR69-GW28IW-10A	thallium	+	J	OT
all field samples	magnesium	+B	U at RL	MBL
IR69-GW28IW-10A	zinc	+B	U at RL	FBL
IR69-GW28IW-10A	copper	+B	U at RL	EBL
all field samples	potassium	+/-	J/UJ	SD
all samples	all analytes	+B	J	

Glossary of Qualification Flags and Abbreviations

Qualification Flags (Q-Flags)

U	not detected above the reported sample quantitation limit
J	estimated value
UJ	reported quantitation limit is qualified as estimated
R	result is rejected; the presence or absence of the analyte cannot be verified
D	result value is based on dilution analysis result
NJ	analyte has been tentatively identified, estimated value
L	analyte present, biased low
UL	not detected, quantitation limit is probably higher
K	analyte present, biased high

Inorganic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 10X the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL and the result is raised to the RL and flagged U.
R or J+	The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator. (see NFG, Rev. date 10/04, p. 17 for extracted blanks (PB))

Organic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 5X (10X for common laboratory contaminants) the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is raised to the RL and flagged U.
U	The sample result for the blank contaminant is greater than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is flagged U at the reported value.

General Abbreviations

RL / MDL	reporting limit/method detection limit
CRQL	contract required quantitation limit
Q Code	qualifier code
+	positive result
-	non-detect result

QUALIFIER CODE REFERENCE

Qualifier	Description
TN	Tune
BSL	Blank Spike/LCS - High Recovery
BSH	Blank Spike/LCS - Low Recovery
BD	Blank Spike/Blank Spike Duplicate (LCS/LCSD) Precision
BRL	Below Reporting Limit
ISL	Internal Standard - Low Recovery
ISH	Internal Standard - High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate - Low Recovery
MSH	Matrix Spike and/or Matrix Spike Duplicate - High Recovery
MI	Matrix interference obscuring the raw data
MDP	Matrix Spike/Matrix Spike Duplicate Precision
2S	Second Source - Bad reproducibility between tandem detectors
SSL	Spiked Surrogate - Low Recovery
SSH	Spiked Surrogate - High Recovery
SD	Serial Dilution Reproducibility
ICL	Initial Calibration - Low Relative Response Factors (RRF)
ICH	Initial Calibration - High Relative Response Factors (RRF)
ICB	Initial Calibration - Bad Linearity or Curve Function
CCL	Continuing Calibration - Low Recovery or %Difference
CCH	Continuing Calibration - High Recovery or %Difference
LD	Lab Duplicate Reproducibility
HT	Holding Time
PD	Pesticide Degradation
2C	Second Column - Poor Dual Column Reproducibility
LR	Concentration Exceeds Linear Range
BL	Blank Contamination (MBL, EBL, FBL)
RE	Redundant Result - due to Re-analysis or Re-extraction
DL	Redundant Result - due to Dilution
FD	Field Duplicate
OT	Other - explained in data validation report
%SOL	High moisture content

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031810-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-03

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003181-0371

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: not dec. _____ Date Analyzed: 03/31/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	11	B
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	1.0	B
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.16	J
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.043	J
78-93-3	2-butanone	3.2	
67-66-3	Chloroform	0.57	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	1.0	
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	3.8	B
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031810-GW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-03

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003181-0371

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: not dec. _____ Date Analyzed: 03/31/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.15	J
108-38-3	m,p-Xylene	0.40	J
95-47-6	o-Xylene	0.19	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.61	
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FB01-031910

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-04

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003181-0471

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: not dec. _____ Date Analyzed: 03/31/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	7.8	B
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	1.4	B
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	1.8	J
67-66-3	Chloroform	2.4	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.17	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	2.1	B
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FB01-031910

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-04

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003181-0471

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: not dec. _____ Date Analyzed: 03/31/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.076	J
108-38-3	m,p-Xylene	0.16	J
95-47-6	o-Xylene	0.068	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.24	J
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13DW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-05

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003181-0571

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: not dec. _____ Date Analyzed: 03/31/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.033	J
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	11	B
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	1.2	B
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.15	J
78-93-3	2-butanone	1.4	J
67-66-3	Chloroform	11	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.076	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.24	JB
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13DW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-05

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003181-0571

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: not dec. _____ Date Analyzed: 03/31/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.11	J
108-38-3	m,p-Xylene	0.083	J
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.089	J
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW28DW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-01

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003181-0171

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: not dec. _____ Date Analyzed: 03/31/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.032	J
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	3.2	B
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.15	JB
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	U
67-66-3	Chloroform	1.2	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.14	JB
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW28DW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-01

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003181-0171

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: not dec. _____ Date Analyzed: 03/31/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW28IW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-02

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003181-0271

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: not dec. _____ Date Analyzed: 03/31/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.084	J
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	13	B
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.65	B
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	1.6	J
67-66-3	Chloroform	7.8	
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.032	J
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.17	JB
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW28IW

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-02

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003181-0271

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: not dec. _____ Date Analyzed: 03/31/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.063	J
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-TB0
1-032210

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-06

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003181-0671

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: not dec. _____ Date Analyzed: 03/31/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
75-15-0	Carbon disulfide	0.50	U
76-13-1	1,1,2-trichloro-1,2,2-triflu	0.50	U
67-64-1	Acetone	2.5	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.071	JB
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl-tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-butanone	2.5	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U
79-01-6	Trichloroethene	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	2.5	U
108-88-3	Toluene	0.072	JB
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-hexanone	2.5	U
124-48-1	Dibromochloromethane	0.50	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-TB0
1-032210

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-06

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003181-0671

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: not dec. _____ Date Analyzed: 03/31/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
108-38-3	m,p-Xylene	1.0	U
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

FORM I VOA

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031810-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003181-03A70

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031810-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003181-03A70

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031810-GW

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003181-03A60

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.057	J
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FB01-031910

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-04

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003181-04A70

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.1	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.1	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.1	U
98-86-2	Acetophenone	5.1	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.1	U
67-72-1	Hexachloroethane	5.1	U
98-95-3	Nitrobenzene	5.1	U
78-59-1	Isophorone	5.1	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.1	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.1	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.1	U
105-60-2	Caprolactam	5.1	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.1	U
77-47-4	Hexachlorocyclopentadiene	5.1	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.1	U
91-58-7	2-Chloronaphthalene	5.1	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.1	U
606-20-2	2,6-Dinitrotoluene	5.1	U
208-96-8	Acenaphthylene	5.1	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.1	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FB01-031910

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-04

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003181-04A70

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.1	U
132-64-9	Dibenzofuran	5.1	U
84-66-2	Diethylphthalate	5.1	U
7005-72-3	4-Chlorophenyl-phenylether	5.1	U
86-73-7	Fluorene	5.1	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.1	U
101-55-3	4-Bromophenyl-phenylether	5.1	U
118-74-1	Hexachlorobenzene	5.1	U
1912-24-9	Atrazine	5.1	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.1	U
120-12-7	Anthracene	5.1	U
86-74-8	Carbazole	5.1	U
84-74-2	Di-n-butylphthalate	5.1	U
206-44-0	Fluoranthene	5.1	U
129-00-0	Pyrene	5.1	U
85-68-7	Butylbenzylphthalate	5.1	U
91-94-1	3,3'-Dichlorobenzidine	5.1	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.1	U
56-55-3	Benzo(a)anthracene	5.1	U
218-01-9	Chrysene	5.1	U
117-84-0	Di-n-octylphthalate	5.1	U
205-99-2	Benzo(b)fluoranthene	5.1	U
207-08-9	Benzo(k)fluoranthene	5.1	U
50-32-8	Benzo(a)pyrene	5.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.1	U
53-70-3	Dibenzo(a,h)anthracene	5.1	U
191-24-2	Benzo(g,h,i)perylene	5.1	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FB01-031910

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-04

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003181-04A60

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.075	J
91-57-6	2-Methylnaphthalene	0.21	U
208-96-8	Acenaphthylene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	U
206-44-0	Fluoranthene	0.21	U
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U
53-70-3	Dibenzo(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13DW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003181-05A70

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13DW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003181-05A70

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	2.3	J
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13DW

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003181-05A60

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW28DW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003181-01A70

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	U
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW28DW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003181-01A70

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	U
120-12-7	Anthracene	5.0	U
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW28DW

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003181-01A60

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW28IW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-02

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1003181-02A70

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.3	U
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.3	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.3	U
98-86-2	Acetophenone	5.3	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.3	U
67-72-1	Hexachloroethane	5.3	U
98-95-3	Nitrobenzene	5.3	U
78-59-1	Isophorone	5.3	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.3	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.3	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.3	U
105-60-2	Caprolactam	5.3	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.3	U
77-47-4	Hexachlorocyclopentadiene	5.3	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.3	U
91-58-7	2-Chloronaphthalene	5.3	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.3	U
606-20-2	2,6-Dinitrotoluene	5.3	U
208-96-8	Acenaphthylene	5.3	U
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.3	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW28IW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-02

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1003181-02A70

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.3	U
132-64-9	Dibenzofuran	5.3	U
84-66-2	Diethylphthalate	5.3	U
7005-72-3	4-Chlorophenyl-phenylether	5.3	U
86-73-7	Fluorene	5.3	U
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.3	U
101-55-3	4-Bromophenyl-phenylether	5.3	U
118-74-1	Hexachlorobenzene	5.3	U
1912-24-9	Atrazine	5.3	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.3	U
120-12-7	Anthracene	5.3	U
86-74-8	Carbazole	5.3	U
84-74-2	Di-n-butylphthalate	5.3	U
206-44-0	Fluoranthene	5.3	U
129-00-0	Pyrene	5.3	U
85-68-7	Butylbenzylphthalate	5.3	U
91-94-1	3,3'-Dichlorobenzidine	5.3	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.3	U
56-55-3	Benzo(a)anthracene	5.3	U
218-01-9	Chrysene	5.3	U
117-84-0	Di-n-octylphthalate	5.3	U
205-99-2	Benzo(b)fluoranthene	5.3	U
207-08-9	Benzo(k)fluoranthene	5.3	U
50-32-8	Benzo(a)pyrene	5.3	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.3	U
53-70-3	Dibenzo(a,h)anthracene	5.3	U
191-24-2	Benzo(g,h,i)perylene	5.3	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW28IW

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-02

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1003181-02A60

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.21	U
91-57-6	2-Methylnaphthalene	0.21	U
208-96-8	Acenaphthylene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	U
206-44-0	Fluoranthene	0.21	U
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U
53-70-3	Dibenzo(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U

FORM I SV

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EB01-031810-GW

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 03/23/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/25/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/30/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.0067	J
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.0063	JP
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FB01-031910

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-04

Sample wt/vol: 950.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/23/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/25/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/30/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.053	U
319-85-7	beta-BHC	0.053	U
319-84-6	alpha-BHC	0.053	U
319-86-8	delta-BHC	0.053	U
58-89-9	gamma-BHC (Lindane)	0.053	U
72-54-8	4,4'-DDD	0.11	U
72-55-9	4,4'-DDE	0.11	U
50-29-3	4,4'-DDT	0.11	U
60-57-1	Dieldrin	0.11	U
959-98-8	Endosulfan I	0.053	U
33213-65-9	Endosulfan II	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
72-20-8	Endrin	0.11	U
7421-93-4	Endrin Aldehyde	0.11	U
76-44-8	Heptachlor	0.053	U
1024-57-3	Heptachlor Epoxide	0.053	U
72-43-5	Methoxychlor	0.53	U
8001-35-2	Toxaphene	2.6	U
12674-11-2	Aroclor-1016	0.98	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.98	U
53469-21-9	Aroclor-1242	0.66	U
12672-29-6	Aroclor-1248	0.66	U
11097-69-1	Aroclor-1254	0.66	U
11096-82-5	Aroclor-1260	0.98	U
53494-70-5	Endrin Ketone	0.11	U
5103-74-2	gamma-Chlordane	0.053	U
5103-71-9	alpha-Chlordane	0.053	U

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW13DW

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/23/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/25/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/30/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW28DW

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/23/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/25/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/29/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

1D
GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IR69-GW28IW

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-02

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/23/10

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/25/10

Concentrated Extract Volume: 5000(uL) Date Analyzed: 03/29/10

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
309-00-2	Aldrin	0.050	U
319-85-7	beta-BHC	0.050	U
319-84-6	alpha-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
72-54-8	4,4'-DDD	0.10	U
72-55-9	4,4'-DDE	0.10	U
50-29-3	4,4'-DDT	0.10	U
60-57-1	Dieldrin	0.10	U
959-98-8	Endosulfan I	0.050	U
33213-65-9	Endosulfan II	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
72-20-8	Endrin	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor Epoxide	0.050	U
72-43-5	Methoxychlor	0.50	U
8001-35-2	Toxaphene	2.5	U
12674-11-2	Aroclor-1016	0.93	U
11104-28-2	Aroclor-1221	1.3	U
11141-16-5	Aroclor-1232	0.93	U
53469-21-9	Aroclor-1242	0.63	U
12672-29-6	Aroclor-1248	0.63	U
11097-69-1	Aroclor-1254	0.63	U
11096-82-5	Aroclor-1260	0.93	U
53494-70-5	Endrin Ketone	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
5103-71-9	alpha-Chlordane	0.050	U

FORM I PEST

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW13DW

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix (soil/water): WATER Lab Sample ID: 1003181-05

Level (low/med): LOW Date Received: 3/23/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	621			P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	7.7	B		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	59600			P
7440-47-3	Chromium	8.3	B		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	2230			P
7439-92-1	Lead	3.3			P
7439-95-4	Magnesium	3250	B		P
7439-96-5	Manganese	57.6			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	2450	B	E	P
7782-49-2	Selenium	5.0	U		P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	59600			P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	3.3	B		P
7440-66-6	Zinc	108			P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW28DW

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix (soil/water): WATER Lab Sample ID: 1003181-01

Level (low/med): LOW Date Received: 3/23/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	4.8	B		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	73900			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	1250			P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	3400	B		P
7439-96-5	Manganese	61.1			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	1450	B	E	P
7782-49-2	Selenium	5.0	U		P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	36000			P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	25.5			P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

IR69-GW28IW

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix (soil/water): WATER Lab Sample ID: 1003181-02

Level (low/med): LOW Date Received: 3/23/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1360			P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	29.2	B		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	73600			P
7440-47-3	Chromium	15.0			P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	2.9	B		P
7439-89-6	Iron	2960			P
7439-92-1	Lead	2.1	B		P
7439-95-4	Magnesium	3460	B		P
7439-96-5	Manganese	62.8			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	1.7	B		P
7440-09-7	Potassium	2930	B	E	P
7782-49-2	Selenium	8.0			P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	203000			P
7440-28-0	Thallium	5.6	B		P
7440-62-2	Vanadium	4.3	B		P
7440-66-6	Zinc	14.2	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

EB01-031810-GW

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix (soil/water): WATER Lab Sample ID: 1003181-03

Level (low/med): LOW Date Received: 3/23/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	2.2	B		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U	E	P
7782-49-2	Selenium	5.0	U		P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	342	B		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	20.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

FB01-031910

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix (soil/water): WATER Lab Sample ID: 1003181-04

Level (low/med): LOW Date Received: 3/23/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	200	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	5000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	5.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	3.0	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	5.0	U		P
7440-09-7	Potassium	5000	U	E	P
7782-49-2	Selenium	5.0	U		P
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	5000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	20.0	U		P
7440-66-6	Zinc	0.97	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

№ 01716

Page 1 of 1

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CompuChem
a division of Liberty Analytical Corp.

CHAIN OF CUSTODY

501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Courier
Airbill No.
Sampling Complete? Y or N

Company Name: CH2M Hill
Address: 11301 Carrel Commons Blvd. Ste. 304
City: Charlotte State: NC Zip: 28226
Project Contact: Gwen Buckley
Phone #: 757-671-6292
Sampler's Name:

Project Name: CTO-081
Sampling Location: MCB Cam Lej Site 69
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Field ID	Date	Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other none	8260B: 40mL VOAs, HCl	8270C/8270C-SIM 2-1L Ambers	RSK 175 MEE 2-40mL VOAs HCl	3550B/8081A/8082 2-1L Ambers	TOC 2-40mL VOAs H2SO4	CNNS-AIK 1-250mL poly, none	Sulfide 1-500mL poly ZnAc & NaOH	TAL 6010B/METALS 1-500mL poly HNO3	6010B/metals Filtered 1-500mL poly HNO3 Filtered	TCLP/ZHE/VOC: 1-Lambers or 4oz soil jar	
1003186-01 IR69-IDW-S-10A	3/17/10	1000	SO	1						1										1	
1003187-01 IR69-IDW-W01-10A	3/17/10	1030	O	1						1										1	
-02 IR69-IDW-W02-10A	3/17/10	1300	O	1						1										1	
-03 IR69-IDW-W03-10A	3/17/10	1400	O	1						1										1	
1003181-06 IR69-TB-032210	3/22/10	1400	TB	3	3						3										
1003181-03 IR69-EB-031810-GW	3/18/10	1645	RI	3	3						3										
1003181-04 IR69-FB-031910	3/19/10	0900	RI	3	3						3										
1003181-02 IR69-GW28IW-10A	3/18/10	1145	GW	3	3						3										
1003181-01 IR69-GW28DW-10A	3/18/10	1120	GW	3	3						3										
1003181-05 IR69-GW13DW-10A	3/18/10	1240	GW	3	3						3										

Sample Unpacked By: Diane Byrd
Sample Order Entry By: [illegible]
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

O: IDW

Relinquished by:	Date/Time: 3/22/10 1500	Received by: Diane Byrd	Date/Time: 3-23-10 1320
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: 3.2 °C

Samples stored 60 days after date report mailed at no extra charge.

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5 2010

№ 01707

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CHAIN OF CUSTODY

CompuChem
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501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Page 1 of 1

Courier
Airbill No.
Sampling Complete? Y or N

Company Name: CH2M Hill	Project Name: CTO-081
Address: 11301 Carmel Commons Blvd Ste 304	Sampling Location: MCB Camp Lejeune Site 69
City: Charlotte State: NC Zip: 28226	Turnaround time: Standard
Project Contact: Gwen Buckley	Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Phone #: 757-671-6292	Are aqueous samples field filtered for metals? Y or N
Sampler's Name:	Are high concentrations expected? Y or N? If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MeOH	Other None	8260B	8270C/8270C-SIM (Amber) 2-40ml	RSK-175 MEE/NWS HCl 2-40ml	3550B/8081A/8082 2-1L Amber	TOC 2-40ml H2SO4	CNWS-Alk 1-250ml poly	Sulfide 1-500ml poly ZnAc 6N NaOH	TPH 6010B/metals 1-500ml poly HNO3	Dissolved 6010B metals 1-500ml poly HNO3 Field Filtered							
1003181-01	IR69-GW28DW-10A	3/18/10	1120	GW	11	2	1	1	2		5		2	2	2	2	1	1	1			<2	>9	<2			
-02	IR69-GW28IW-10A	3/18/10	1145	GW	11	2	1	1	2		5		2	2	2	2	1	1	1			<2	>9	<2			

Sample Unpacked By: Diane Byrd
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

~~Residual Chlorine Present?~~
Yes ____ No ✓

Relinquished by:	Date/Time: 3/22/10 1500	Received by:	Date/Time: 3-23-10 1320
Relinquished by:	Date/Time:	Received by:	Date/Time:
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 0.2 °C

Samples stored 60 days after date report mailed at no extra charge.

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SN0010

№ 01815

Page 1 of 1

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CHAIN OF CUSTODY

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Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Courier
Airbill No.
Sampling Complete? Y or N

Company Name: CH2M Hill	Project Name: CTO-081
Address: 11301 Carmel Commons Blvd Ste. 304	Sampling Location: MCB Camp Lej Site 69
City: Charlotte State: NC Zip: 28226	Turnaround time: Standard
Project Contact: Gwen Buckley	Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Phone #: 757-671-6292	Are aqueous samples field filtered for metals? Y or N
Sampler's Name	Are high concentrations expected? Y or N If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	ZnAc NaOH	HNO3	H2SO4	MEOH	Other None	8260B	8270C/8270C SIM (2-L Ambers)	RSK 175 MEE (2-40ml VOAs, HCl)	355.08/8081A/8082 (2-1L Ambers)	TOC (2-40ml VOAs H2SO4)	CNWS-AIK (1-250ml poly, no pres)	Sulfide (1-500ml poly ZnAc 6N NaOH)	TPH 8015B/DRO/GRO (1-500ml poly HNO3)	Dissolved 6010B/metals (1-500ml poly HNO3 Field Filtered)							
1003181-03	JR69-EB-031810-GW	3/18/10	1645	RI	11	2	1	1	2		5		2	2	2	2	1	1	1			<2	>9	<2		

Sample Unpacked By: Diane Byrd	Cyanide samples checked for sulfide & chlorine? Y or NA	~~Residual Chlorine Present?~~
Sample Order Entry By: [signature]	625 & Phenol samples checked for chlorine? Y or NA	Yes ____ No ✓
Samples Received in Good Condition? Y or N	608 samples checked for pH between 5.0-9.0? Y or NA	
If no, explain:		

Relinquished by: [signature]	Date/Time: 3/22/10 1500	Received by: Diane Byrd	Date/Time: 3 23 10 1320
Relinquished by:	Date/Time:	Received by:	Date/Time:
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 0.4 °C

Samples stored 60 days after date report mailed at no extra charge.

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№ 01708

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CHAIN OF CUSTODY

501 Madison Ave.
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Phone: 919-379-4100 Fax 919-379-4040

Page 1 of 1

Courier
Airbill No.
Sampling Complete? Y or N

Company Name: CH2M Hill	Project Name: CTO-081
Address: 11301 Carmel Commons Blvd Ste. 304	Sampling Location: MCB Camp Lej Site 69
City: Charlotte State: NC Zip: 28226	Turnaround time: Standard
Project Contact: Gwen Buckley	Batch QC or Project Specific? If Specific, which Sample ID?: Batch
Phone #: 757 671 6292	Are aqueous samples field filtered for metals? Y or N
Sampler's Name:	Are high concentrations expected? Y or N If yes, which ID(s)?

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab ID	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	MEOH	Other 2oz	8260B	8270C/8270C SIM (Amber) 2-1L	RSK 175 MEE 10ml 2-40ml HCl	3550B/8081A/8082 (Amber) 2-1L	TOC 2-40ml VOAs H2SO4	CNNS-AIK 1-250ml poly, none	Sulfides 1-500ml poly ZnAc 6N NaOH	TAL 1-500ml poly HNO3	6010B/METALS Dissolved 1-500ml poly HNO3	6010B/metals Field Filtered		pH			
1003181-04	IR69-FB-031910	3/19/10	0900	O	11	2	1	1	2		5		2	2	2	2	1	1	1				<2	>9	<2	
-05	IR69-GW13DW-10A	3/18/10	1240	GW	11	2	1	1	2		5		2	2	2	2	1	1	1				<2	>9	<2	

Sample Unpacked By: Diane Byrd
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

O: field blank

Residual Chlorine Present?
Yes ____ No ✓

Relinquished by:	Date/Time: 3/22/10 1500	Received by: Diane Byrd	Date/Time: 3-23-10 1320
Relinquished by:	Date/Time:	Received by:	Date/Time:
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: 0.5 °C

Samples stored 60 days after date report mailed at no extra charge.

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0010

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Sample ID Cross Reference

LAB WO	Project	Sample #	Field ID	Sample Date	Receive Date	DueDate	Chain of Custody ID
1003181	CTO-081 SITE 69/289017.SA.DM/N624	1003181-01	IR69-GW28DW	03/18/2010	03/23/2010	04/17/2010	IR69-GW28DW-10A
1003181	CTO-081 SITE 69/289017.SA.DM/N624	1003181-02	IR69-GW28IW	03/18/2010	03/23/2010	04/17/2010	IR69-GW28IW-10A
1003181	CTO-081 SITE 69/289017.SA.DM/N624	1003181-03	EB01-031810-GW	03/18/2010	03/23/2010	04/17/2010	IR69-EB01-031810-GW
1003181	CTO-081 SITE 69/289017.SA.DM/N624	1003181-04	FB01-031910	03/19/2010	03/23/2010	04/17/2010	IR69-FB01-031910
1003181	CTO-081 SITE 69/289017.SA.DM/N624	1003181-05	IR69-GW13DW	03/18/2010	03/23/2010	04/17/2010	IR69-GW13DW-10A
1003181	CTO-081 SITE 69/289017.SA.DM/N624	1003181-06	IR69-TB01-032210	03/22/2010	03/23/2010	04/17/2010	

Data Completeness

The data package was received complete and intact. Resubmissions were not required. (SW846 Method 8260B)

Laboratory: CompuChem

Holding Times

Sampling Date: 3/18-22/10
Received Date: 3/23/10
Analysis Dates: 3/31/10

Cooler Temp: 0.2-3.2°C

All prep and analysis holding time requirements were met.

Calibrations

Mass assignments were verified by the injection of BFB.

The initial and continuing calibrations required qualifications due to high %D values and low RRFs; see attached FormVI and VIIs.

Internal Standards

All criteria met.

Blank Summary

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying criteria.
- Qualification/Action codes where applied as stated in table below:
-

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Storage, Field, Trip, Instrument	Detects	Not detected	No qualifications
	< CRQL*	< CRQL*	Report CRQL value with a U
		> CRQL*	Use professional judgment
	> CRQL*	< CRQL*	Report CRQL value with a U
		> CRQL* and < blank concentration	Report the concentration for the sample with a U, or qualify the data as unusable R
		> CRQL* and > blank concentration	Use professional judgment
	= CRQL*	< CRQL*	Report CRQL value with a U
		> CRQL*	Use professional judgment
	Gross contamination	Detects	Qualify results as unusable R

*2x the CRQL for methylene chloride, 2-butanone and acetone

Method blank contamination was exhibited- qualifications were required. The associated field QC for this data package was: IR69-TB01-032210- trip blank; IR69-EB01-031810-GW-equipment blanks; IR69-FB01-031910- field blank.

Blank Contamination and Qualification Summaries

Blank ID	Compound	Concentration	Reporting Limit
VBLKSF	acetone	1.3J ug/L	2.5 ug/L
	methylene chloride	0.13J	0.5
	toluene	0.13J	0.5
IR69-TB01-031110	acetone	1.6J	2.5
	methylene chloride	0.052J	0.5
	cyclohexane	0.25J	0.5
IR69-TB01-032210	methylene chloride	0.071J	0.5
	toluene	0.072J	0.5
IR69-EB01-031810-GW	acetone	11	2.5
	methylene chloride	1.0	0.5
	methyl-tert-butyl ether	0.16J	0.5
	cis-1,2-dichloroethene	0.043	0.5
	2-butanone	3.2	2.5
	chloroform	0.57	0.5
	benzene	1.0	0.5
	toluene	3.8	0.5
	ethylbenzene	0.15J	0.5
	m,p-xylene	0.40J	0.5
	o-xylene	0.19J	0.5
	xylene (total)	0.61	0.5
IR69-FB01-031910	acetone	7.8	2.5
	methylene chloride	1.4	0.5
	2-butanone	1.8J	2.5
	chloroform	2.4	0.5
	benzene	0.17J	0.5
	toluene	2.1	0.5
	ethylbenzene	0.076J	0.5
	m,p-xylene	0.16J	0.5
	o-xylene	0.068	0.5
	xylene (total)	0.24	0.5

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Qual Code
IR69-GW28DW-10A	methylene chloride	U at RL	MBL
IR69-GW13DW-10A, IR69-GW28DW-10A, IR69-GW28IW-10A	toluene	U at RL	MBL
IR69-GW28DW-10A	acetone	U	MBL
IR69-GW13DW-10A	acetone	U	EBL
IR69-GW13DW-10A	methylene chloride	U	FBL
IR69-GW13DW-10A	cis-1,2-dichloroethene	U at RL	EBL

IR69-GW13DW-10A, IR69-GW28IW-10A	2-butanone	U at RL	EBL
IR69-GW13DW-10A	benzene	U at RL	EBL
IR69-GW13DW-10A, IR69-GW28IW-10A	ethylbenzene	U at RL	EBL
IR69-GW13DW-10A	m,p-xylene	U at RL	EBL
IR69-GW13DW-10A	xylene (total)	U at RL	EBL
IR69-GW28DW-10A	chloroform	U	EBL
IR69-GW28IW-10A	methylene chloride	U	EBL

Surrogates

All criteria were met.

Laboratory Control Sample

The LCS/LCSD associated with all samples exhibited low recoveries for bromomethane at 47% and 50% (QC limit 60-135%); therefore the results for this compound were qualified as estimated (J/UJ) in all samples.

Matrix Spike/Spike Duplicate Samples

An MS/MSD was not submitted for this data package.

Field Duplicate Sample

A field duplicate was not submitted for this data package.

Specific Comments:

All sample results were reported within the calibration range of the instruments.

Detection limits were acceptable. Raw data and calculations were verified.

We have limited the supporting documentation, found with these worksheets, to those forms that indicate qualifications were required.

Validator Signature: _____ **Date:** 7/13/10

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Lab File ID: 0C23006-TUN171 BFB Injection Date: 03/23/10

Instrument ID: 5972HP71 BFB Injection Time: 1354

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.5
75	30.0 - 60.0% of mass 95	41.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	87.1
175	5.0 - 9.0% of mass 174	6.7 (7.7)1
176	95.0 - 101.0% of mass 174	87.8 (100.8)1
177	5.0 - 9.0% of mass 176	5.9 (6.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD001	0C23006-CAL	0C23006-CAL271	03/23/10	1426
02	VSTD0.5	0C23006-CAL	0C23006-CAL171	03/23/10	1454
03	VSTD005	0C23006-CAL	0C23006-CAL371	03/23/10	1529
04	VSTD010	0C23006-CAL	0C23006-CAL471	03/23/10	1558
05	VSTD040	0C23006-CAL	0C23006-CAL671	03/23/10	1653
06	VSTD020	0C23006-CAL	0C23006-CAL5R7	03/23/10	1721
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Instrument ID: 5972HP71 Calibration Date(s): 03/23/10 03/23/10

Column: SPB-624 ID: 0.32 (mm) Calibration Time(s): 1426 1721

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2	MAX %RSD OR R^2	
Dichlorodifluoromethane	AVRG		0.44620239	14.057	15.000	<-
Chloromethane	AVRG		0.36100994	2.746	15.000	
Vinyl Chloride	AVRG		0.27117386	7.702	30.000	
Bromomethane	LINR	0.16722755	5.63092314	0.9978869	0.9900000	
Chloroethane	LINR	-0.0603386	6.54621450	0.9976747	0.9900000	
Trichlorofluoromethane	LINR	0.01969996	1.55131161	0.9975274	0.9900000	<-
1,1-Dichloroethene	AVRG		0.24477705	10.725	30.000	
Carbon disulfide	AVRG		0.78788743	5.941	15.000	
1,1,2-trichloro-1,2,2-triflu	LINR	-0.0934521	7.84789519	0.9991874	0.9900000	
Acetone	AVRG		0.03088940	10.967	15.000	
Methyl acetate	AVRG		0.08808612	14.290	15.000	
Methylene Chloride	AVRG		0.20486308	10.165	15.000	
trans-1,2-Dichloroethene	AVRG		0.27927231	9.612	15.000	
Methyl-tert-butyl ether	AVRG		0.37332211	10.572	15.000	
1,1-Dichloroethane	AVRG		0.51599851	6.390	15.000	
cis-1,2-Dichloroethene	AVRG		0.28384274	9.818	15.000	
-butanone	AVRG		0.04382008	9.656	15.000	
loroform	AVRG		0.47216297	6.803	30.000	
1,1,1-Trichloroethane	AVRG		0.56371143	10.946	15.000	
Carbon Tetrachloride	LINR	-0.0416406	2.25851692	0.9999137	0.9900000	
Benzene	AVRG		0.79132627	7.551	15.000	
1,2-Dichloroethane	AVRG		0.32414982	8.542	15.000	
Trichloroethene	AVRG		0.24072169	13.706	15.000	
1,2-Dichloropropane	AVRG		0.21862784	11.311	30.000	
Bromodichloromethane	AVRG		0.32785955	9.594	15.000	
cis-1,3-Dichloropropene	AVRG		0.31123012	8.964	15.000	
4-Methyl-2-pentanone	AVRG		0.14815484	11.373	15.000	
Toluene	AVRG		0.82240060	9.405	30.000	
trans-1,3-Dichloropropene	AVRG		0.37394347	7.835	15.000	
1,1,2-Trichloroethane	AVRG		0.19052002	6.720	15.000	
Tetrachloroethene	LINR	-0.0797114	3.97616834	0.9998282	0.9900000	
2-hexanone	AVRG		0.09994493	11.002	15.000	
Dibromochloromethane	AVRG		0.26627949	7.224	15.000	
1,2-Dibromoethane	AVRG		0.25346719	8.442	15.000	
Chlorobenzene	AVRG		1.04476959	10.092	15.000	
Ethylbenzene	AVRG		0.60451954	12.188	30.000	
m,p-Xylene	AVRG		0.75237608	12.316	15.000	
o-Xylene	AVRG		0.70244343	12.352	15.000	
Styrene	AVRG		1.07301015	8.083	15.000	
Bromoform	AVRG		0.16166090	7.882	15.000	
Isopropyl Benzene	AVRG		1.97002351	12.701	15.000	
1,1,2,2-Tetrachloroethane	AVRG		0.49257840	7.213	15.000	
1,3-Dichlorobenzene	AVRG		1.56833663	11.661	15.000	
1,4-Dichlorobenzene	AVRG		1.51589400	11.078	15.000	

FORM VI VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Lab File ID: 0C30008-TUN171 BFB Injection Date: 03/31/10

Instrument ID: 5972HP71 BFB Injection Time: 0009

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.0
75	30.0 - 60.0% of mass 95	37.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	71.7
175	5.0 - 9.0% of mass 174	5.1 (7.1)1
176	95.0 - 101.0% of mass 174	72.0 (100.4)1
177	5.0 - 9.0% of mass 176	4.6 (6.4)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005	0C30008-CCV	0C30008-CCV171	03/31/10	0024
02	VBLKSF	0033040-BLK	0033040-BLK171	03/31/10	0101
03	VSFLCS	0033040-BS1	0033040-BS171	03/31/10	0129
04	VSFLCSD	0033040-BSD	0033040-BSD171	03/31/10	0156
05	IR69-GW28DW	1003181-01	1003181-0171	03/31/10	0443
06	IR69-GW28IW	1003181-02	1003181-0271	03/31/10	0511
07	EB01-031810-GW	1003181-03	1003181-0371	03/31/10	0539
08	FB01-031910	1003181-04	1003181-0471	03/31/10	0606
09	IR69-GW13DW	1003181-05	1003181-0571	03/31/10	0634
10	IR69-TB01-032210	1003181-06	1003181-0671	03/31/10	0702
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Instrument ID: 5972HP71 Calibration Date: 03/31/10 Time: 0024

Lab File ID: 0C30008-CCV171 Init. Calib. Date(s): 03/23/10 03/23/10

Init. Calib. Times: 1426 1721

GC Column: SPB-624 ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF5 or AMOUNT	CCAL RRF5	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dichlorodifluoromethane	0.4462000	0.1504979	0.1504979	0.001	-66.27	90.00	AVRG
Chloromethane	0.3610100	0.2808811	0.2808811	0.1	-22.20	90.00	AVRG
Vinyl Chloride	0.2711700	0.2958591	0.2958591	0.001	9.10	20.00	AVRG
Bromomethane	54.678781	125.00000	0.0479855	0.001	-56.26	90.00	LINR
Chloroethane	114.39058	125.00000	0.1490118	0.001	-8.49	90.00	LINR
Trichlorofluoromethane	113.07087	125.00000	0.5703993	0.001	-9.54	90.00	LINR
1,1-Dichloroethene	0.2447800	0.2653375	0.2653375	0.001	8.40	20.00	AVRG
Carbon disulfide	0.7878900	0.8703536	0.8703536	0.001	10.47	90.00	AVRG
1,1,2-trichloro-1,2,2-triflu	152.79810	125.00000	0.1676675	0.001	22.24	90.00	LINR
Acetone	0.0308900	0.0357101	0.0357101	0.001	15.60	90.00	AVRG
Methyl acetate	0.0880800	0.1234474	0.1234474	0.001	40.15	90.00	AVRG
Methylene Chloride	0.2048600	0.2122905	0.2122905	0.001	3.63	90.00	AVRG
trans-1,2-Dichloroethene	0.2792700	0.2947446	0.2947446	0.001	5.54	90.00	AVRG
Methyl-tert-butyl ether	0.3733200	0.3635753	0.3635753	0.001	-2.61	90.00	AVRG
1-Dichloroethane	0.5160000	0.5353817	0.5353817	0.1	3.76	90.00	AVRG
cis-1,2-Dichloroethene	0.2838400	0.2836968	0.2836968	0.001	-0.05	90.00	AVRG
2-butanone	0.0438200	0.0489001	0.0489001	0.001	11.59	90.00	AVRG
Chloroform	0.4721600	0.4751379	0.4751379	0.001	0.63	20.00	AVRG
1,1,1-Trichloroethane	0.5637100	0.5615682	0.5615682	0.001	-0.38	90.00	AVRG
Carbon Tetrachloride	122.25467	125.00000	0.4514812	0.001	-2.20	90.00	LINR
Benzene	0.7913200	0.8378470	0.8378470	0.001	5.88	90.00	AVRG
1,2-Dichloroethane	0.3241500	0.3070822	0.3070822	0.001	-5.26	90.00	AVRG
Trichloroethene	0.2407200	0.2341793	0.2341793	0.001	-2.72	90.00	AVRG
1,2-Dichloropropane	0.2186300	0.2424552	0.2424552	0.001	10.90	20.00	AVRG
Bromodichloromethane	0.3278600	0.3215989	0.3215989	0.001	-1.91	90.00	AVRG
cis-1,3-Dichloropropene	0.3112300	0.3135088	0.3135088	0.001	0.73	90.00	AVRG
4-Methyl-2-pentanone	0.1481500	0.1352712	0.1352712	0.001	-8.69	90.00	AVRG
Toluene	0.8224000	0.7258913	0.7258913	0.001	-11.74	20.00	AVRG
trans-1,3-Dichloropropene	0.3739400	0.2977359	0.2977359	0.001	-20.38	90.00	AVRG
1,1,2-Trichloroethane	0.1905200	0.1624537	0.1624537	0.001	-14.73	90.00	AVRG
Tetrachloroethene	103.57264	125.00000	0.2284341	0.001	-17.14	90.00	LINR
2-hexanone	0.0999400	0.0964515	0.0964515	0.001	-3.49	90.00	AVRG
Dibromochloromethane	0.2662800	0.2003519	0.2003519	0.001	-24.76	90.00	AVRG
1,2-Dibromoethane	0.2534600	0.1953301	0.1953301	0.001	-22.93	90.00	AVRG
Chlorobenzene	1.0447700	0.8777528	0.8777528	0.3	-15.99	90.00	AVRG
Ethylbenzene	0.6045200	0.5124499	0.5124499	0.001	-15.23	20.00	AVRG
m,p-Xylene	0.7523800	0.6482351	0.6482351	0.001	-13.84	90.00	AVRG
o-Xylene	0.7024400	0.6163535	0.6163535	0.001	-12.26	90.00	AVRG
Styrene	1.0730100	0.8982453	0.8982453	0.001	-16.29	90.00	AVRG
Bromoform	0.1616600	0.1129115	0.1129115	0.1	-30.15	90.00	AVRG
Isopropyl Benzene	1.9700200	1.6491206	1.6491206	0.001	-16.29	90.00	AVRG
1,1,2,2-Tetrachloroethane	0.4925800	0.4117426	0.4117426	0.3	-16.41	90.00	AVRG

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Instrument ID: 5972HP71 Calibration Date: 03/31/10 Time: 0024

Lab File ID: 0C30008-CCV171 Init. Calib. Date(s): 03/23/10 03/23/10

Init. Calib. Times: 1426 1721

GC Column: SPB-624 ID: 0.32 (mm)

COMPOUND	RRF or AMOUNT	RRF5 or AMOUNT	CCAL RRF5	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
1,3-Dichlorobenzene	1.5683400	1.2112583	1.2112583	0.001	-22.77	90.00	AVRG
1,4-Dichlorobenzene	1.5159000	1.1873700	1.1873700	0.001	-21.67	90.00	AVRG
1,2-Dichlorobenzene	1.2324200	0.9976888	0.9976888	0.001	-19.05	90.00	AVRG
1,2-Dibromo-3-Chloropropane	93.548927	125.00000	0.0683225	0.001	-25.16	90.00	LINR
1,2,4-Trichlorobenzene	96.991588	125.00000	0.9722076	0.001	-22.41	90.00	LINR
Xylene (total)	0.7024400	0.6163535	0.6163535	0.001	-12.26	90.00	AVRG
Cyclohexane	143.93837	125.00000	0.3306304	0.001	15.15	90.00	LINR
Methylcyclohexane	146.19197	125.00000	0.3829093	0.001	16.95	90.00	LINR
Dibromofluoromethane	0.3374700	0.3296848	0.3296848	0.001	-2.31	90.00	AVRG
1,2-Dichloroethane-d4	121.32017	125.00000	0.2442648	0.001	-2.94	90.00	LINR
Toluene-d8	1.3529200	1.1155158	1.1155158	0.001	-17.55	90.00	AVRG
Bromofluorobenzene	1.4270100	1.3066840	1.3066840	0.001	-8.43	90.00	AVRG

3A
WATER VOLATILE LAB CONTROL SAMPLE

VSFLCS

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix Spike - EPA Sample No.: VSFLCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Dichlorodifluoromethane	5		2.717	54	30-155
Chloromethane	5		4.274	85	40-125
Vinyl Chloride	5		5.394	108	50-145
Bromomethane	5		2.354	47*	60-135
Chloroethane	5		4.42	88	50-150
Trichlorofluoromethane	5		4.789	96	60-145
1,1-Dichloroethene	5		5.049	101	70-130
Carbon disulfide	5		5.336	107	35-160
1,1,2-trichloro-1,2,2-t	5		5.804	116	50-150
Acetone	25		29.99	120	40-140
Methyl acetate	5		7.771	155*	50-150
Methylene Chloride	5		5.212	104	55-140
trans-1,2-Dichloroethen	5		5.1	102	60-140
Methyl-tert-butyl ether	5		5.139	103	65-125
1,1-Dichloroethane	5		5.35	107	70-135
cis-1,2-Dichloroethene	5		5	100	70-125
2-butanone	25		30.47	122	30-150
Chloroform	5		5.105	102	65-135
1,1,1-Trichloroethane	5		4.953	99	65-130
Carbon Tetrachloride	5		4.902	98	65-140
Benzene	5		5.235	105	80-120
1,2-Dichloroethane	5		5.024	100	70-130
Trichloroethene	5		4.743	95	70-125
1,2-Dichloropropane	5		5.638	113	75-125
Bromodichloromethane	5		5.045	101	75-120
cis-1,3-Dichloropropene	5		5.2	104	70-130
4-Methyl-2-pentanone	25		25.67	103	60-135
Toluene	5		4.498	90	75-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

3A
WATER VOLATILE LAB CONTROL SAMPLE

VSFLCS

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix Spike - EPA Sample No.: VSFLCS

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Dichlorodifluoromethane	5	2.867	57	5	30	30-155
Chloromethane	5	4.62	92	8	30	40-125
Vinyl Chloride	5	5.63	113	5	30	50-145
Bromomethane	5	2.509	50*	6	30	60-135
Chloroethane	5	4.576	92	4	30	50-150
Trichlorofluoromethane	5	4.855	97	1	30	60-145
1,1-Dichloroethene	5	5.253	105	4	30	70-130
Carbon disulfide	5	5.352	107	0	30	35-160
1,1,2-trichloro-1,2,2-t	5	6.164	123	6	30	50-150
Acetone	25	32.94	132	10	30	40-140
Methyl acetate	5	7.798	156*	1	30	50-150
Methylene Chloride	5	5.389	108	4	30	55-140
trans-1,2-Dichloroethen	5	5.2	104	2	30	60-140
Methyl-tert-butyl ether	5	5.273	105	2	30	65-125
1,1-Dichloroethane	5	5.316	106	1	30	70-135
cis-1,2-Dichloroethene	5	5.1	102	2	30	70-125
2-butanone	25	32.8	131	7	30	30-150
Chloroform	5	5.277	106	4	30	65-135
1,1,1-Trichloroethane	5	5.038	101	2	30	65-130
Carbon Tetrachloride	5	4.944	99	1	30	65-140
Benzene	5	5.354	107	2	30	80-120
1,2-Dichloroethane	5	5.24	105	5	30	70-130
Trichloroethene	5	4.798	96	1	30	70-125
1,2-Dichloropropane	5	5.835	117	3	30	75-125
Bromodichloromethane	5	5.263	105	4	30	75-120
cis-1,3-Dichloropropene	5	5.212	104	0	30	70-130
4-Methyl-2-pentanone	25	25.91	104	1	30	60-135
Toluene	5	4.427	89	1	30	75-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKSF

Lab Name: COMPUCHEM Contract: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Lab File ID: 0033040-BLK171 Lab Sample ID: 0033040-BLK1

Date Analyzed: 03/31/10 Time Analyzed: 0101

GC Column: SPB-624 ID: 0.32 (mm) Heated Purge: (Y/N) N

Instrument ID: 5972HP71

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VSFLCS	0033040-BS1	0033040-BS17	0129
02	VSFLCSD	0033040-BSD1	0033040-BSD1	0156
03	IR69-GW28DW	1003181-01	1003181-0171	0443
04	IR69-GW28IW	1003181-02	1003181-0271	0511
05	EB01-031810-GW	1003181-03	1003181-0371	0539
06	FB01-031910	1003181-04	1003181-0471	0606
07	IR69-GW13DW	1003181-05	1003181-0571	0634
08	IR69-TB01-032210	1003181-06	1003181-0671	0702
09				
10				
11				
12				
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30				

COMMENTS:

Initial Calibration Date: 3/23/2010

RRF and %RSD Calculations:

Compound Name: vinyl chloride
Lab Value: 0.2321

Area of Compound	1465977
Area of Internal STD	789488
Conc. of Internal STD	125
Conc. of Compound	1000
Calculated RRF	0.232

Compound Name: 2-hexanone
Lab Value: 11.0

RRF of STD 1	0.1155
RRF of STD 2	0.0900
RRF of STD 3	0.0970
RRF of STD 4	0.1110
RRF of STD 5	0.0975
RRF of STD 6	0.0886
Calculated % RSD	11.0

Continuing Calibration File ID: 3/31/2010

RRF and %D Calculations:

Compound Name: methylene chloride
Lab Value: 0.212

Area of Compound	101709
Area of Internal STD	479103
Conc. of Internal STD	125
Conc. of Compound	125
Calculated RRF	0.212

Compound Name: toluene
Lab Value: 11.7

Average RRF	0.822
Calibration Check RRF	0.726
Calculated % D	11.7

SAMPLE CALCULATION

Sample ID: EB01-031810-GW
Standard ID: 3/23/2010
Compound: acetone
Concnetration: 11 ug/L

	Water (ug/L)	Soil (ug/Kg)	Soil ug/Kg)
Area of Compound	24593		
Area of Internal STD	375678		
Conc. of Internal (ng)	125		
RRF of Compound	0.03089		
Dilution Factor	1		
Weight of Sample	NA	25	
Volume of Sample	25	NA	
% Moisture	NA	0.79	
Aliquot of sample	NA	NA	
Concentration	10.60	#DIV/0!	#DIV/0!

	RT of Internal STD	RT of Compound	RRT
Sample	11.072	7.693	0.695
Standard	11.073	7.694	0.695

CompuChem

A division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1003181
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS:		**IR69-GW28DW**	**IR69-GW28IW**
EB01-031810-GW	**FB01-031910**	**IR69-GW13DW**	**IR69-TB01-032210**

The 6 aqueous samples listed above were received intact, properly refrigerated between 0.2°C and 3.2°C, with proper documentation, in sealed shipping containers, on March 23, 2010. The Trip Blank was scheduled for the requested analyses of the volatile fraction only. All remaining samples were scheduled for the requested analyses of the volatile, semivolatile, pesticide and RSK fractions. SW-846, 3rd Edition, Update 3, Method 8260B was used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section, and all pertinent Laboratory notices for SDG 1003181 are included in the sample data sections.

Analysis holding time requirements were met for all of these samples. The pH values of the samples were equal to 1. There were volatile Project/Target Compound List (TCL) analytes identified above the Contract Required Quantitation Limit (CRQL) in five of these six samples. All of the system monitoring compounds met recovery criteria in the analyses of these samples. All of the internal standards met response and retention time criteria in the analyses of these samples.

All Bromofluorobenzene (BFB) abundance criteria were met for tunes associated to this SDG. All QC criteria were met for all initial and continuing calibration standards associated to this SDG. Manual integrations were not performed on any of the process files associated with this SDG. The associated method blanks met all quality control criteria. The associated Laboratory Control Samples (LCS/LCSD) met overall accuracy criteria. However, LSFLCS/LSFLCSD were bias low for Bromomethane and bias high for Methyl Acetate. No matrix spike/matrix spike duplicate (MS/MSD) samples were requested for the volatile fraction with this SDG.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Quentisha L. Forrester
Analyst II
April 20, 2010

Data Completeness

The data package was received complete and intact. Resubmissions were not required. (SW846 Method 8270C)
All field sample and QC blank IDs were missing the first four (IR69) and/or the last four (-10A) characters. The characters were added to the Form 1s in the DV reports by the data validator.

Laboratory: CompuChem

Holding Times

Sampling Date: 3/18-22/10
Received Date: 3/23/10
Extraction Date: 3/25/10
Analysis Dates: 4/02-03/10
Cooler Temp: 0.2-3.2°C

All prep and analysis holding time requirements were met.

Calibrations

Mass assignments were verified by the injection of DFTPP.
The initial and continuing calibrations required no qualifications.

Internal Standards

All criteria met.

Blank Summary

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying criteria.
- Qualification/Action codes where applied as stated in table below:

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Field	Detects	Not detected	No qualifications
	< CRQL*	< CRQL*	Report CRQL value with a U
		≥ CRQL*	Use professional judgment
	> CRQL*	< CRQL*	Report CRQL value with a U
		≥ CRQL* and < blank concentration	Report the concentration for the sample with a U, or qualify the data as unusable R
		≥ CRQL* and ≥ blank concentration	Use professional judgment
	= CRQL*	< CRQL*	Report CRQL value with a U
		≥ CRQL*	Use professional judgment
	Gross contamination	Detects	Qualify results as unusable R

*5x the CRQL for bis(2-ethylhexyl)phthalate

Method blank contamination was not exhibited- qualifications were not required. The associated field QC for this data package was: IR69-EB01-031810-GW (no positive results)-equipment blanks; IR69-FB01-031910 (no positive results)- field blank.

Surrogates

All criteria were met.

Laboratory Control Sample

No qualifications were required.

Matrix Spike/Spike Duplicate Samples

An MS/MSD was not submitted for this data package.

Field Duplicate Sample

A field duplicate was not submitted for this data package.

Specific Comments:

All sample results were reported within the calibration range of the instruments.

Detection limits were acceptable. Raw data and calculations were verified.

We have limited the supporting documentation, found with these worksheets, to those forms that indicate qualifications were required.

Validator Signature: _____ **Date:** 1/22/10

Initial Calibration Date: 3/16/2010

RRF and %RSD Calculations:

Compound Name: phenol
Lab Value: 1.426

Area of Compound	301398
Area of Internal STD	422640
Conc. of Internal STD	40
Conc. of Compound	20
Calculated RRF	1.426

Compound Name: 2-methylphenol
Lab Value: 11.1

RRF of STD 1	1.055
RRF of STD 2	1.049
RRF of STD 3	0.906
RRF of STD 4	1.084
RRF of STD 5	0.834
Calculated % RSD	11.10

Continuing Calibration File ID: 4/3/2010

RRF and %D Calculations:

Compound Name: benzo(k)fluoranthene
Lab Value: 1.082

Area of Compound	2888801
Area of Internal STD	2136225
Conc. of Internal STD	40
Conc. of Compound	50
Calculated RRF	1.082

Compound Name: indeno(1,2,3-cd)pyrene
Lab Value: 11.3

Average RRF	0.852
Calibration Check RRF	0.9483188
Calculated % D	-11.31

CompuChem

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501 Madison Avenue
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Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1003181
PROTOCOL: SW-846
SAMPLE IDENTIFICATIONS: IR69-GW28DW, IR69-GW28IW, EB01-031810-GW, FB01-031910, and IR69-GW13DW

The 5 water samples listed above were received between 0.2°C and 0.5°C, with proper documentation, in sealed shipping container, on March 23rd, 2010. The samples were scheduled for the requested analysis of the semivolatile fraction. SW-846, 3rd Edition, Update 3, Separatory Funnel extraction (Method 3510C), and Method 8270C were used to prepare and analyze these samples, with the exceptions and/or additions requested by the client. This portion of the SDG narrative deals with the semivolatile fraction only.

Semivolatiles
Extraction and analysis holding time requirements were met for these samples.

There were no semivolatile target compound list (TCL) analytes identified above the Quantitation Limit (QL) in any of these samples.

Manual integrations were performed on sample files 1003181-01A70, 1003181-04A70; QC files 0032426-BS1A70, 0032426-BSD1A70; ICAL files 0C16003-CAL1A70, 0C16003-CAL2A70, 0C16003-CAL3A70, 0C16003-CAL4A70, 0C16003-CAL5A70; and CCAL file 0D03002-CCV1A70. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.

All decafluorotriphenylphosphine (DFTPP) abundance criteria were met for tunes associated to this SDG. Tailing factor criteria were met for pentachlorophenol and benzidine. The breakdown criterion was met for DDT. These three compounds have been added to the DFTPP solution and analyzed together.

Overall QC criteria were met for all initial and continuing calibration standards associated to this SDG.

The surrogates met recovery criteria in the analyses of the samples.

All of the internal standards met response and retention time criteria in the analyses of the samples.

The associated method blank met all quality control criteria.

The associated Laboratory Control Samples (SPILCS/SPILCSD) prepared and analyzed along with these samples bias high for 3,3'-Dichlorobenzidine in SPILCS and SPILCSD and for Caprolactam in SPILCSD.

No matrix spike/matrix spike duplicate (MS/MSD) samples were requested for this SDG.

An uncertainty of these test results may be estimated from the recovery of the surrogates added to the sample prior to sample preparation or from the recovery of spiked compound(s) in the associated laboratory control sample. Further information is available upon request.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

CompuChem
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501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1003181
PROTOCOL: SW-846
Date: May 12, 2010

SAMPLE IDENTIFICATIONS:

EB01-031810-GW, FB01-031910, IR69-GW13DW, IR69-GW28DW, and IR69GW28IW

The five (5) aqueous samples listed above were received intact, with proper documentation, in sealed shipping containers, on March 23, 2010. The cooler temperatures associated with these samples were 3.2, 0.2, 0.4, and 0.5 °C.

The samples listed above were scheduled for the requested analysis of the semivolatile Selected Ion Monitoring (SIM) fraction.

SW-846, 3rd Edition, Update 3, Separatory Funnel extraction (Method 3510C), and Method 8270C Selected Ion Monitoring (SIM) were used to prepare and analyze these samples, with the exceptions and/or additions requested by the client. This portion of the narrative deals with the semivolatile SIM fraction only.

Semivolatile SIM:

Extraction and analysis holding time requirements were met for these samples.

Sample FB01-031910 was extracted using 975 mL of raw sample, rather than the method-specified amount of 1000 mL. The use of this lower volume of the raw sample resulted in slightly higher Contract Required Quantitation Limits (CRQLs).

Sample IR69-GW28IW was extracted using 950 mL of raw sample, rather than the method-specified amount of 1000 mL. The use of this lower volume of the raw sample resulted in slightly higher Contract Required Quantitation Limits (CRQLs).

There were no semivolatile SIM project analytes identified above the Contract Required Quantitation Limits (CRQLs) in any of these samples.

Manual integrations were performed on one or more of the process files associated with this SDG, including standards SSTD0.40V6, SSTD1.20V6, SSTD3.00V6, SSTD5.00V6, and SSTD10.0V6. Please see the detailed Manual Integration Summary report that is located behind this SDG narrative. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.

Mass assignments were verified by the injections of perfluorotributylamine for the SIM analysis.

All QC criteria were met for all initial and continuing calibration standards associated to this SDG.

No surrogate standards are reported for the semivolatile SIM analysis in this SDG. The surrogate standards are included in the full scan analysis for these samples.

All of the internal standards met response and retention time criteria in the analyses of these samples.

The associated method blank met all quality control criteria.

No matrix spike/matrix spike duplicate (MS/MSD) samples were requested for the semivolatile SIM fraction for this SDG.

The associated Laboratory Control Samples, prepared and analyzed along with these sample, met all accuracy and precision criteria.

An uncertainty of these test results may be estimated from the recovery of the surrogates added to the sample prior to sample preparation or from the recovery of spiked compound(s) in the associated laboratory control sample. Further information is available upon request.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted electronically has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

S. A. Parikh

Saroj A. Parikh
Data Reviewer
May 12, 2010

Holding Times

Sampling Date: 3/18-3/19
Received Date: 3/23
Extraction Date: 3/25
Analysis Dates: 3/29-3/30

All extraction and analysis holding times were met for the samples in this SDG. No qualifications were required. Sample receipt data is in order. Cooler temperature was within acceptable range.

Calibrations

Initial calibrations were performed according to the method with a five-point curve for the single component pesticides, toxaphene, chlordane and the PCB target compounds 1016 & 1660. Single points were included for the other Aroclors. Calibration factors were calculated. %RSDs were within QC limits. Continuing calibration standards were analyzed per the SW-846 methods requested. All PEM breakdown criteria were met. All continuing calibration criteria were met. Column resolution was acceptable. The correct analytical sequence was run. All required instrument blanks were analyzed. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Any compound detected in the sample, and the associated blank, must be qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than five (5) times the blank concentration.
- Sample weight, volume or dilution factor must be taken into consideration when applying the 5X criteria.
- Apply the same data validation guidelines to any associated rinse and field blanks and all associated samples.
- Qualification Action codes:
-

No Action -	The sample result is greater than the RL and greater than five times (5X) the blank value.
U at RL-	The sample result is less than the RL when the blank contamination level is less than the RL.

No contamination that resulted in qualification of the data was noted in the associated method or instrument blanks or the submitted field QC blanks.

SURROGATE RECOVERIES

All surrogates were OK.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

There was no MS/MSD. No qualifications were required.

LABORATORY CONTROL SAMPLES

The submitted LCS samples exhibited acceptable recoveries. No qualifications were required.

FIELD DUPLICATE SAMPLE SUMMARY

Please note that results aren't assessed for field duplicate reproducibility unless both results are above the compound reporting limit.

Sample ID: none **Duplicate ID:**

Compound	Sample Conc.	Duplicate Conc.	RPD
4,4'-DDE			#DIV/0!
4,4'-DDT			#DIV/0!

Comments: No qualifications were required

SAMPLE RESULT VERIFICATION

Calculations were verified. All P flagged results were qualified as estimated J (column quantitation %Ds >40.)

Reviewer_____ **Date:**____/____/____

CompuChem

a division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1003181
PROTOCOL: SW-846

SAMPLE IDENTIFICATIONS: IR69-GW28DW, IR69-GW28IW, EB01-031810-GW, FB01-031910, IR69-GW13DW

The five water samples listed above were received intact, refrigerated between 0.2 and 3.2°C, with proper documentation, in sealed shipping containers, on March 23, 2010. The samples were scheduled for the requested analysis of the Pesticide/PCB fraction. SW-846, 3rd Edition, Update 4, Method 8081B and 8082A were used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. All pertinent Quality Assurance notices are included in the narrative section and all pertinent Laboratory notices for SDG # 1003181 are included in the sample data sections.

Pesticide/PCB

Extraction and analysis holding time requirements were met for the samples.

No target analytes confirmed above the reporting limits in the samples.

All QC criteria were met for all initial and continuing calibration standards associated to this SDG.

All surrogate recoveries were with the method specified limits.

The method blank associated with the samples met all quality control criteria.

Per client's request, duplicate matrix spikes were not performed with this SDG. The Laboratory Control Samples (LCS/LCSD) prepared and analyzed with the samples met recovery and precision criteria.

An uncertainty of these test results may be estimated from the recovery of the surrogates added to the sample prior to sample preparation or from the recovery of spiked compound(s) in the associated laboratory control sample. Further information is available upon request.

I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on CD has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Teresa Amentt Jennings

Teresa Amentt Jennings
GC/HPLC Data Reviewer
April 16, 2010

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

EB01-031810-GW

Lab Name: COMPUCHEM Contract: 8081B-8082A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Lab Sample ID: 1003181-03 Date(s) Analyzed: 03/30/10 03/30/10

Instrument ID (1): TRACEGC84 Instrument ID (2): TRACEGC85

GC Column(1): CLPEST ID: 0.32(mm) GC Column(2): CLPEST2 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
beta-BHC	1	10.39	10.31	10.46	0.0067	
	2	10.15	10.09	10.23	0.010	39.5
Dieldrin	1	14.81	14.78	14.92	0.032	
	2	14.41	14.40	14.54	0.0063	134.2
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

page 1 of 1

FORM X PEST-1

Initial Calibration Date: 3/26/2010

RRF and %RSD Calculations:

Compound Name: heptachlor in level 1 on C1
Lab Value: 742200.0000

Area of Compound	3712
Conc. of Compound	0.005
Calculated RRF	742400.0000

Compound Name: heptachlor
Lab Value: 6.7

RRF of STD 1	742200.0000
RRF of STD 2	699900.0000
RRF of STD 3	673500.0000
RRF of STD 4	652700.0000
RRF of STD 5	623462.0000
RRF of STD 6	
Calculated % RSD	6.69

Continuing Calibration File ID: 100ZINDC3ZP

RRF and %D Calculations:

Compound Name: aldrin
Lab Value: 625657.50000

Area of compound	12513
Conc. Of compound	0.02
Calculated CF	625650.000

Compound Name: alrin
Lab Value: 0.2

Avg. CF from ICAL	626935.00000
CF of CCV	625650.00000
Calculated % D	0.2

rounding differences noted - no quals required

SAMPLE CALCULATION

Sample ID: EB01-031810-GW
Standard ID: ICAL curve 3/26/10
Compound: dieldrin
Concnetration: 0.0063JP ug/L

	Water (ug/L)	Soil (ug/Kg)
Area of Compound	497	
Calibration Factor of Compound	396185	
Dilution Factor	1	
Weight/Volume of Sample	1000	
Final Volume extract	5000	
% Moisture	NA	
conversion factor	1	
Concentration	0.00627	#DIV/0!

This SDG contains select metals analysis using SW-846 6010B/7470A/7471A.

HOLDING TIMES

Sampling Date: 3/18, 3/19
Received Date: 3/23 Cooler temps: OK
Prep. Dates: 4/6 ICP, 4/6 Hg
Analysis Dates: 4/12 ICP, 4/7 Hg
All holding time requirements were met.

CALIBRATIONS

All initial calibration criteria were met. Single point calibration was analyzed for ICP. Calibration verification criteria were met for all ICV and CCV standards. The RL standards were analyzed and did not meet method criteria for all analytes. See report for qualifications. Interference check standards were analyzed and met criteria in all standards. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if an analyte is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying the criteria.
- Apply the same data validation guidelines to any associated calibration, preparation, and field QC blanks and all associated samples.
- Qualification/Action codes:

No Action - The sample result is greater than the CRDL and greater than ten times (10X) the blank value.
U - The sample result is greater than or equal to the MDL but less than or equal to the RL, result is reported as non-detect at the RL.
R or J. The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator.

Blank Contamination and Qualification Summaries

Blank ID	Analyte	Concentration	Action Level	Q Flag	Q Code
CCB	magnesium	16.7B ug/L	RL	U	MBL
FB01-031910	zinc	0.97B ug/L	RL	U	FBL
EB01-031810-GW	copper	2.2B ug/L	RL	U	EBL

The concentration noted for the CCBs is the highest concentration in all the CCBs. However, when qualifying samples for CCB contamination, associated samples are those just prior to or just following a CCB. Therefore, not all analytes in all samples are flagged for noted CCB contamination. See worksheets for associations. Samples are qualified for field QC blank contamination based on QC tracking provided by CH2M HILL. Negative contamination in a prep blank or CCB, if less than the analyte CRDL, is qualified based on professional judgment.

Please note that based on the National Functional Guidelines, for contamination above the CRDL, results in the field samples that are greater than the RL up to 10X the blank contamination level should be qualified as estimated and considered biased high or they should be rejected. Associated samples and required qualifications are noted in the following table.

Sample ID	Analyte	Q Flag	Q Code
all field samples	magnesium	U at RL	MBL
IR69-GW28IW-10A	zinc	U at RL	FBL
IR69-GW28IW-10A	copper	U at RL	EBL

MATRIX SPIKE/DUPLICATE SUMMARY

There was no spike pair in this SDG. All LCS recoveries and RPDs were acceptable.

SERIAL DILUTIONS

The serial dilution results were high for potassium (16.7). Results for potassium were qualified as estimated in the field samples.

SAMPLE CALCULATION

EPA SAMPLE ID: IR69-GW13DW-10A
ANALYTE: manganese
CONCENTRATION: 57.6 ug/L
%Solids – NA
Raw Data result: 57.62717 ug/L Water results are direct read from the instrument.

FIELD DUPLICATE SAMPLE RESULTS

Note: Field duplicate results are assessed only if both results are above the CRDL.

Sample ID: none **Duplicate Sample ID:**

Analyte	Sample Conc.	Duplicate Conc.	RPD
aluminum			#DIV/0!
barium			#DIV/0!
calcium			#DIV/0!
chromium			#DIV/0!
iron			#DIV/0!
lead			#DIV/0!
magnesium			#DIV/0!
manganese			#DIV/0!
sodium			#DIV/0!
zinc			#DIV/0!

Comments: Flag Mn in both samples

SAMPLE RESULT VERIFICATION

Specific Comments:

All sample results were reported within the calibration/linear range of the instruments. Detection limits were acceptable. Raw data was verified. All positive results reported at concentrations between the IDL and the RL were qualified as estimated J by the laboratory. All field sample and QC blank IDs were missing either the first 4 or the last four characters. The characters (-10A) were added for the field samples and the characters IR69 were added for the field QC blanks to the Form 1s in the DV reports by the data validator.

Reviewer _____ **Date:** _____

CompuChem
a Division of Liberty Analytical Corp.
501 Madison Avenue
Cary, NC 27513

SDG NARRATIVE
SDG # 1003181

The indicated Sample Delivery Group (SDG) consisting of five (5) liquid samples was received into the laboratory information management system (LIMS) on March 23, 2010 intact and in good condition with Chain of Custody (COC) Records in order, unless otherwise noted in any attachments or Quality Assurance Notices. The temperature of the samples upon receipt was 0.2 to 3.2°C. Sample ID's reported in this data package are noted by the receiving department on the COC if they differ from those listed by the samplers on the COC.

The samples were digested and analyzed in accordance with SW846 methodology for the requested TAL metals and mercury.

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (ICV & CCV) and blanks (ICB & CCB) associated with this data were confirmed to be within allowable limits.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verification (PBW, LCSW, & LCSWD) was found to be within acceptable ranges and the field samples were analyzed within the specified holding times.

MATRIX RELATED QUALITY CONTROL:

No matrix spikes were requested for this SDG.

A five-fold serial dilution of sample, CCN = 1003181-01 ID IR69-GW28DWL was performed in accordance with requirements for ICP and mercury analyses.

The adjusted sample concentration was inside control limits for the requested analytes except potassium.

The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice.

Susan W. Bass
Senior Chemist
April 13, 2010

SW846 - METALS

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: COMPUCHEM Contract: _____

Lab Code: LIBRTY Case No.: _____ SAS No.: _____ SDG No.: 1003181

AA CRDL Standard Source: HP0916320

ICP CRDL Standard Source: HP0916320

Concentration Units: ug/L

Analyte	True	Found	%R	CRDL Standard for ICP Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum				200.0	160.92	80.5		
Antimony				10.0	12.36	123.6		
Arsenic				10.0	9.47	94.7		
Barium				200.0	197.95	99.0		
Beryllium				5.0	4.65	93.0		
Cadmium				5.0	4.80	96.0		
Calcium				5000.0	4994.24	99.9		
Chromium				10.0	10.54	105.4		
Cobalt				5.0	4.62	92.4		
Copper				5.0	5.66	113.2		
Iron				100.0	96.07	96.1		
Lead				3.0	2.55	85.0		
Magnesium				5000.0	4904.24	98.1		
Manganese				10.0	9.43	94.3		
Mercury	0.2	0.20	100.0					
Nickel				5.0	3.87	77.4		
Potassium				5000.0	4354.91	87.1		
Selenium				5.0	3.55	0.0		
Silver				5.0	4.87	97.4		
Sodium				5000.0	5091.57	101.8		
Thallium				10.0	15.15	151.5		
Vanadium				20.0	19.62	98.1		
Zinc				20.0	17.59	88.0		

Control Limits: no limits have been established by EPA at this time

SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum	200.0	U	83.0	B	85.0	B	111.5	B	36.120	B	P
Antimony	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P
Arsenic	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P
Barium	-0.3	B	-0.3	B	200.0	U	-0.4	B	-0.487	B	P
Beryllium	5.0	U	0.8	B	1.0	B	1.3	B	0.394	B	P
Cadmium	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P
Calcium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	5000.000	U	P
Chromium	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P
Cobalt	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P
Copper	5.0	U	-1.9	B	-2.1	B	-2.9	B	-1.791	B	P
Iron	100.0	U	100.0	U	100.0	U	100.0	U	100.000	U	P
Lead	3.0	U	3.0	U	3.0	U	3.0	U	3.000	U	P
Magnesium	5000.0	U	25.1	B	16.7	B	12.5	B	5000.000	U	P
Manganese	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P
Mercury	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	CV
Nickel	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P
Potassium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	5000.000	U	P
Selenium	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P
Silver	5.0	U	5.0	U	5.0	U	-1.2	B	-0.964	B	P
Sodium	5000.0	U	5000.0	U	5000.0	U	5000.0	U	5000.000	U	P
Thallium	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	P
Vanadium	20.0	U	20.0	U	20.0	U	20.0	U	20.000	U	P
Zinc	20.0	U	20.0	U	20.0	U	20.0	U	20.000	U	P

SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum			-65.3	B							P
Antimony			10.0	U							P
Arsenic			10.0	U							P
Barium			200.0	U							P
Beryllium			-0.4	B							P
Cadmium			5.0	U							P
Calcium			5000.0	U							P
Chromium			10.0	U							P
Cobalt			5.0	U							P
Copper			5.0	U							P
Iron			100.0	U							P
Lead			3.0	U							P
Magnesium			16.2	B							P
Manganese			10.0	U							P
Nickel			5.0	U							P
Potassium			5000.0	U							P
Selenium			5.0	U							P
Silver			5.0	U							P
Sodium			362.9	B							P
Thallium			10.0	U							P
Vanadium			20.0	U							P
Zinc			20.0	U							P

SW846 - METALS

9
ICP SERIAL DILUTIONS

SAMPLE NO.

IR69-GW28DWL

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	200.00	U	1000.00	U			P
Antimony	10.00	U	50.00	U			P
Arsenic	10.00	U	50.00	U			P
Barium	4.81	B	3.25	B	32.4		P
Beryllium	5.00	U	25.00	U			P
Cadmium	5.00	U	25.00	U			P
Calcium	73856.14		74382.41		0.7		P
Chromium	10.00	U	50.00	U			P
Cobalt	5.00	U	25.00	U			P
Copper	5.00	U	25.00	U			P
Iron	1249.78		1264.22		1.2		P
Lead	3.00	U	15.00	U			P
Magnesium	3397.72	B	3411.46	B	0.4		P
Manganese	61.08		59.71		2.2		P
Mercury	0.20	U	1.00	U			CV
Nickel	5.00	U	25.00	U			P
Potassium	1449.14	B	1206.71	B	16.7	E	P
Selenium	5.00	U	25.00	U			P
Silver	5.00	U	25.00	U			P
Sodium	35983.41		37212.25		3.4		P
Thallium	10.00	U	50.00	U			P
Vanadium	20.00	U	100.00	U			P
Zinc	25.50		25.79	B	1.1		P

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRM EB01-031810-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003181-03A70

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

WM 072310

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

WM 081210

WM 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IRW EB01-031810-GW

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-03 UM 072310

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003181-03A70

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

UM 072310

UM 0512.10

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

EB01-031810-GW

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003181-03A60

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.057	J
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FB01-031910

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-04

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003181-04A70

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.1	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.1	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.1	U
98-86-2	Acetophenone	5.1	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.1	U
67-72-1	Hexachloroethane	5.1	U
98-95-3	Nitrobenzene	5.1	U
78-59-1	Isophorone	5.1	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.1	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.1	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.1	U
105-60-2	Caprolactam	5.1	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.1	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.1	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.1	U
91-58-7	2-Chloronaphthalene	5.1	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.1	U
606-20-2	2,6-Dinitrotoluene	5.1	U
208-96-8	Acenaphthylene	5.1	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.1	~~U~~ exclude RE

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR09 FB01-031910

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181 WM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003181-04

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003181-04A70

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.1	U
132-64-9	Dibenzofuran	5.1	U
84-66-2	Diethylphthalate	5.1	U
7005-72-3	4-Chlorophenyl-phenylether	5.1	U
86-73-7	Fluorene	5.1	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.1	U
101-55-3	4-Bromophenyl-phenylether	5.1	U
118-74-1	Hexachlorobenzene	5.1	U
1912-24-9	Atrazine	5.1	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.1	~~U~~ exclude RE
120-12-7	Anthracene	5.1	~~U~~ exclude RE
86-74-8	Carbazole	5.1	U
84-74-2	Di-n-butylphthalate	5.1	U
206-44-0	Fluoranthene	5.1	~~U~~ exclude RE
129-00-0	Pyrene	5.1	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.1	U
91-94-1	3,3'-Dichlorobenzidine	5.1	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.1	U
56-55-3	Benzo(a)anthracene	5.1	~~U~~ exclude RE
218-01-9	Chrysene	5.1	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.1	U
205-99-2	Benzo(b)fluoranthene	5.1	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.1	U
50-32-8	Benzo(a)pyrene	5.1	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.1	U
53-70-3	Dibenzo(a,h)anthracene	5.1	U
191-24-2	Benzo(g,h,i)perylene	5.1	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

WM 081210

WM 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FB01-031910

Lab Name: COMPUCHEM Method: 8270C-SIM IR69

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181 WM 072310

Matrix: (soil/water) WATER Lab Sample ID: 1003181-04

Sample wt/vol: 975 (g/mL) ML Lab File ID: 1003181-04A60

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.075	J
91-57-6	2-Methylnaphthalene	0.21	U
208-96-8	Acenaphthylene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	U
206-44-0	Fluoranthene	0.21	U
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U
53-70-3	Dibenzo(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U

FORM I SV

WM 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13DW 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-05 WM 072310

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003181-05A70

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

WM 081210

WM 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13DW 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003181-05A70

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	~~U~~ exclude RE
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5.0	~~U~~ exclude RE
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	U
84-74-2	Di-n-butylphthalate	2.3	J
206-44-0	Fluoranthene	5.0	~~U~~ exclude RE
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	U
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	~~U~~ exclude RE
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM I SV 8270C

WM 072310

WM 051210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13DW 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003181-05A60

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW28DW 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-01 WM 072310

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003181-01A70

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.0	U
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	5.0	U
95-57-8	2-Chlorophenol	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.0	U
98-86-2	Acetophenone	5.0	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-N-propylamine	5.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
78-59-1	Isophorone	5.0	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
91-20-3	Naphthalene	5.0	~~U~~ exclude RE
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	5.0	U
105-60-2	Caprolactam	5.0	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	5.0	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.0	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
92-52-4	1,1'-Biphenyl	5.0	U
91-58-7	2-Chloronaphthalene	5.0	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	5.0	U
606-20-2	2,6-Dinitrotoluene	5.0	U
208-96-8	Acenaphthylene	5.0	~~U~~ exclude RE
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene	5.0	~~U~~ exclude RE

FORM I SV 8270C

WM 081210

WM 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW28DW 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-01 WM 072310

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003181-01A70

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
100-02-7	4-Nitrophenol	10	U
121-14-2	2,4-Dinitrotoluene	5.0	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
7005-72-3	4-Chlorophenyl-phenylether	5.0	U
86-73-7	Fluorene	5.0	U
100-01-6	4-Nitroaniline	5.0	~~U~~ exclude RE
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	5.0	U
118-74-1	Hexachlorobenzene	5.0	U
1912-24-9	Atrazine	5.0	U
87-86-5	Pentachlorophenol	5.0	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	5.0	~~U~~ exclude RE
86-74-8	Carbazole	5.0	~~U~~ exclude RE
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.0	~~U~~ exclude RE
91-94-1	3,3'-Dichlorobenzidine	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
218-01-9	Chrysene	5.0	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.0	~~U~~ exclude RE
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	~~U~~ exclude RE
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U
191-24-2	Benzo(g,h,i)perylene	5.0	U

(1) - Cannot be separated from Diphenylamine

WM 081210

WM 072310

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW28DW 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1003181-01A60

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.20	U
91-57-6	2-Methylnaphthalene	0.20	U
208-96-8	Acenaphthylene	0.20	U
83-32-9	Acenaphthene	0.20	U
86-73-7	Fluorene	0.20	U
85-01-8	Phenanthrene	0.20	U
120-12-7	Anthracene	0.20	U
206-44-0	Fluoranthene	0.20	U
129-00-0	Pyrene	0.20	U
56-55-3	Benzo(a)anthracene	0.20	U
218-01-9	Chrysene	0.20	U
205-99-2	Benzo(b)fluoranthene	0.20	U
207-08-9	Benzo(k)fluoranthene	0.20	U
50-32-8	Benzo(a)pyrene	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.20	U
53-70-3	Dibenzo(a,h)anthracene	0.20	U
191-24-2	Benzo(g,h,i)perylene	0.20	U

FORM I SV

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW28IW -10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-02

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1003181-02A70

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-52-7	Benzaldehyde	5.3	U
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	5.3	U
95-57-8	2-Chlorophenol	11	U
95-48-7	2-Methylphenol	11	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5.3	U
98-86-2	Acetophenone	5.3	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-di-N-propylamine	5.3	U
67-72-1	Hexachloroethane	5.3	U
98-95-3	Nitrobenzene	5.3	U
78-59-1	Isophorone	5.3	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	5.3	U
120-83-2	2,4-Dichlorophenol	11	U
91-20-3	Naphthalene	5.3	~~U~~ exclude RE
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	5.3	U
105-60-2	Caprolactam	5.3	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	5.3	~~U~~ exclude RE
77-47-4	Hexachlorocyclopentadiene	5.3	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	11	U
92-52-4	1,1'-Biphenyl	5.3	U
91-58-7	2-Chloronaphthalene	5.3	U
88-74-4	2-Nitroaniline	11	U
131-11-3	Dimethylphthalate	5.3	U
606-20-2	2,6-Dinitrotoluene	5.3	U
208-96-8	Acenaphthylene	5.3	~~U~~ exclude RE
99-09-2	3-Nitroaniline	11	U
83-32-9	Acenaphthene	5.3	~~U~~ exclude RE

FORM I SV 8270C

WM 072310

WM 081210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW28IW 10A

Lab Name: COMPUCHEM Method: 8270C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-02

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1003181-02A70

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/03/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	11	U
100-02-7	4-Nitrophenol	11	U
121-14-2	2,4-Dinitrotoluene	5.3	U
132-64-9	Dibenzofuran	5.3	U
84-66-2	Diethylphthalate	5.3	U
7005-72-3	4-Chlorophenyl-phenylether	5.3	U
86-73-7	Fluorene	5.3	~~U~~ exclude RE
100-01-6	4-Nitroaniline	11	U
534-52-1	4,6-Dinitro-2-methylphenol	11	U
86-30-6	N-Nitrosodiphenylamine (1)	5.3	U
101-55-3	4-Bromophenyl-phenylether	5.3	U
118-74-1	Hexachlorobenzene	5.3	U
1912-24-9	Atrazine	5.3	U
87-86-5	Pentachlorophenol	11	U
85-01-8	Phenanthrene	5.3	~~U~~ exclude RE
120-12-7	Anthracene	5.3	~~U~~ exclude RE
86-74-8	Carbazole	5.3	U
84-74-2	Di-n-butylphthalate	5.3	U
206-44-0	Fluoranthene	5.3	~~U~~ exclude RE
129-00-0	Pyrene	5.3	~~U~~ exclude RE
85-68-7	Butylbenzylphthalate	5.3	U
91-94-1	3,3'-Dichlorobenzidine	5.3	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.3	U
56-55-3	Benzo(a)anthracene	5.3	~~U~~ exclude RE
218-01-9	Chrysene	5.3	~~U~~ exclude RE
117-84-0	Di-n-octylphthalate	5.3	U
205-99-2	Benzo(b)fluoranthene	5.3	~~U~~ exclude RE
207-08-9	Benzo(k)fluoranthene	5.3	U
50-32-8	Benzo(a)pyrene	5.3	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.3	U
53-70-3	Dibenzo(a,h)anthracene	5.3	U
191-24-2	Benzo(g,h,i)perylene	5.3	U

(1) - Cannot be separated from Diphenylamine

WM 072310

WM 081210

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW28IW 10A

Lab Name: COMPUCHEM Method: 8270C-SIM

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-02

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1003181-02A60

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/25/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/02/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	0.21	U
91-57-6	2-Methylnaphthalene	0.21	U
208-96-8	Acenaphthylene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	U
206-44-0	Fluoranthene	0.21	U
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U
53-70-3	Dibenzo(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U

FORM I SV

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

IR69-GW13DW -10A

Lab Name: COMPUCHEM Method: 8260B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1003181

Matrix: (soil/water) WATER Lab Sample ID: 1003181-05

Sample wt/vol: 25 (g/ml) ML Lab File ID: 1003181-0571

Level: (low/med) LOW Date Received: 03/23/10

% Moisture: not dec. _____ Date Analyzed: 03/31/10

GC Column: SPB-624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50 ~~0.11~~	~~J~~ UEBL
108-38-3	m,p-Xylene	1.0 ~~0.083~~	~~J~~ UEBL
95-47-6	o-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropyl Benzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
1330-20-7	Xylene (total)	0.50 ~~0.089~~	~~J~~ UEBL
110-82-7	Cyclohexane	0.50	U
108-87-2	Methylcyclohexane	0.50	U

cdac 8/12/10

UJ CCL

FORM I VOA

DataQual

Environmental Services, LLC

CH2M HILL
5700 Cleveland Street
Suite 101
Virginia Beach, VA 23462

July 27, 2010
TestAmerica-Savannah, SDG# CLJ55796-1
MCB Camp Lejeune, CTO-81

Dear Ms. Buckley,

The following Data Validation report is provided as requested for the parameters noted in the table below for SDG # CLJ55796-1. The data validation was performed in accordance with the SW846 Method 8141A for organophosphorous pesticides (OPP) and good professional judgment. Also used in the validation of these samples were The National Functional Guidelines for Organic Data Review (June, 2008), as applicable. All areas of concern are discussed in the body of the report and a summary of data qualifications is provided.

Sample ID	Lab ID	Matrix	OPP
IR69-EB01-030910-GW	680-55796-13	water	X
IR69-EB01-030610-GW	680-55796-7	water	X
IR69-EB01-030710	680-55796-6	water	X
IR69-EB01-030410-SS	680-55796-18	water	X
IR69-EB01-030810-GW	680-55796-16	water	X
IR69-EB01-030710-SB	680-55796-11	water	X
IR69-FB01-031010	680-55796-5	water	X
IR69-GW02DD-10A	680-55796-1	water	X
IR69-GW03BCH-10A	680-55796-8	water	X
IR69-GW02BCH-10A	680-55796-15	water	X
IR69-GW03DW-10A	680-55796-17	water	X
IR69-GW03-10A	680-55796-19	water	X
IR69-GW03D-10A	680-55796-20	water	X
IR69-GW08-10A	680-55796-9	water	X
IR69-GW08D-10A	680-55796-10	water	X
IR69-GW09IW-10A	680-55796-2	water	X
IR69-GW15-10A	680-55796-4	water	X
IR69-GW15IW-10A	680-55796-3	water	X
IR69-GW05-10A	680-55796-12	water	X
IR69-GW05D-10A	680-55796-14	water	X

The following quality control samples were provided with this SDG: sample IR69-GW03D-10A-field duplicate of sample IR69-GW03-10A; sample IR69-GW08D-10A-field duplicate of sample IR69-GW08-10A; sample IR69-GW05D-10A-field duplicate of sample IR69-GW05-10A; samples IR69-EB01-030610-GW, IR69-EB01-030710, IR69-EB01-030710-SB, IR69-EB01-030910-GW, IR69-EB01-030810-GW, IR69-EB01-030410-SS-equipment blanks; and sample IR69-FB01-031010- field blank.

The samples were evaluated based on the following criteria:

5830 Amberway Drive • St. Louis, MO 63128 • 314-330-1327 • Fax 314-849-6264

- Data Completeness *
- Technical Holding Times
- GC Performance *
- Initial/Continuing Calibrations *
- Blanks *
- Surrogates *
- Laboratory Control Samples
- Matrix Spike Recoveries *
- Field Duplicates *
- Identification/Quantitation *
- Reporting Limits *

* - indicates that no qualifications were required based on this criteria

Overall Evaluation of Data/Potential Usability Issues

A summary of qualifications applied to the sample results are noted below for the fractions validated. Specific details regarding qualification of the data are addressed in the Specific Evaluation section of this narrative. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte the validator has chosen the qualifier that best indicates possible bias in the results and flagged the data accordingly. However, information regarding all quality control issues is provided in the body of the report and on the qualification summary page. Please note that when a compound or analyte is flagged due to blank contamination the BL qualifier code takes precedence over all other qualifier codes except a code that explains rejected data.

Organophosphorous Pesticides (OPP)

One rinse blank was received at the laboratory one day below extraction holding time. Qualification was required in the rinse blank.

Two of the laboratory control samples associated with samples exhibited non-compliant recoveries for some compounds that resulted in the qualification of results.

Specific Evaluation of Data

Data Completeness

This SDG was received complete and intact. Resubmissions were not required.

Technical Holding Times

According to chain of custody records, sampling was performed on 3/04-10/10 and samples were received at the laboratory 3/12/10. All sample preparation and analysis was performed within method holding time requirements with the following exception.

OPP

Sample IR69-EB01-030410-SS was extracted one day outside the seven day extraction holding time. All results in the sample were qualified as estimated J/UJ with a qualifier code of HT.

Laboratory Control Samples

OPP

The laboratory control samples associated with the samples in this SDG exhibited low recoveries for the compound demeton-s (19%/19%/19). The compound was qualified as estimated J/UJ in all field and QC blank samples with a qualifier code of BSL.

The compound naled was qualified as estimated in samples IR69-FB01-031010, IR69-GW03BCH-10A, IR69-EB01-030910-GW, IR69-GW05D-10A, IR69-GW02BCH-10A, and IR69-EB01-030810-GW due to a low recovery of 36% in the associated LCS.

A summary of qualifications required is provided on the following page. Please do not hesitate to contact DataQual ES with any questions regarding this validation report.

Sincerely,

Jacqueline Cleveland

Jacqueline Cleveland
Vice-President

Summary of Data Qualifications

Organophosphorous Pesticides

Sample ID	Compound	Results	Q-Flag	Q Code
IR69-EB01-030410-SS *	all compounds	+/-	J/UJ	HT
all samples	demeton-s	+/-	J/UJ	BSL
IR69-FB01-031010, IR69-GW03BCH-10A, IR69-EB01-030910-GW, IR69-GW05D-10A, IR69-GW02BCH-10A, IR69-EB01-030810-GW	naled	+/-	J/UJ	BSL

*final qualifier code for sample IR69-EB01-030410-SS was HT

Glossary of Qualification Flags and Abbreviations

Qualification Flags (Q-Flags)

U	not detected above the reported sample quantitation limit
J	estimated value
UJ	reported quantitation limit is qualified as estimated
R	result is rejected; the presence or absence of the analyte cannot be verified
D	result value is based on dilution analysis result
NJ	analyte has been tentatively identified, estimated value
L	analyte present, biased low
UL	not detected, quantitation limit is probably higher
K	analyte present, biased high

Inorganic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 10X the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL and the result is raised to the RL and flagged U.
R or J_+	The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator. (see NFG, Rev. date 10/04, p. 17 for extracted blanks (PB))

Organic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 5X (10X for common laboratory contaminants) the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is raised to the RL and flagged U.
U	The sample result for the blank contaminant is greater than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is flagged U at the reported value.

General Abbreviations

RL / MDL	reporting limit/method detection limit
CRQL	contract required quantitation limit
Q Code	qualifier code
+	positive result
-	non-detect result

QUALIFIER CODE REFERENCE

Qualifier	Description
TN	Tune
BSL	Blank Spike/LCS - High Recovery
BSH	Blank Spike/LCS - Low Recovery
BD	Blank Spike/Blank Spike Duplicate (LCS/LCSD) Precision
BRL	Below Reporting Limit
ISL	Internal Standard - Low Recovery
ISH	Internal Standard - High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate - Low Recovery
MSH	Matrix Spike and/or Matrix Spike Duplicate - High Recovery
MI	Matrix interference obscuring the raw data
MDP	Matrix Spike/Matrix Spike Duplicate Precision
2S	Second Source - Bad reproducibility between tandem detectors
SSL	Spiked Surrogate - Low Recovery
SSH	Spiked Surrogate - High Recovery
SD	Serial Dilution Reproducibility
ICL	Initial Calibration - Low Relative Response Factors (RRF)
ICH	Initial Calibration - High Relative Response Factors (RRF)
ICB	Initial Calibration - Bad Linearity or Curve Function
CCL	Continuing Calibration - Low Recovery or %Difference
CCH	Continuing Calibration - High Recovery or %Difference
LD	Lab Duplicate Reproducibility
HT	Holding Time
PD	Pesticide Degradation
2C	Second Column - Poor Dual Column Reproducibility
LR	Concentration Exceeds Linear Range
BL	Blank Contamination (MBL, EBL, FBL, TBL)
RE	Redundant Result - due to Re-analysis or Re-extraction
DL	Redundant Result - due to Dilution
FD	Field Duplicate
OT	Other - explained in data validation report
%SOL	High moisture content

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 680-55796-1
SDG No.: CLJ55796-1
Client Sample ID: IR69-GW02DD-10A
Lab Sample ID: 680-55796-1
Matrix: Water
Lab File ID: oc15041.d
Analysis Method: 8141A
Date Collected: 03/06/2010 12:30
Extraction Method: 3520C
Date Extracted: 03/12/2010 14:20
Sample wt/vol: 1050(mL)
Date Analyzed: 03/17/2010 02:05
Con. Extract Vol.: 10(mL)
Dilution Factor: 1
Injection Volume: 2(uL)
GC Column: Rtx-OPP 2 ID: 0.32(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 163324
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U Ø	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ Ø WJ GSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U Ø	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U Ø	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
52-85-7	Famphur	1.9	U Ø	1.9	0.95
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U Ø	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U Ø	9.5	4.8
300-76-5	Naled	4.8	U	4.8	2.4
56-38-2	Parathion	0.95	U Ø	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U Ø	0.48	0.24
297-97-2	Thionazin	0.95	U Ø	0.95	0.48
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	87	26-134	

JRC 8/26/10

FORM I 8141A

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-1

SDG No.: CLJ55796-1

Client Sample ID: IR69-GW09IW-10A | Lab Sample ID: 680-55796-2

Matrix: Water | Lab File ID: oc15042.d

Analysis Method: 8141A | Date Collected: 03/06/2010 17:40

Extraction Method: 3520C | Date Extracted: 03/12/2010 14:20

Sample wt/vol: 1050(mL) | Date Analyzed: 03/17/2010 02:30

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163324 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ ~~Q~~ NJ BSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U ~~Q~~	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U ~~Q~~	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
52-85-7	Famphur	1.9	U ~~Q~~	1.9	0.95
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U ~~Q~~	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U ~~Q~~	9.5	4.8
300-76-5	Naled	4.8	U	4.8	2.4
56-38-2	Parathion	0.95	U ~~Q~~	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U ~~Q~~	0.48	0.24
297-97-2	Thionazin	0.95	U ~~Q~~	0.95	0.48
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	96	26-134	

JAC 5/26/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 680-55796-1
SDG No.: CLJ55796-1
Client Sample ID: IR69-GW15IW-10A
Lab Sample ID: 680-55796-3
Matrix: Water
Lab File ID: oc15043.d
Analysis Method: 8141A
Date Collected: 03/06/2010 11:45
Extraction Method: 3520C
Date Extracted: 03/12/2010 14:20
Sample wt/vol: 1050(mL)
Date Analyzed: 03/17/2010 02:55
Con. Extract Vol.: 10(mL)
Dilution Factor: 1
Injection Volume: 2(uL)
GC Column: Rtx-OPP 2 ID: 0.32(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 163324
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U Ø	2.4	1.2
126-75-0	Demeton-S	2.4	U Ø UJ BSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U Ø	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U Ø	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
52-85-7	Famphur	1.9	U Ø	1.9	0.95
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U Ø	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U Ø	9.5	4.8
300-76-5	Naled	4.8	U	4.8	2.4
56-38-2	Parathion	0.95	U Ø	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U Ø	0.48	0.24
297-97-2	Thionazin	0.95	U Ø	0.95	0.48
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	95	26-134	

JC 6/2010

FORM I 8141A

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-1

SDG No.: CLJ55796-1

Client Sample ID: IR69-GW15-10A | Lab Sample ID: 680-55796-4

Matrix: Water | Lab File ID: oc15044.d

Analysis Method: 8141A | Date Collected: 03/07/2010 11:40

Extraction Method: 3520C | Date Extracted: 03/12/2010 14:20

Sample wt/vol: 1060(mL) | Date Analyzed: 03/17/2010 03:20

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163324 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ ~~Q~~ UJ BSL	2.4	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U ~~Q~~	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U ~~Q~~	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
52-85-7	Famphur	1.9	U ~~Q~~	1.9	0.94
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U ~~Q~~	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monochrotophos	9.4	U ~~Q~~	9.4	4.7
300-76-5	Naled	4.7	U	4.7	2.4
56-38-2	Parathion	0.94	U ~~Q~~	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U ~~Q~~	0.47	0.24
297-97-2	Thionazin	0.94	U ~~Q~~	0.94	0.47
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	93	26-134	

JAC 4/26/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-1

SDG No.: CLJ55796-1

Client Sample ID: IR69-FB01-031010 | Lab Sample ID: 680-55796-5

Matrix: Water | Lab File ID: oc17037.d

Analysis Method: 8141A | Date Collected: 03/10/2010 11:00

Extraction Method: 3520C | Date Extracted: 03/15/2010 14:22

Sample wt/vol: 1050(mL) | Date Analyzed: 03/18/2010 01:56

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163436 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ ~~Q~~ UJ BSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
52-85-7	Famphur	1.9	U	1.9	0.95
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U	9.5	4.8
300-76-5	Naled	4.8	~~U~~ ~~Q~~ UJ BSL	4.8	2.4
56-38-2	Parathion	0.95	U	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U	0.48	0.24
297-97-2	Thionazin	0.95	U	0.95	0.48
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	101	26-134	

JLC 4/2010

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011

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-1

SDG No.: CLJ55796-1

Client Sample ID: IR69-EB01-030710 | Lab Sample ID: 680-55796-6

Matrix: Water | Lab File ID: oc15045.d

Analysis Method: 8141A | Date Collected: 03/07/2010 12:00

Extraction Method: 3520C | Date Extracted: 03/12/2010 14:20

Sample wt/vol: 1060(mL) | Date Analyzed: 03/17/2010 03:45

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163324 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ ~~Q~~ UJ BSL	2.4	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U ~~Q~~	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U ~~Q~~	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
52-85-7	Famphur	1.9	U ~~Q~~	1.9	0.94
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U ~~Q~~	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monochrotophos	9.4	U ~~Q~~	9.4	4.7
300-76-5	Naled	4.7	U	4.7	2.4
56-38-2	Parathion	0.94	U ~~Q~~	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U ~~Q~~	0.47	0.24
297-97-2	Thionazin	0.94	U ~~Q~~	0.94	0.47
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	86	26-134	

JAC 4/26/10

FORM I 8141A

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 680-55796-1
SDG No.: CLJ55796-1
Client Sample ID: IR69-EB01-030610-GW
Lab Sample ID: 680-55796-7
Matrix: Water
Lab File ID: oc15046.d
Analysis Method: 8141A
Date Collected: 03/06/2010 11:00
Extraction Method: 3520C
Date Extracted: 03/12/2010 14:20
Sample wt/vol: 1050(mL)
Date Analyzed: 03/17/2010 04:10
Con. Extract Vol.: 10(mL)
Dilution Factor: 1
Injection Volume: 2(uL)
GC Column: Rtx-OPP 2 ID: 0.32(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 163324
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ ~~Q~~ UJ BSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U ~~Q~~	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U ~~Q~~	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
52-85-7	Famphur	1.9	U ~~Q~~	1.9	0.95
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U ~~Q~~	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U ~~Q~~	9.5	4.8
300-76-5	Naled	4.8	U	4.8	2.4
56-38-2	Parathion	0.95	U ~~Q~~	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U ~~Q~~	0.48	0.24
297-97-2	Thionazin	0.95	U ~~Q~~	0.95	0.48
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	103	26-134	

JMC 6/2/10

FORM I 8141A

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-1

SDG No.: CLJ55796-1

Client Sample ID: IR69-GW03BCH-10A | Lab Sample ID: 680-55796-8

Matrix: Water | Lab File ID: oc17038.d

Analysis Method: 8141A | Date Collected: 03/09/2010 15:40

Extraction Method: 3520C | Date Extracted: 03/15/2010 14:22

Sample wt/vol: 1050(mL) | Date Analyzed: 03/18/2010 02:21

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163436 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ ~~Q~~ UJ BSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
52-85-7	Famphur	1.9	U	1.9	0.95
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U	9.5	4.8
300-76-5	Naled	4.8	~~U~~ ~~Q~~ UJ BSL	4.8	2.4
56-38-2	Parathion	0.95	U	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U	0.48	0.24
297-97-2	Thionazin	0.95	U	0.95	0.48
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	92	26-134	

JAC 4/2010

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-1

SDG No.: CLJ55796-1

Client Sample ID: IR69-GW08-10A | Lab Sample ID: 680-55796-9

Matrix: Water | Lab File ID: oc15047.d

Analysis Method: 8141A | Date Collected: 03/08/2010 11:30

Extraction Method: 3520C | Date Extracted: 03/12/2010 14:20

Sample wt/vol: 1050(mL) | Date Analyzed: 03/17/2010 04:35

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163324 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U Ø	2.4	1.2
126-75-0	Demeton-S	2.4	U Ø 105 BSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U Ø	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U Ø	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
52-85-7	Famphur	1.9	U Ø	1.9	0.95
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U Ø	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U Ø	9.5	4.8
300-76-5	Naled	4.8	U	4.8	2.4
56-38-2	Parathion	0.95	U Ø	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U Ø	0.48	0.24
297-97-2	Thionazin	0.95	U Ø	0.95	0.48
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	73	26-134	

JAC 4/2010

FORM I 8141A

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-1

SDG No.: CLJ55796-1

Client Sample ID: IR69-GW08D-10A | Lab Sample ID: 680-55796-10

Matrix: Water | Lab File ID: oc15048.d

Analysis Method: 8141A | Date Collected: 03/08/2010 11:35

Extraction Method: 3520C | Date Extracted: 03/12/2010 14:20

Sample wt/vol: 1030(mL) | Date Analyzed: 03/17/2010 05:00

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163324 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.97	U	0.97	0.49
35400-43-2	Bolstar	0.97	U	0.97	0.49
2921-88-2	Chlorpyrifos	0.97	U	0.97	0.49
56-72-4	Coumaphos	0.97	U	0.97	0.49
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.3
126-75-0	Demeton-S	2.4	U ~~Q~~ UJ BSL	2.4	1.3
333-41-5	Diazinon	0.97	U	0.97	0.49
62-73-7	Dichlorvos	1.9	U	1.9	0.97
60-51-5	Dimethoate	1.9	U ~~Q~~	1.9	0.97
298-04-4	Disulfoton	1.9	U	1.9	0.97
2104-64-5	EPN	0.97	U ~~Q~~	0.97	0.49
13194-48-4	Ethoprop	0.49	U	0.49	0.24
52-85-7	Famphur	1.9	U ~~Q~~	1.9	0.97
115-90-2	Fensulfothion	4.9	U	4.9	2.4
55-38-9	Fenthion	0.97	U	0.97	0.49
121-75-5	Malathion	0.97	U ~~Q~~	0.97	0.49
150-50-5	Merphos	1.5	U	1.5	0.73
298-00-0	Methyl parathion	0.49	U	0.49	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.97
6923-22-4	Monochrotophos	9.7	U ~~Q~~	9.7	4.9
300-76-5	Naled	4.9	U	4.9	2.4
56-38-2	Parathion	0.97	U ~~Q~~	0.97	0.49
298-02-2	Phorate	0.97	U	0.97	0.49
299-84-3	Ronnel	0.97	U	0.97	0.49
22248-79-9	Stirophos	0.97	U	0.97	0.49
3689-24-5	Sulfotepp	0.49	U ~~Q~~	0.49	0.24
297-97-2	Thionazin	0.97	U ~~Q~~	0.97	0.49
34643-46-4	Tokuthion	0.97	U	0.97	0.49
327-98-0	Trichloronate	0.97	U	0.97	0.49

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	83	26-134	

JAC 7/2010

FORM I 8141A

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-1

SDG No.: CLJ55796-1

Client Sample ID: IR69-EB01-030710-SB | Lab Sample ID: 680-55796-11

Matrix: Water | Lab File ID: oc15054.d

Analysis Method: 8141A | Date Collected: 03/07/2010 17:00

Extraction Method: 3520C | Date Extracted: 03/12/2010 14:20

Sample wt/vol: 1030(mL) | Date Analyzed: 03/17/2010 07:29

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163326 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.97	U	0.97	0.49
35400-43-2	Bolstar	0.97	U	0.97	0.49
2921-88-2	Chlorpyrifos	0.97	U	0.97	0.49
56-72-4	Coumaphos	0.97	U	0.97	0.49
298-03-3	Demeton-O	2.4	U Ø	2.4	1.3
126-75-0	Demeton-S	2.4	U Ø WJ BSL	2.4	1.3
333-41-5	Diazinon	0.97	U	0.97	0.49
62-73-7	Dichlorvos	1.9	U	1.9	0.97
60-51-5	Dimethoate	1.9	U Ø	1.9	0.97
298-04-4	Disulfoton	1.9	U	1.9	0.97
2104-64-5	EPN	0.97	U Ø	0.97	0.49
13194-48-4	Ethoprop	0.49	U	0.49	0.24
52-85-7	Famphur	1.9	U Ø	1.9	0.97
115-90-2	Fensulfothion	4.9	U	4.9	2.4
55-38-9	Fenthion	0.97	U	0.97	0.49
121-75-5	Malathion	0.97	U Ø	0.97	0.49
150-50-5	Merphos	1.5	U	1.5	0.73
298-00-0	Methyl parathion	0.49	U	0.49	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.97
6923-22-4	Monochrotophos	9.7	U Ø	9.7	4.9
300-76-5	Naled	4.9	U	4.9	2.4
56-38-2	Parathion	0.97	U Ø	0.97	0.49
298-02-2	Phorate	0.97	U	0.97	0.49
299-84-3	Ronnel	0.97	U	0.97	0.49
22248-79-9	Stirophos	0.97	U	0.97	0.49
3689-24-5	Sulfotepp	0.49	U Ø	0.49	0.24
297-97-2	Thionazin	0.97	U Ø	0.97	0.49
34643-46-4	Tokuthion	0.97	U	0.97	0.49
327-98-0	Trichloronate	0.97	U	0.97	0.49

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	92	26-134	

FORM I 8141A

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 680-55796-1
SDG No.: CLJ55796-1
Client Sample ID: IR69-GW05-10A
Lab Sample ID: 680-55796-12
Matrix: Water
Lab File ID: oc15055.d
Analysis Method: 8141A
Date Collected: 03/08/2010 16:00
Extraction Method: 3520C
Date Extracted: 03/12/2010 14:20
Sample wt/vol: 1050(mL)
Date Analyzed: 03/17/2010 07:54
Con. Extract Vol.: 10(mL)
Dilution Factor: 1
Injection Volume: 2(uL)
GC Column: Rtx-OPP 2 ID: 0.32(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 163326
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U Ø	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ Ø UJ BSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U Ø	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U Ø	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
52-85-7	Famphur	1.9	U Ø	1.9	0.95
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U Ø	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U Ø	9.5	4.8
300-76-5	Naled	4.8	U	4.8	2.4
56-38-2	Parathion	0.95	U Ø	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U Ø	0.48	0.24
297-97-2	Thionazin	0.95	U Ø	0.95	0.48
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	90	26-134	

SDC 7/2010

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-1

SDG No.: CLJ55796-1

Client Sample ID: IR69-EB01-030910-GW | Lab Sample ID: 680-55796-13

Matrix: Water | Lab File ID: oc17039.d

Analysis Method: 8141A | Date Collected: 03/09/2010 16:00

Extraction Method: 3520C | Date Extracted: 03/15/2010 14:22

Sample wt/vol: 1050(mL) | Date Analyzed: 03/18/2010 02:45

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163436 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ ~~Q~~ UJ BL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
52-85-7	Famphur	1.9	U	1.9	0.95
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U	9.5	4.8
300-76-5	Naled	4.8	~~U~~ ~~Q~~ UJ BL	4.8	2.4
56-38-2	Parathion	0.95	U	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U	0.48	0.24
297-97-2	Thionazin	0.95	U	0.95	0.48
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	76	26-134	

JAC 6/6/10

FORM I 8141A

06/15/2010

01

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-1

SDG No.: CLJ55796-1

Client Sample ID: IR69-GW05D-10A | Lab Sample ID: 680-55796-14

Matrix: Water | Lab File ID: oc17053.d

Analysis Method: 8141A | Date Collected: 03/08/2010 16:05

Extraction Method: 3520C | Date Extracted: 03/15/2010 14:22

Sample wt/vol: 1050(mL) | Date Analyzed: 03/18/2010 08:35

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163438 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U ~~Ø~~	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ ~~Ø~~ UJ BSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
52-85-7	Famphur	1.9	U	1.9	0.95
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U	9.5	4.8
300-76-5	Naled	4.8	~~U~~ ~~Ø~~ UJ BSL	4.8	2.4
56-38-2	Parathion	0.95	U	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U	0.48	0.24
297-97-2	Thionazin	0.95	U	0.95	0.48
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	99	26-134	

JAC 7/26/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-1

SDG No.: CLJ55796-1

Client Sample ID: IR69-GW02BCH-10A | Lab Sample ID: 680-55796-15

Matrix: Water | Lab File ID: oc17054.d

Analysis Method: 8141A | Date Collected: 03/08/2010 15:10

Extraction Method: 3520C | Date Extracted: 03/15/2010 14:22

Sample wt/vol: 1060(mL) | Date Analyzed: 03/18/2010 08:59

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163438 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	2.4	U ~~Ø~~	2.4	1.2
126-75-0	Demeton-S	2.4	~~U Ø~~ UJ BSL	2.4	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
52-85-7	Famphur	1.9	U	1.9	0.94
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monochrotophos	9.4	U	9.4	4.7
300-76-5	Naled	4.7	~~U Ø~~ UJ BSL	4.7	2.4
56-38-2	Parathion	0.94	U	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U	0.47	0.24
297-97-2	Thionazin	0.94	U	0.94	0.47
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	91	26-134	

JLC 7/2010

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-1

SDG No.: CLJ55796-1

Client Sample ID: IR69-EB01-030810-GW | Lab Sample ID: 680-55796-16

Matrix: Water | Lab File ID: oc17055.d

Analysis Method: 8141A | Date Collected: 03/08/2010 09:30

Extraction Method: 3520C | Date Extracted: 03/15/2010 14:22

Sample wt/vol: 1050(mL) | Date Analyzed: 03/18/2010 09:24

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163438 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U ~~Ø~~	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ ~~Ø~~ NJ BSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
52-85-7	Famphur	1.9	U	1.9	0.95
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U	9.5	4.8
300-76-5	Naled	4.8	~~U~~ ~~Ø~~ NJ BSL	4.8	2.4
56-38-2	Parathion	0.95	U	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U	0.48	0.24
297-97-2	Thionazin	0.95	U	0.95	0.48
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	100	26-134	

JAC 7/26/10

FORM I 8141A

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-1

SDG No.: CLJ55796-1

Client Sample ID: IR69-GW03DW-10A | Lab Sample ID: 680-55796-17

Matrix: Water | Lab File ID: oc15056.d

Analysis Method: 8141A | Date Collected: 03/07/2010 16:50

Extraction Method: 3520C | Date Extracted: 03/12/2010 14:20

Sample wt/vol: 1050(mL) | Date Analyzed: 03/17/2010 08:19

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163326 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U Ø	2.4	1.2
126-75-0	Demeton-S	2.4	U Ø UJ BSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U Ø	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U Ø	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
52-85-7	Famphur	1.9	U Ø	1.9	0.95
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U Ø	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U Ø	9.5	4.8
300-76-5	Naled	4.8	U	4.8	2.4
56-38-2	Parathion	0.95	U Ø	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U Ø	0.48	0.24
297-97-2	Thionazin	0.95	U Ø	0.95	0.48
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	88	26-134	

JAC 7/2010

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-1

SDG No.: CLJ55796-1

Client Sample ID: IR69-EB01-030410-SS | Lab Sample ID: 680-55796-18

Matrix: Water | Lab File ID: oc15057.d

Analysis Method: 8141A | Date Collected: 03/04/2010 17:00

Extraction Method: 3520C | Date Extracted: 03/12/2010 14:20

Sample wt/vol: 1050(mL) | Date Analyzed: 03/17/2010 08:44

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163326 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U H	UJ HT 0.95	0.48
35400-43-2	Bolstar	0.95	U H	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U H	0.95	0.48
56-72-4	Coumaphos	0.95	U H	0.95	0.48
298-03-3	Demeton-O	2.4	U H Ø	2.4	1.2
126-75-0	Demeton-S	2.4	U H Ø	2.4	1.2
333-41-5	Diazinon	0.95	U H	0.95	0.48
62-73-7	Dichlorvos	1.9	U H	1.9	0.95
60-51-5	Dimethoate	1.9	U H Ø	1.9	0.95
298-04-4	Disulfoton	1.9	U H	1.9	0.95
2104-64-5	EPN	0.95	U H Ø	0.95	0.48
13194-48-4	Ethoprop	0.48	U H	0.48	0.24
52-85-7	Famphur	1.9	U H Ø	1.9	0.95
115-90-2	Fensulfothion	4.8	U H	4.8	2.4
55-38-9	Fenthion	0.95	U H	0.95	0.48
121-75-5	Malathion	0.95	U H Ø	0.95	0.48
150-50-5	Merphos	1.4	U H	1.4	0.71
298-00-0	Methyl parathion	0.48	U H	0.48	0.24
7786-34-7	Mevinphos	1.9	U H	1.9	0.95
6923-22-4	Monochrotophos	9.5	U H Ø	9.5	4.8
300-76-5	Naled	4.8	U H	4.8	2.4
56-38-2	Parathion	0.95	U H Ø	0.95	0.48
298-02-2	Phorate	0.95	U H	0.95	0.48
299-84-3	Ronnel	0.95	U H	0.95	0.48
22248-79-9	Stirophos	0.95	U H	0.95	0.48
3689-24-5	Sulfotepp	0.48	U H Ø	0.48	0.24
297-97-2	Thionazin	0.95	U H Ø	0.95	0.48
34643-46-4	Tokuthion	0.95	U H	0.95	0.48
327-98-0	Trichloronate	0.95	U H	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	88	26-134	

MC 3/20/10

FORM I 8141A

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-1

SDG No.: CLJ55796-1

Client Sample ID: IR69-GW03-10A | Lab Sample ID: 680-55796-19

Matrix: Water | Lab File ID: oc15058.d

Analysis Method: 8141A | Date Collected: 03/07/2010 17:00

Extraction Method: 3520C | Date Extracted: 03/12/2010 14:20

Sample wt/vol: 1050(mL) | Date Analyzed: 03/17/2010 09:09

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163326 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U Ø	2.4	1.2
126-75-0	Demeton-S	2.4	U Ø UJ BSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U Ø	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U Ø	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
52-85-7	Famphur	1.9	U Ø	1.9	0.95
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U Ø	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U Ø	9.5	4.8
300-76-5	Naled	4.8	U	4.8	2.4
56-38-2	Parathion	0.95	U Ø	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U Ø	0.48	0.24
297-97-2	Thionazin	0.95	U Ø	0.95	0.48
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	73	26-134	

FORM I 8141A

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FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-1

SDG No.: CLJ55796-1

Client Sample ID: IR69-GW03D-10A | Lab Sample ID: 680-55796-20

Matrix: Water | Lab File ID: oc15059.d

Analysis Method: 8141A | Date Collected: 03/07/2010 17:05

Extraction Method: 3520C | Date Extracted: 03/12/2010 14:20

Sample wt/vol: 1060(mL) | Date Analyzed: 03/17/2010 09:34

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163326 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	2.4	U Ø	2.4	1.2
126-75-0	Demeton-S	2.4	U Ø UJ BSL	2.4	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U Ø	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U Ø	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
52-85-7	Famphur	1.9	U Ø	1.9	0.94
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U Ø	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monochrotophos	9.4	U Ø	9.4	4.7
300-76-5	Naled	4.7	U	4.7	2.4
56-38-2	Parathion	0.94	U Ø	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U Ø	0.47	0.24
297-97-2	Thionazin	0.94	U Ø	0.94	0.47
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	84	26-134	

JAC 7/2010

FORM I 8141A

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION
CTO-081	374082.F1.F1.69	MCB Camp Lejeune

TESTAMERICA (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
Abbie Yont		

CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
Gwen Buckley	757-671-6292	704-544-4041

CLIENT NAME	CLIENT EMAIL
CH2M HILL	Gwen.Buckley@CH2M.com

CLIENT ADDRESS
11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226

COMPANY CONTRACTING THIS WORK (if applicable):

PAGE 1 OF 1

STANDARD REPORT DELIVERY ○
DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

REQUIRED ANALYSES: OP Pesticides/2 / 1L amb 8141A

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
3/6/10	1230	IR69-GW02DD-10A	G	X				2	
3/6/10	1740	IR69-GW09IW-10A	G	X				2	
3/6/10	1145	IR69-GW15IW-10A	G	X				2	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3/11/10	1200						

RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/12/10	0919	YES ○ NO ○		680-55796	0.2

FCU052:01.02.08:2

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

PROJECT REFERENCE: CTO-081	PROJECT NO.: 374082.FI.FI.69	PROJECT LOCATION: MCB Camp Lejeune
TESTAMERICA (LAB) PROJECT MANAGER: Abbie Yont	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Gwen Buckley	CLIENT PHONE: 757-671-6292	CLIENT FAX: 704-544-4041
CLIENT NAME: CH2M HILL	CLIENT EMAIL: Gwen.Buckley@CH2M.com	
CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226		
COMPANY CONTRACTING THIS WORK (if applicable):		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ○
DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

REQUIRED ANALYSES: OPrest 8/4/10

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
3-7-10	1140	IR69-GW15-10A	G	W				2	
3-10-10	1100	IR69-FB-031010	G	W				2	
3-7-10	1200	IR69-FB-030710	G	W				2	
3-6-10	1100	IR69-EB-030610-GW	G	W				2	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
Jeffrey Mathis	8/11/10	1300						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
George Kly	3/12/10	0919	YES ○ NO ○		680-55796	0.8

FCU052:01.02.08:2

04/02/2010

028

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

PROJECT REFERENCE: CTO-081	PROJECT NO.: 374082.FI.FI.69	PROJECT LOCATION: MCB Camp Lejeune
TESTAMERICA (LAB) PROJECT MANAGER: Abbie Yont	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Gwen Buckley	CLIENT PHONE: 757-671-6292	CLIENT FAX: 704-544-4041
CLIENT NAME: CH2M HILL	CLIENT EMAIL: Gwen.Buckley@CH2M.com	
CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226		
COMPANY CONTRACTING THIS WORK (if applicable):		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ○ DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○ DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	REQUIRED ANALYSES: OP Pest 8141A	REMARKS
3-9-10	1540	IR69-GW03BCH-10A	G	W				2	
3-8-10	1130	IR69-GW08-10A	G	W				2	
3-8-10	1135	IR69-GW08D-10A	G	W				2	
3-7-10	1700	IR69-EB-030710-SB	G	W				2	
3-8-10	1600	IR69-GW05-10A	G	W				2	

NUMBER OF CONTAINERS SUBMITTED

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3/11/10	1400						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/12/10	0919	YES ○ NO ○		G80-55796	0.4

FCU052 01.02.08:2

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

PROJECT REFERENCE: CTO-081	PROJECT NO: 374082.FI.FI.69	PROJECT LOCATION: MCB Camp Lejeune
TESTAMERICA (LAB) PROJECT MANAGER: Abbie Yoni	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Gwen Buckley	CLIENT PHONE: 757-671-6292	CLIENT FAX: 704-544-4041
CLIENT NAME: CH2M HILL	CLIENT EMAIL: Gwen.Buckley@CH2M.com	
CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226		
COMPANY CONTRACTING THIS WORK (if applicable):		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ○
DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

MATRIX TYPE: COMPOSITE (C) OR GRAB (G) INDICATE; AQUEOUS (WATER); SOLID OR SEMISOLID; AIR; NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)

REQUIRED ANALYSES: OP Pest 8/8144

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G)	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
3-9-10	1600	IR69-EB-030910-GW	G	W				2	
3-8-10	1605	IR69-GW05D-10A	G	W				2	
3-8-10	1510	IR69-GW02BCH-10A	G	W				2	
3-8-10	0930	IR69-EB-030810-GW	G	W				2	
			~~G~~	~~W~~				~~2~~ MM	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3/11/10	1400						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/12/10	0919	YES ○ NO ○		680-55746	0.3

FCU052:01.02.08:2

04/02/2010

030

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

PROJECT REFERENCE: CTO-081	PROJECT NO.: 374082.FI.FI.69	PROJECT LOCATION: MCB Camp Lejeune
TESTAMERICA (LAB) PROJECT MANAGER: Abbie Yoni	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Gwen Buckley	CLIENT PHONE: 757-671-6292	CLIENT FAX: 704-544-4041
CLIENT NAME: CH2M HILL	CLIENT EMAIL: Gwen.Buckley@CH2M.com	
CLIENT ADDRESS: 11301 Carmel Commons Blvd, Ste 304, Charlotte, NC 28226		
COMPANY CONTRACTING THIS WORK (if applicable):		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ○
DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	REQUIRED ANALYSES: OP Pest 8141A	REMARKS
3-7-10	1650	IR69-GW03DW-10A	G	X				2	
3-4-10	1700	IR69-EB-030410-SS	G	X				2	
3-7-10	1700	IR69-GW03-10A'	G	X				2	
3-7-10	1705	IR69-GW03D-10A	G	X				2	

NUMBER OF CONTAINERS SUBMITTED

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3/11/10	1200						

RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/12/10	0919	YES ○ NO ○		680-55796	O.L

FCU052:01.02.08:2

04/02/2010

031

Holding Times

Sampling Date: 3/4-3/10
Received Date: 3/12 at TestAmerica Cooler temps were within acceptable range.
Extraction Date: 3/12, 3/15
Analysis Dates: 3/17-3/18

All extraction and analysis holding times were met for the samples in this SDG with one exception. Sample IR69-EB01-030410-SS was extracted one day out of extraction holding time. Sample receipt data is in order. Cooler temperature was within acceptable range. This analysis was sub-contracted to Test America Savannah by Compuchem.

Calibrations

Initial calibrations were performed according to the method with a eight-point curve for the organophosphorus pesticide target compounds. Calibration factors were calculated or LR curves were plotted. %RSDs or correlation coefficients were within QC limits. Continuing calibration standards were analyzed per the SW-846 methods requested. All %D criteria were not met. Please see the report for any necessary qualifications. Column resolution was acceptable. Retention time windows were provided, retention times were stable throughout the analytical sequence. All required instrument blanks were analyzed. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Any compound detected in the sample, and the associated blank, must be qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than five (5) times the blank concentration.
- Sample weight, volume or dilution factor must be taken into consideration when applying the 5X criteria.
- Apply the same data validation guidelines to any associated rinse and field blanks and all associated samples.
- Qualification/Action codes:
-

No Action -	The sample result is greater than the RL and greater than five times (5X) the blank value.
U at RL-	The sample result is less than the RL when the blank contamination level is less than the RL.

No contamination that resulted in qualification of the data was noted in the associated method or instrument blanks or the submitted field QC blanks.

SURROGATE RECOVERIES

Surrogate recoveries were acceptable.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

The associated MS/MSD pair was batch QC. No qualifications were required.

LABORATORY CONTROL SAMPLES

The submitted LCS's and LCS/LCSD pairs submitted exhibited acceptable recoveries with the exception of demeton-s, demeton-o and naled. All samples were flagged as estimated for demeton-s. Demeton-o did not required qualifications because there were no positive results. The compound naled was qualified as estimated in samples IR69-FB01-031010, IR69-GW03BCH-10A, IR69-EB01-030910-GW, IR69-GW05D-10A, IR69-GW02BCH-10A, and IR69-EB01-030810-GW.

FIELD DUPLICATE SAMPLE SUMMARY

Sample ID: **Duplicate ID:**

Compound	Sample Conc.	Duplicate Conc.	RPD
			#DIV/0!

Comments: There were 3 field duplicate pairs submitted – no positive results were reported in any of the field samples.

SAMPLE RESULT VERIFICATION

Raw data was verified. Calculations were verified.

Reviewer JACleveland **Date:** 7/26/10

Test America Savannah
SDG 680-55796-1
OPP

Job Narrative
680-55796-1

Comments
No additional comments.

Receipt
Method(s) 3520C: The following sample was received outside of holding time: IR69-EB-030410-SS (680-55796-18). The client was contacted, and the laboratory was instructed to proceed with analysis.

One container for the following sample(s) was received broken or leaking: IR69-FB-031010 (680-55796-5), IR69-GW03-10A (680-55796-19), IR69-GW05-10A (680-55796-12).

All other samples were received in good condition within temperature requirements.

GC Semi VOA
Method(s) 8141A: The laboratory control sample (LCS) for batch 680-162920 exceeded control limits for the following analytes: Demeton-S. The vendor purchased standard for Demeton-O and Demeton-S is expressed as a the value of the total concentration of the two analytes and not as the concentration of the individual analytes. The ratio of the LCS standard differs from the rations present in the calibration standards. The % recovery of the total od Demeton-O and Demeton-S was within limits.

Method(s) 8141A: A mix B laboratory control sample (LCS) and a laboratory control standard duplicate (LCSD) were performed for batch 680-162920. The LCS recoveries were within acceptable limits; however, the LCSD recoveries were outside acceptable limits. The data have been reported and qualified. The LCSD went dry during the extraction step of the process resulting in the low biased recoveries.

Method(s) 8141A: The laboratory control sample (LCS) for batch 680-162920 exceeded control limits for the following analytes: Demeton-S. The vendor purchased standard for Demeton-O and Demeton-S is expressed as a the value of the total concentration of the two analytes and not as the concentration of the individual analytes. The ratio of the LCS standard differs from the rations present in the calibration standards. The % recovery of the total od Demeton-O and Demeton-S was within limits.

Method(s) 8141A: The laboratory control sample (LCS) for batch 680-163041 exceeded control limits for the following analyte(s): Naled. Naled has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method(s) 8141A: The laboratory control sample (LCS) for batch 680-163041 exceeded control limits for the following analytes: Demeton-S. The vendor purchased standard for Demeton-O and Demeton-S is expressed as a the value of the total concentration of the two analytes and not as the concentration of the individual analytes. The ratio of the LCS standard differs from the rations present in the calibration standards. The % recovery of the total od Demeton-O and Demeton-S was within limits.

Method(s) 8141A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 680-163041 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Initial Calibration Date: 3/16/2010

RRF and %RSD Calculations:

Compound Name: bolstar in level 4
Lab Value: 4393664.0000

Area of Compound	2196832
Conc. of Compound	0.5
Calculated RRF	4393664.0000

Compound Name: bolstar
Lab Value: 8.1

RRF of STD 1	4650720.0000
RRF of STD 2	3991920.0000
RRF of STD 3	4761128.0000
RRF of STD 4	4393664.0000
RRF of STD 3	5009332.0000
RRF of STD 4	4468265.0000
RRF of STD 5	4839163.0000
RRF of STD 6	5188140.0000
Calculated % RSD	8.10

Continuing Calibration File ID: oc15065.d

RRF and %D Calculations:

Compound Name: stirophos
Lab Value: 4361262.00000

Area of compound	2180631
Conc. Of compound	0.5
Calculated CF	4361262.00000

Compound Name: stirophos
Lab Value: 9.6

Avg. CF from ICAL	3978501.00000
CF of CCV	4361262.00000
Calculated % D	-9.6

Initial Calibration Date: 3/17/2010

RRF and %RSD Calculations:

Compound Name: parathion in level 1
Lab Value: 6410200.0000

Area of Compound	320510
Conc. of Compound	0.05
Calculated RRF	6410200.0000

Compound Name: parathion
Lab Value: 8.3

RRF of STD 1	6410200.0000
RRF of STD 2	5814370.0000
RRF of STD 3	6919304.0000
RRF of STD 4	6743898.0000
RRF of STD 3	7449757.0000
RRF of STD 4	7146476.0000
RRF of STD 5	7299523.0000
RRF of STD 6	
Calculated % RSD	8.30

Continuing Calibration File ID: oc17049

RRF and %D Calculations:

Compound Name: ronnel
Lab Value: 8471798.00000

Area of compound	4235899
Conc. Of compound	0.5
Calculated CF	8471798.00000

Compound Name: ronnel
Lab Value: 3.5

Avg. CF from ICAL	8183126.00000
CF of CCV	8471798.00000
Calculated % D	-3.5

SAMPLE CALCULATION

Sample ID: LCS 680-163041/24-A
Standard ID: ICAL curve3/17/10
Compound: famphur
Concnetration: 3.07 ug/L

	Water (ug/L)	Soil (ug/Kg)
Area of Compound	1762077	
Calibration Factor of Compound	5736545	
Dilution Factor	1	
Weight/Volume of Sample	1000	
Final Volume extract	10000	
% Moisture	NA	
conversion factor	1	
Concentration	3.07167	#DIV/0!

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 680-55796-1

SDG No.: CLJ55796-1

Lab Sample ID: CCV 680-163326/2 Calibration Date: 03/17/2010 06:39

Instrument ID: SGO Calib Start Date: 03/16/2010 17:46

GC Column: Rtx-OPP 2 ID: 0.32(mm) Calib End Date: 03/16/2010 20:41

Lab File ID: oc15052.d Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Thionazin	QuaF	6102685	7479102		50.0	0.500	8.0	
Sulfotepp	Ave	10939333	12390660		25.0	0.500	13.3	15.0
Monochrotophos	QuaF	3998769	5135420		500	5.00	2.3	
Dimethoate	LinF	5993036	5778992		100	0.500	-17.5	
Malathion	Ave	4861387	5047590		50.0	0.500	3.8	15.0
Parathion	Ave	5397511	6005646		50.0	0.500	11.3	15.0
Famphur	Ave	3904761	4661294		100	0.500	19.4*	15.0
EPN	Ave	3662336	4188622		50.0	0.500	14.4	15.0
Triphenylphosphate	Ave	3456209	3877186		0.561	0.500	12.2	15.0

NQ

NC due to ↑ in response - no + - NQ

FORM VII 8141A

FORM IV
GC SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 680-55796-1

SDG No.: CLJ55796-1

Lab Sample ID: MB 680-163041/12-A

Matrix: Water Date Extracted: 03/15/2010 14:22

Lab File ID:(1) oc17034.d Lab File ID:(2)

Date Analyzed:(1) 03/18/2010 00:41 Date Analyzed:(2)

Instrument ID:(1) SGO Instrument ID:(2)

GC Column:(1) Rtx-OPP 2 ID: 0.32(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 680-163041/21-A		03/18/2010 01:06
	LCS 680-163041/24-A		03/18/2010 01:31
IR69-FB01-031010	680-55796-5		03/18/2010 01:56
IR69-GW03BCH-10A	680-55796-8		03/18/2010 02:21
IR69-EB01-030910-GW	680-55796-13		03/18/2010 02:45
IR69-GW05D-10A	680-55796-14		03/18/2010 08:35
IR69-GW02BCH-10A	680-55796-15		03/18/2010 08:59
IR69-EB01-030810-GW	680-55796-16		03/18/2010 09:24

FORM III
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55796-1

SDG No.: CLJ55796-1

Matrix: Water Level: Low Lab File ID: oc17035.d

Lab ID: LCS 680-163041/21-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#	
Azinphos-methyl	4.00	4.19	105	10-155		
Bolstar	4.00	4.10	102	62-130		
Chlorpyrifos	4.00	3.73	93	66-130		
Coumaphos	4.00	4.26	106	53-130		
Demeton-O	4.00	11.4	285	70-130	Q	J+
Demeton-S	4.00	1.3 U	19	70-130	Q	J/UJ
Diazinon	4.00	3.60	90	53-138		
Dichlorvos	4.00	4.24	106	52-130		
Disulfoton	4.00	3.60	90	57-130		
Ethoprop	4.00	3.91	98	57-130		
Fensulfothion	4.00	5.21	130	16-184		
Fenthion	4.00	3.49	87	10-181	M	
Merphos	4.00	3.51	88	10-135		
Methyl parathion	4.00	3.66	91	31-130		
Mevinphos	4.00	3.00	75	38-131		
Naled	4.00	2.5 U	36	54-130	Q	J/UJ
Phorate	4.00	2.94	73	49-130		
Ronnel	4.00	3.91	98	46-142		
Stirophos	4.00	3.83	96	70-130		
Tokuthion	4.00	3.50	87	63-130		
Trichloronate	4.00	3.49	87	26-145	M	

Flag in associated

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55796-1

SDG No.: CLJ55796-1

Matrix: Water Level: Low Lab File ID: oc17036.d

Lab ID: LCS 680-163041/24-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Dimethoate	4.00	3.17	79	31-130	
EPN	4.00	3.41	85	53-130	
Famphur	4.00	3.07	77	54-130	
Malathion	4.00	3.41	85	56-130	
Monochrotophos	40.0	8.88 J	22	10-130	
Parathion	4.00	3.56	89	45-132	
Sulfotepp	4.00	3.40	85	53-130	
Thionazin	4.00	3.20	80	37-134	

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM IV
GC SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 680-55796-1

SDG No.: CLJ55796-1

Lab Sample ID: MB 680-162920/2-A

Matrix: Water Date Extracted: 03/12/2010 14:20

Lab File ID:(1) oc15034.d Lab File ID:(2)

Date Analyzed:(1) 03/16/2010 23:11 Date Analyzed:(2)

Instrument ID:(1) SGO Instrument ID:(2)

GC Column:(1) Rtx-OPP 2 ID: 0.32(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 680-162920/12-A		03/16/2010 23:35
	LCSD 680-162920/13-A		03/17/2010 00:01
	LCS 680-162920/14-A		03/17/2010 00:25
	LCSD 680-162920/15-A		03/17/2010 00:50
IR69-GW02DD-10A	680-55796-1		03/17/2010 02:05
IR69-GW09IW-10A	680-55796-2		03/17/2010 02:30
IR69-GW15IW-10A	680-55796-3		03/17/2010 02:55
IR69-GW15-10A	680-55796-4		03/17/2010 03:20
IR69-EB01-030710	680-55796-6		03/17/2010 03:45
IR69-EB01-030610-GW	680-55796-7		03/17/2010 04:10
IR69-GW08-10A	680-55796-9		03/17/2010 04:35
IR69-GW08D-10A	680-55796-10		03/17/2010 05:00
IR69-EB01-030710-SB	680-55796-11		03/17/2010 07:29
IR69-GW05-10A	680-55796-12		03/17/2010 07:54
IR69-GW03DW-10A	680-55796-17		03/17/2010 08:19
IR69-EB01-030410-SS	680-55796-18		03/17/2010 08:44
IR69-GW03-10A	680-55796-19		03/17/2010 09:09
IR69-GW03D-10A	680-55796-20		03/17/2010 09:34

FORM III
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55796-1

SDG No.: CLJ55796-1

Matrix: Water Level: Low Lab File ID: oc15035.d

Lab ID: LCS 680-162920/12-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Azinphos-methyl	4.00	3.36	84	10-155	
Bolstar	4.00	3.74	94	62-130	
Chlorpyrifos	4.00	3.70	92	66-130	
Coumaphos	4.00	3.60	90	53-130	
Demeton-O	4.00	9.32	233	70-130	Q
Demeton-S	4.00	1.3 U	19	70-130	Q
Diazinon	4.00	3.55	89	53-138	
Dichlorvos	4.00	3.95	99	52-130	
Disulfoton	4.00	3.59	90	57-130	
Ethoprop	4.00	3.44	86	57-130	
Fensulfothion	4.00	3.97 J	99	16-184	
Fenthion	4.00	3.54	89	10-181	M
Merphos	4.00	3.64	91	10-135	
Methyl parathion	4.00	3.21	80	31-130	
Mevinphos	4.00	2.45	61	38-131	
Naled	4.00	2.5 U	57	54-130	
Phorate	4.00	2.73	68	49-130	
Ronnel	4.00	3.90	97	46-142	
Stirophos	4.00	3.74	94	70-130	
Tokuthion	4.00	3.67	92	63-130	
Trichloronate	4.00	3.33	83	26-145	M

J+
J/UJ

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55796-1

SDG No.: CLJ55796-1

Matrix: Water Level: Low Lab File ID: oc15036.d

Lab ID: LCSD 680-162920/13-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Azinphos-methyl	4.00	2.82	71	17	40	10-155	
Bolstar	4.00	3.34	84	11	40	62-130	
Chlorpyrifos	4.00	3.16	79	16	40	66-130	
Coumaphos	4.00	3.26	81	10	40	53-130	
Demeton-O	4.00	8.03	201	15	40	70-130	Q
Demeton-S	4.00	1.3 U	19	0	40	70-130	Q
Diazinon	4.00	3.07	77	15	40	53-138	
Dichlorvos	4.00	3.36	84	16	40	52-130	
Disulfoton	4.00	3.14	78	14	40	57-130	
Ethoprop	4.00	3.19	80	8	40	57-130	
Fensulfothion	4.00	4.64 J	116	16	40	16-184	
Fenthion	4.00	2.85	71	22	40	10-181	M
Merphos	4.00	2.98	75	20	40	10-135	
Methyl parathion	4.00	2.85	71	12	40	31-130	
Mevinphos	4.00	2.47	62	1	40	38-131	
Naled	4.00	2.68 J	67	17	40	54-130	
Phorate	4.00	2.44	61	11	40	49-130	
Ronnel	4.00	3.45	86	12	40	46-142	
Stirophos	4.00	3.15	79	17	40	70-130	
Tokuthion	4.00	2.88	72	24	40	63-130	
Trichloronate	4.00	3.22	80	3	40	26-145	

J+
J/UJ

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55796-1

SDG No.: CLJ55796-1

Matrix: Water Level: Low Lab File ID: oc15037.d

Lab ID: LCS 680-162920/14-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Dimethoate	4.00	2.71	68	31-130	
EPN	4.00	2.66	66	53-130	
Famphur	4.00	2.77	69	54-130	
Malathion	4.00	2.80	70	56-130	
Monochrotophos	40.0	16.2	41	10-130	
Parathion	4.00	2.81	70	45-132	
Sulfotepp	4.00	3.05	76	53-130	
Thionazin	4.00	3.19	80	37-134	

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55796-1

SDG No.: CLJ55796-1

Matrix: Water Level: Low Lab File ID: oc15038.d

Lab ID: LCSD 680-162920/15-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Dimethoate	4.00	1.0 U	16	123	40	31-130	Q
EPN	4.00	1.85	46	36	40	53-130	Q
Famphur	4.00	1.54 J	38	57	40	54-130	Q
Malathion	4.00	1.29	32	74	40	56-130	Q
Monochrotophos	40.0	5.0 U	3	174	40	10-130	Q
Parathion	4.00	1.37	34	69	40	45-132	Q
Sulfotepp	4.00	1.03	26	99	40	53-130	Q
Thionazin	4.00	0.988 J	25	105	40	37-134	Q

Note- LCSD went to dryness during extraction - NQ

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

DataQual

Environmental Services, LLC

CH2M HILL
5700 Cleveland Street
Suite 101
Virginia Beach, VA 23462

July 27, 2010
TestAmerica-Savannah, SDG# CLJ55796-2
MCB Camp Lejeune, CTO-81

Dear Ms. Buckley,

The following Data Validation report is provided as requested for the parameters noted in the table below for SDG # CLJ55796-2. The data validation was performed in accordance with the SW846 Method 8141A for organophosphorous pesticides (OPP) and good professional judgment. Also used in the validation of these samples were The National Functional Guidelines for Organic Data Review (June, 2008), as applicable. All areas of concern are discussed in the body of the report and a summary of data qualifications is provided.

Sample ID	Lab ID	Matrix	OPP
IR69-GW01-10A	680-55796-21	water	X
IR69-GW06-10A	680-55796-22	water	X
IR69-GW09DW-10A	680-55796-23	water	X
IR69-GW27IW-10A	680-55796-24	water	X
IR69-GW27DW-10A	680-55796-25	water	X
IR69-GW07D-10A	680-55796-26	water	X
IR69-GW01D-10A	680-55796-27	water	X
IR69-GW10-10A	680-55796-28	water	X
IR69-GW07-10A	680-55796-29	water	X
IR69-SW01-10A	680-55946-1	water	X
IR69-SW01D-10A	680-55946-2	water	X
IR69-GW04DW-10A	680-55946-3	water	X
IR69-EB01-031510-SD	680-55946-4	water	X
IR69-GW11IW-10	680-55946-5	water	X
IR69-GW11DW-10A	680-55946-6	water	X
IR69-GW05DW-10A	680-55946-7	water	X
IR69-EB01-031310-SS	680-55975-4	water	X
IR69-EB01-031310-GW	680-55975-5	water	X
IR69-EB01-031410-GW	680-55975-7	water	X
IR69-EB01-031410-SD	680-55975-8	water	X
IR69-GW06-10AMS	680-55796-22MS	water	X
IR69-GW06-10AMSD	680-55796-22MSD	water	X

The following quality control samples were provided with this SDG: sample IR69-GW07D-10A-field duplicate of sample IR69-GW07-10A; sample IR69-GW01D-10A-field duplicate of sample IR69-GW01-10A; sample IR69-SW01D-10A-field duplicate of sample IR69-SW01-10A; samples IR69-EB01-031510-SD, IR69-EB01-031310-SS, IR69-EB01-031310-GW, IR69-EB01-031410-GW, IR69-EB01-031410-SD-equipment blanks.

5830 Amberway Drive • St. Louis, MO 63128 • 314-330-1327 • Fax 314-849-6264

The samples were evaluated based on the following criteria:

- Data Completeness *
- Technical Holding Times *
- GC Performance *
- Initial/Continuing Calibrations *
- Blanks *
- Surrogates *
- Laboratory Control Samples
- Matrix Spike Recoveries
- Field Duplicates *
- Identification/Quantitation *
- Reporting Limits *

* - indicates that no qualifications were required based on this criteria

Overall Evaluation of Data/Potential Usability Issues

A summary of qualifications applied to the sample results are noted below for the fractions validated. Specific details regarding qualification of the data are addressed in the Specific Evaluation section of this narrative. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte the validator has chosen the qualifier that best indicates possible bias in the results and flagged the data accordingly. However, information regarding all quality control issues is provided in the body of the report and on the qualification summary page. Please note that when a compound or analyte is flagged due to blank contamination the BL qualifier code takes precedence over all other qualifier codes except a code that explains rejected data.

Organophosphorous Pesticides (OPP)

The laboratory control samples associated with samples exhibited non-compliant recoveries for some compounds that resulted in the qualification of results.

The MS/MSD pair of sample IR69-GW06-10A exhibited non-compliant %Rs that resulted in the qualification of some sample results.

Specific Evaluation of Data

Data Completeness

This SDG was received complete and intact. Resubmissions were not required.

Technical Holding Times

According to chain of custody records, sampling was performed on 3/06-14/10 and samples were received at the laboratory on 3/12/10 and 3/18/10. All sample preparation and analysis was performed within method holding time requirements.

Laboratory Control Samples

OPP

The laboratory control samples associated with the samples in this SDG exhibited low recoveries for the compound demeton-s (19%/19%/17). The compound was qualified as estimated J/UJ in all field and QC blank samples with a qualifier code of BSL.

The compound naled was qualified as estimated in samples IR69-GW06-10A, IR69-GW07D-10A, IR69-GW10-10A, and IR69-GW07-10A due to a low recovery of 36% in the associated LCS with a qualifier code of BSL.

Matrix Spike Recoveries

OPP

The MS/MSD of sample IR69-GW06-10A exhibited 0% recoveries for the compounds demeton-s and naled. These compounds were rejected R in the native sample only with a qualifier code of MSL.

A summary of qualifications required is provided on the following page. Please do not hesitate to contact DataQual ES with any questions regarding this validation report.

Sincerely,

Jacqueline Cleveland

Jacqueline Cleveland
Vice-President

Summary of Data Qualifications

Organophosphorous Pesticides

Sample ID	Compound	Results	Q-Flag	Q Code
all samples	demeton-s	+/-	J/UJ	BSL
IR69-GW06-10A, IR69-GW07D-10A, IR69-GW10-10A, IR69-GW07-10A	naled	+/-	J/UJ	BSL
IR69-GW06-10A	demeton-s naled	+/-	J/UJ	MSL

*final qualifier code for sample IR69-GW06-10A was MSL

Glossary of Qualification Flags and Abbreviations

Qualification Flags (Q-Flags)

U	not detected above the reported sample quantitation limit
J	estimated value
UJ	reported quantitation limit is qualified as estimated
R	result is rejected; the presence or absence of the analyte cannot be verified
D	result value is based on dilution analysis result
NJ	analyte has been tentatively identified, estimated value
L	analyte present, biased low
UL	not detected, quantitation limit is probably higher
K	analyte present, biased high

Inorganic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 10X the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL and the result is raised to the RL and flagged U.
R or J_+	The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator. (see NFG, Rev. date 10/04, p. 17 for extracted blanks (PB))

Organic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 5X (10X for common laboratory contaminants) the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is raised to the RL and flagged U.
U	The sample result for the blank contaminant is greater than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is flagged U at the reported value.

General Abbreviations

RL / MDL	reporting limit/method detection limit
CRQL	contract required quantitation limit
Q Code	qualifier code
+	positive result
-	non-detect result

QUALIFIER CODE REFERENCE

Qualifier	Description
TN	Tune
BSL	Blank Spike/LCS - High Recovery
BSH	Blank Spike/LCS - Low Recovery
BD	Blank Spike/Blank Spike Duplicate (LCS/LCSD) Precision
BRL	Below Reporting Limit
ISL	Internal Standard - Low Recovery
ISH	Internal Standard - High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate - Low Recovery
MSH	Matrix Spike and/or Matrix Spike Duplicate - High Recovery
MI	Matrix interference obscuring the raw data
MDP	Matrix Spike/Matrix Spike Duplicate Precision
2S	Second Source - Bad reproducibility between tandem detectors
SSL	Spiked Surrogate - Low Recovery
SSH	Spiked Surrogate - High Recovery
SD	Serial Dilution Reproducibility
ICL	Initial Calibration - Low Relative Response Factors (RRF)
ICH	Initial Calibration - High Relative Response Factors (RRF)
ICB	Initial Calibration - Bad Linearity or Curve Function
CCL	Continuing Calibration - Low Recovery or %Difference
CCH	Continuing Calibration - High Recovery or %Difference
LD	Lab Duplicate Reproducibility
HT	Holding Time
PD	Pesticide Degradation
2C	Second Column - Poor Dual Column Reproducibility
LR	Concentration Exceeds Linear Range
BL	Blank Contamination (MBL, EBL, FBL, TBL)
RE	Redundant Result - due to Re-analysis or Re-extraction
DL	Redundant Result - due to Dilution
FD	Field Duplicate
OT	Other - explained in data validation report
%SOL	High moisture content

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 680-55796-2
SDG No.: CLJ55796-2
Client Sample ID: IR69-GW01-10A
Lab Sample ID: 680-55796-21
Matrix: Water
Lab File ID: oc15060.d
Analysis Method: 8141A
Date Collected: 03/06/2010 11:15
Extraction Method: 3520C
Date Extracted: 03/12/2010 14:20
Sample wt/vol: 1060(mL)
Date Analyzed: 03/17/2010 09:59
Con. Extract Vol.: 10(mL)
Dilution Factor: 1
Injection Volume: 2(uL)
GC Column: Rtx-OPP 2 ID: 0.32(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 163326
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ ~~Q~~ UJ BSL	2.4	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U ~~Q~~	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U ~~Q~~	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
52-85-7	Famphur	1.9	U ~~Q~~	1.9	0.94
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U ~~Q~~	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monochrotophos	9.4	U ~~Q~~	9.4	4.7
300-76-5	Naled	4.7	U	4.7	2.4
56-38-2	Parathion	0.94	U ~~Q~~	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U ~~Q~~	0.47	0.24
297-97-2	Thionazin	0.94	U ~~Q~~	0.94	0.47
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	68	26-134	

SAC 12/2010

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-2

SDG No.: CLJ55796-2

Client Sample ID: IR69-GW06-10A | Lab Sample ID: 680-55796-22

Matrix: Water | Lab File ID: oc17056.d

Analysis Method: 8141A | Date Collected: 03/09/2010 11:15

Extraction Method: 3520C | Date Extracted: 03/15/2010 14:22

Sample wt/vol: 1030(mL) | Date Analyzed: 03/18/2010 09:49

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163438 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.97	U	0.97	0.49
35400-43-2	Bolstar	0.97	U	0.97	0.49
2921-88-2	Chlorpyrifos	0.97	U	0.97	0.49
56-72-4	Coumaphos	0.97	U	0.97	0.49
298-03-3	Demeton-O	2.4	U ~~Q~~ J	2.4	1.3
126-75-0	Demeton-S	2.4	~~U Q J~~ R MSL	2.4	1.3
333-41-5	Diazinon	0.97	U	0.97	0.49
62-73-7	Dichlorvos	1.9	U	1.9	0.97
60-51-5	Dimethoate	1.9	U	1.9	0.97
298-04-4	Disulfoton	1.9	U	1.9	0.97
2104-64-5	EPN	0.97	U	0.97	0.49
13194-48-4	Ethoprop	0.49	U	0.49	0.24
52-85-7	Famphur	1.9	U	1.9	0.97
115-90-2	Fensulfothion	4.9	U	4.9	2.4
55-38-9	Fenthion	0.97	U	0.97	0.49
121-75-5	Malathion	0.97	U	0.97	0.49
150-50-5	Merphos	1.5	U	1.5	0.73
298-00-0	Methyl parathion	0.49	U	0.49	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.97
6923-22-4	Monochrotophos	9.7	U	9.7	4.9
300-76-5	Naled	4.9	~~U Q J~~ R MSL	4.9	2.4
56-38-2	Parathion	0.97	U	0.97	0.49
298-02-2	Phorate	0.97	U	0.97	0.49
299-84-3	Ronnel	0.97	U	0.97	0.49
22248-79-9	Stirophos	0.97	U	0.97	0.49
3689-24-5	Sulfotepp	0.49	U	0.49	0.24
297-97-2	Thionazin	0.97	U	0.97	0.49
34643-46-4	Tokuthion	0.97	U	0.97	0.49
327-98-0	Trichloronate	0.97	U	0.97	0.49

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	97	26-134	

JBC 12/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-2

SDG No.: CLJ55796-2

Client Sample ID: IR69-GW09DW-10A | Lab Sample ID: 680-55796-23

Matrix: Water | Lab File ID: oc15061.d

Analysis Method: 8141A | Date Collected: 03/06/2010 18:00

Extraction Method: 3520C | Date Extracted: 03/12/2010 14:20

Sample wt/vol: 1060(mL) | Date Analyzed: 03/17/2010 10:24

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163326 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	2.4	U Ø	2.4	1.2
126-75-0	Demeton-S	2.4	U Ø UJ BSL	2.4	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U Ø	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U Ø	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
52-85-7	Famphur	1.9	U Ø	1.9	0.94
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U Ø	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monochrotophos	9.4	U Ø	9.4	4.7
300-76-5	Naled	4.7	U	4.7	2.4
56-38-2	Parathion	0.94	U Ø	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U Ø	0.47	0.24
297-97-2	Thionazin	0.94	U Ø	0.94	0.47
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	91	26-134	

JAC 7/2010

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-2

SDG No.: CLJ55796-2

Client Sample ID: IR69-GW27IW-10A | Lab Sample ID: 680-55796-24

Matrix: Water | Lab File ID: oc15062.d

Analysis Method: 8141A | Date Collected: 03/06/2010 14:15

Extraction Method: 3520C | Date Extracted: 03/12/2010 14:20

Sample wt/vol: 1060(mL) | Date Analyzed: 03/17/2010 10:49

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163326 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	2.4	U Ø	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ Ø WJ BSL	2.4	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U Ø	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U Ø	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
52-85-7	Famphur	1.9	U Ø	1.9	0.94
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U Ø	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monochrotophos	9.4	U Ø	9.4	4.7
300-76-5	Naled	4.7	U	4.7	2.4
56-38-2	Parathion	0.94	U Ø	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U Ø	0.47	0.24
297-97-2	Thionazin	0.94	U Ø	0.94	0.47
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	85	26-134	

FORM I 8141A

JSC 12/2010

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-2

SDG No.: CLJ55796-2

Client Sample ID: IR69-GW27DW-10A | Lab Sample ID: 680-55796-25

Matrix: Water | Lab File ID: oc15063.d

Analysis Method: 8141A | Date Collected: 03/06/2010 16:50

Extraction Method: 3520C | Date Extracted: 03/12/2010 14:20

Sample wt/vol: 1060(mL) | Date Analyzed: 03/17/2010 11:14

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163326 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	2.4	U Ø	2.4	1.2
126-75-0	Demeton-S	2.4	U Ø NJ BSL	2.4	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U Ø	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U Ø	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
52-85-7	Famphur	1.9	U Ø	1.9	0.94
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U Ø	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monochrotophos	9.4	U Ø	9.4	4.7
300-76-5	Naled	4.7	U	4.7	2.4
56-38-2	Parathion	0.94	U Ø	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U Ø	0.47	0.24
297-97-2	Thionazin	0.94	U Ø	0.94	0.47
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	107	26-134	

JAC 7/26/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-2

SDG No.: CLJ55796-2

Client Sample ID: IR69-GW07D-10A | Lab Sample ID: 680-55796-26

Matrix: Water | Lab File ID: oc17057.d

Analysis Method: 8141A | Date Collected: 03/09/2010 16:05

Extraction Method: 3520C | Date Extracted: 03/15/2010 14:22

Sample wt/vol: 1030(mL) | Date Analyzed: 03/18/2010 10:14

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163438 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.97	U	0.97	0.49
35400-43-2	Bolstar	0.97	U	0.97	0.49
2921-88-2	Chlorpyrifos	0.97	U	0.97	0.49
56-72-4	Coumaphos	0.97	U	0.97	0.49
298-03-3	Demeton-O	2.4	U ~~Ø~~	2.4	1.3
126-75-0	Demeton-S	2.4	~~U~~ ~~Ø~~ WJ BSL	2.4	1.3
333-41-5	Diazinon	0.97	U	0.97	0.49
62-73-7	Dichlorvos	1.9	U	1.9	0.97
60-51-5	Dimethoate	1.9	U	1.9	0.97
298-04-4	Disulfoton	1.9	U	1.9	0.97
2104-64-5	EPN	0.97	U	0.97	0.49
13194-48-4	Ethoprop	0.49	U	0.49	0.24
52-85-7	Famphur	1.9	U	1.9	0.97
115-90-2	Fensulfothion	4.9	U	4.9	2.4
55-38-9	Fenthion	0.97	U	0.97	0.49
121-75-5	Malathion	0.97	U	0.97	0.49
150-50-5	Merphos	1.5	U	1.5	0.73
298-00-0	Methyl parathion	0.49	U	0.49	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.97
6923-22-4	Monochrotophos	9.7	U	9.7	4.9
300-76-5	Naled	4.9	~~U~~ ~~Ø~~ WJ BSL	4.9	2.4
56-38-2	Parathion	0.97	U	0.97	0.49
298-02-2	Phorate	0.97	U	0.97	0.49
299-84-3	Ronnel	0.97	U	0.97	0.49
22248-79-9	Stirophos	0.97	U	0.97	0.49
3689-24-5	Sulfotepp	0.49	U	0.49	0.24
297-97-2	Thionazin	0.97	U	0.97	0.49
34643-46-4	Tokuthion	0.97	U	0.97	0.49
327-98-0	Trichloronate	0.97	U	0.97	0.49

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	88	26-134	

JJC 4/26/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-2

SDG No.: CLJ55796-2

Client Sample ID: IR69-GW01D-10A | Lab Sample ID: 680-55796-27

Matrix: Water | Lab File ID: oc15064.d

Analysis Method: 8141A | Date Collected: 03/06/2010 11:20

Extraction Method: 3520C | Date Extracted: 03/12/2010 14:20

Sample wt/vol: 1060(mL) | Date Analyzed: 03/17/2010 11:38

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163326 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.2
126-75-0	Demeton-S	2.4	U ~~Q~~ UJ BSL	2.4	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U ~~Q~~	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U ~~Q~~	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
52-85-7	Famphur	1.9	U ~~Q~~	1.9	0.94
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U ~~Q~~	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monochrotophos	9.4	U ~~Q~~	9.4	4.7
300-76-5	Naled	4.7	U	4.7	2.4
56-38-2	Parathion	0.94	U ~~Q~~	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U ~~Q~~	0.47	0.24
297-97-2	Thionazin	0.94	U ~~Q~~	0.94	0.47
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	104	26-134	

JAC 7/26/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-2

SDG No.: CLJ55796-2

Client Sample ID: IR69-GW10-10A | Lab Sample ID: 680-55796-28

Matrix: Water | Lab File ID: oc17058.d

Analysis Method: 8141A | Date Collected: 03/08/2010 16:25

Extraction Method: 3520C | Date Extracted: 03/15/2010 14:22

Sample wt/vol: 1030(mL) | Date Analyzed: 03/18/2010 10:39

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163438 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.97	U	0.97	0.49
35400-43-2	Bolstar	0.97	U	0.97	0.49
2921-88-2	Chlorpyrifos	0.97	U	0.97	0.49
56-72-4	Coumaphos	0.97	U	0.97	0.49
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.3
126-75-0	Demeton-S	2.4	U ~~Q~~ WJ BSL	2.4	1.3
333-41-5	Diazinon	0.97	U	0.97	0.49
62-73-7	Dichlorvos	1.9	U	1.9	0.97
60-51-5	Dimethoate	1.9	U	1.9	0.97
298-04-4	Disulfoton	1.9	U	1.9	0.97
2104-64-5	EPN	0.97	U	0.97	0.49
13194-48-4	Ethoprop	0.49	U	0.49	0.24
52-85-7	Famphur	1.9	U	1.9	0.97
115-90-2	Fensulfothion	4.9	U	4.9	2.4
55-38-9	Fenthion	0.97	U	0.97	0.49
121-75-5	Malathion	0.97	U	0.97	0.49
150-50-5	Merphos	1.5	U	1.5	0.73
298-00-0	Methyl parathion	0.49	U	0.49	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.97
6923-22-4	Monochrotophos	9.7	U	9.7	4.9
300-76-5	Naled	4.9	U ~~Q~~ WJ BSL	4.9	2.4
56-38-2	Parathion	0.97	U	0.97	0.49
298-02-2	Phorate	0.97	U	0.97	0.49
299-84-3	Ronnel	0.97	U	0.97	0.49
22248-79-9	Stirophos	0.97	U	0.97	0.49
3689-24-5	Sulfotepp	0.49	U	0.49	0.24
297-97-2	Thionazin	0.97	U	0.97	0.49
34643-46-4	Tokuthion	0.97	U	0.97	0.49
327-98-0	Trichloronate	0.97	U	0.97	0.49

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	91	26-134	

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GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-2

SDG No.: CLJ55796-2

Client Sample ID: IR69-GW07-10A | Lab Sample ID: 680-55796-29

Matrix: Water | Lab File ID: oc17059.d

Analysis Method: 8141A | Date Collected: 03/09/2010 16:00

Extraction Method: 3520C | Date Extracted: 03/15/2010 14:22

Sample wt/vol: 1030(mL) | Date Analyzed: 03/18/2010 11:04

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163438 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.97	U	0.97	0.49
35400-43-2	Bolstar	0.97	U	0.97	0.49
2921-88-2	Chlorpyrifos	0.97	U	0.97	0.49
56-72-4	Coumaphos	0.97	U	0.97	0.49
298-03-3	Demeton-O	2.4	U ~~Ø~~	2.4	1.3
126-75-0	Demeton-S	2.4	~~U~~ ~~Ø~~ UJ BSL	2.4	1.3
333-41-5	Diazinon	0.97	U	0.97	0.49
62-73-7	Dichlorvos	1.9	U	1.9	0.97
60-51-5	Dimethoate	1.9	U	1.9	0.97
298-04-4	Disulfoton	1.9	U	1.9	0.97
2104-64-5	EPN	0.97	U	0.97	0.49
13194-48-4	Ethoprop	0.49	U	0.49	0.24
52-85-7	Famphur	1.9	U	1.9	0.97
115-90-2	Fensulfothion	4.9	U	4.9	2.4
55-38-9	Fenthion	0.97	U	0.97	0.49
121-75-5	Malathion	0.97	U	0.97	0.49
150-50-5	Merphos	1.5	U	1.5	0.73
298-00-0	Methyl parathion	0.49	U	0.49	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.97
6923-22-4	Monochrotophos	9.7	U	9.7	4.9
300-76-5	Naled	4.9	~~U~~ ~~Ø~~ UJ BSL	4.9	2.4
56-38-2	Parathion	0.97	U	0.97	0.49
298-02-2	Phorate	0.97	U	0.97	0.49
299-84-3	Ronnel	0.97	U	0.97	0.49
22248-79-9	Stirophos	0.97	U	0.97	0.49
3689-24-5	Sulfotepp	0.49	U	0.49	0.24
297-97-2	Thionazin	0.97	U	0.97	0.49
34643-46-4	Tokuthion	0.97	U	0.97	0.49
327-98-0	Trichloronate	0.97	U	0.97	0.49

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	86	26-134	

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FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-2

SDG No.: CLJ55796-2

Client Sample ID: IR69-SW01-10A | Lab Sample ID: 680-55946-1

Matrix: Water | Lab File ID: oc23037.d

Analysis Method: 8141A | Date Collected: 03/14/2010 13:45

Extraction Method: 3520C | Date Extracted: 03/19/2010 12:42

Sample wt/vol: 1050(mL) | Date Analyzed: 03/24/2010 16:22

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164209 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U ~~Ø~~	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ ~~Ø~~ UJ BSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U	9.5	4.8
300-76-5	Naled	4.8	U	4.8	2.4
56-38-2	Parathion	0.95	U	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
52-85-7	Famphur	1.9	U	1.9	0.95
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U	0.48	0.24
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48
297-97-2	Thionazin	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	88	26-134	

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FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-2

SDG No.: CLJ55796-2

Client Sample ID: IR69-SW01D-10A | Lab Sample ID: 680-55946-2

Matrix: Water | Lab File ID: oc23038.d

Analysis Method: 8141A | Date Collected: 03/14/2010 13:50

Extraction Method: 3520C | Date Extracted: 03/19/2010 12:42

Sample wt/vol: 1030(mL) | Date Analyzed: 03/24/2010 16:47

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164209 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.97	U	0.97	0.49
35400-43-2	Bolstar	0.97	U	0.97	0.49
2921-88-2	Chlorpyrifos	0.97	U	0.97	0.49
56-72-4	Coumaphos	0.97	U	0.97	0.49
298-03-3	Demeton-O	2.4	U ~~Ø~~	2.4	1.3
126-75-0	Demeton-S	2.4	U ~~Ø~~ WJ BSL	2.4	1.3
333-41-5	Diazinon	0.97	U	0.97	0.49
62-73-7	Dichlorvos	1.9	U	1.9	0.97
60-51-5	Dimethoate	1.9	U	1.9	0.97
298-04-4	Disulfoton	1.9	U	1.9	0.97
2104-64-5	EPN	0.97	U	0.97	0.49
13194-48-4	Ethoprop	0.49	U	0.49	0.24
115-90-2	Fensulfothion	4.9	U	4.9	2.4
55-38-9	Fenthion	0.97	U	0.97	0.49
121-75-5	Malathion	0.97	U	0.97	0.49
150-50-5	Merphos	1.5	U	1.5	0.73
298-00-0	Methyl parathion	0.49	U	0.49	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.97
6923-22-4	Monochrotophos	9.7	U	9.7	4.9
300-76-5	Naled	4.9	U	4.9	2.4
56-38-2	Parathion	0.97	U	0.97	0.49
298-02-2	Phorate	0.97	U	0.97	0.49
52-85-7	Famphur	1.9	U	1.9	0.97
299-84-3	Ronnel	0.97	U	0.97	0.49
22248-79-9	Stirophos	0.97	U	0.97	0.49
3689-24-5	Sulfotepp	0.49	U	0.49	0.24
34643-46-4	Tokuthion	0.97	U	0.97	0.49
327-98-0	Trichloronate	0.97	U	0.97	0.49
297-97-2	Thionazin	0.97	U	0.97	0.49

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	98	26-134	

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FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-2

SDG No.: CLJ55796-2

Client Sample ID: IR69-GW04DW-10A | Lab Sample ID: 680-55946-3

Matrix: Water | Lab File ID: oc23039.d

Analysis Method: 8141A | Date Collected: 03/14/2010 17:35

Extraction Method: 3520C | Date Extracted: 03/19/2010 12:42

Sample wt/vol: 1050(mL) | Date Analyzed: 03/24/2010 17:12

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164209 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U Q	2.4	1.2
126-75-0	Demeton-S	2.4	U Q UJ BSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U	9.5	4.8
300-76-5	Naled	4.8	U	4.8	2.4
56-38-2	Parathion	0.95	U	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
52-85-7	Famphur	1.9	U	1.9	0.95
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U	0.48	0.24
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48
297-97-2	Thionazin	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	106	26-134	

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FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 680-55796-2
SDG No.: CLJ55796-2
Client Sample ID: IR69-EB01-031510-SD
Lab Sample ID: 680-55946-4
Matrix: Water
Lab File ID: oc23040.d
Analysis Method: 8141A
Date Collected: 03/15/2010 17:00
Extraction Method: 3520C
Date Extracted: 03/19/2010 12:42
Sample wt/vol: 1050(mL)
Date Analyzed: 03/24/2010 17:37
Con. Extract Vol.: 10(mL)
Dilution Factor: 1
Injection Volume: 2(uL)
GC Column: Rtx-OPP 2 ID: 0.32(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 164209
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ ~~Q~~ NJ BSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U	9.5	4.8
300-76-5	Naled	4.8	U	4.8	2.4
56-38-2	Parathion	0.95	U	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
52-85-7	Famphur	1.9	U	1.9	0.95
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U	0.48	0.24
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48
297-97-2	Thionazin	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	93	26-134	

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FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 680-55796-2
SDG No.: CLJ55796-2
Client Sample ID: IR69-GW11IW-10A
Lab Sample ID: 680-55946-5
Matrix: Water
Lab File ID: oc23041.d
Analysis Method: 8141A
Date Collected: 03/13/2010 12:35
Extraction Method: 3520C
Date Extracted: 03/19/2010 12:42
Sample wt/vol: 1060(mL)
Date Analyzed: 03/24/2010 18:01
Con. Extract Vol.: 10(mL)
Dilution Factor: 1
Injection Volume: 2(uL)
GC Column: Rtx-OPP 2 ID: 0.32(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 164209
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.2
126-75-0	Demeton-S	2.4	U ~~Q~~ NOT BEL	2.4	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monochrotophos	9.4	U	9.4	4.7
300-76-5	Naled	4.7	U	4.7	2.4
56-38-2	Parathion	0.94	U	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
52-85-7	Famphur	1.9	U	1.9	0.94
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U	0.47	0.24
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47
297-97-2	Thionazin	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	73	26-134	

JC 3/24/10

020

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 680-55796-2
SDG No.: CLJ55796-2
Client Sample ID: IR69-GW11DW-10A
Lab Sample ID: 680-55946-6
Matrix: Water
Lab File ID: oc23042.d
Analysis Method: 8141A
Date Collected: 03/13/2010 13:30
Extraction Method: 3520C
Date Extracted: 03/19/2010 12:42
Sample wt/vol: 1060(mL)
Date Analyzed: 03/24/2010 18:26
Con. Extract Vol.: 10(mL)
Dilution Factor: 1
Injection Volume: 2(uL)
GC Column: Rtx-OPP 2 ID: 0.32(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 164209
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.2
126-75-0	Demeton-S	2.4	U ~~Q~~ UJ BSL	2.4	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monochrotophos	9.4	U	9.4	4.7
300-76-5	Naled	4.7	U	4.7	2.4
56-38-2	Parathion	0.94	U	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
52-85-7	Famphur	1.9	U	1.9	0.94
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U	0.47	0.24
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47
297-97-2	Thionazin	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	110	26-134	

JAC 7/2/2010

021

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-2

SDG No.: CLJ55796-2

Client Sample ID: IR69-GW05DW-10A | Lab Sample ID: 680-55946-7

Matrix: Water | Lab File ID: oc23043.d

Analysis Method: 8141A | Date Collected: 03/14/2010 12:20

Extraction Method: 3520C | Date Extracted: 03/19/2010 12:42

Sample wt/vol: 1060(mL) | Date Analyzed: 03/24/2010 18:51

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164209 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.2
126-75-0	Demeton-S	2.4	U ~~Q~~ WJ BSL	2.4	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monochrotophos	9.4	U	9.4	4.7
300-76-5	Naled	4.7	U	4.7	2.4
56-38-2	Parathion	0.94	U	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
52-85-7	Famphur	1.9	U	1.9	0.94
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U	0.47	0.24
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47
297-97-2	Thionazin	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	106	26-134	

JAC 7/26/10

FORM I 8141A

022

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-2

SDG No.: CLJ55796-2

Client Sample ID: IR69-EB01-031310-SS | Lab Sample ID: 680-55975-4

Matrix: Water | Lab File ID: oc23057.d

Analysis Method: 8141A | Date Collected: 03/13/2010 10:45

Extraction Method: 3520C | Date Extracted: 03/19/2010 12:42

Sample wt/vol: 1030(mL) | Date Analyzed: 03/25/2010 00:38

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164210 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.97	U	0.97	0.49
35400-43-2	Bolstar	0.97	U	0.97	0.49
2921-88-2	Chlorpyrifos	0.97	U	0.97	0.49
56-72-4	Coumaphos	0.97	U	0.97	0.49
298-03-3	Demeton-O	2.4	U Ø	2.4	1.3
126-75-0	Demeton-S	2.4	~~U~~ Ø UJ BSL	2.4	1.3
333-41-5	Diazinon	0.97	U	0.97	0.49
62-73-7	Dichlorvos	1.9	U	1.9	0.97
60-51-5	Dimethoate	1.9	U	1.9	0.97
298-04-4	Disulfoton	1.9	U	1.9	0.97
2104-64-5	EPN	0.97	U	0.97	0.49
13194-48-4	Ethoprop	0.49	U	0.49	0.24
115-90-2	Fensulfothion	4.9	U	4.9	2.4
55-38-9	Fenthion	0.97	U	0.97	0.49
121-75-5	Malathion	0.97	U	0.97	0.49
150-50-5	Merphos	1.5	U	1.5	0.73
298-00-0	Methyl parathion	0.49	U	0.49	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.97
6923-22-4	Monochrotophos	9.7	U	9.7	4.9
300-76-5	Naled	4.9	U	4.9	2.4
56-38-2	Parathion	0.97	U	0.97	0.49
298-02-2	Phorate	0.97	U	0.97	0.49
52-85-7	Famphur	1.9	U	1.9	0.97
299-84-3	Ronnel	0.97	U	0.97	0.49
22248-79-9	Stirophos	0.97	U	0.97	0.49
3689-24-5	Sulfotepp	0.49	U	0.49	0.24
34643-46-4	Tokuthion	0.97	U	0.97	0.49
327-98-0	Trichloronate	0.97	U	0.97	0.49
297-97-2	Thionazin	0.97	U	0.97	0.49

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	81	26-134	

FORM I 8141A

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-2

SDG No.: CLJ55796-2

Client Sample ID: IR69-EB01-031310-GW | Lab Sample ID: 680-55975-5

Matrix: Water | Lab File ID: oc23058.d

Analysis Method: 8141A | Date Collected: 03/13/2010 10:00

Extraction Method: 3520C | Date Extracted: 03/19/2010 12:42

Sample wt/vol: 1020(mL) | Date Analyzed: 03/25/2010 01:03

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164210 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.98	U	0.98	0.49
35400-43-2	Bolstar	0.98	U	0.98	0.49
2921-88-2	Chlorpyrifos	0.98	U	0.98	0.49
56-72-4	Coumaphos	0.98	U	0.98	0.49
298-03-3	Demeton-O	2.5	U ~~Q~~	2.5	1.3
126-75-0	Demeton-S	2.5	~~U Q~~ UJ BSL	2.5	1.3
333-41-5	Diazinon	0.98	U	0.98	0.49
62-73-7	Dichlorvos	2.0	U	2.0	0.98
60-51-5	Dimethoate	2.0	U	2.0	0.98
298-04-4	Disulfoton	2.0	U	2.0	0.98
2104-64-5	EPN	0.98	U	0.98	0.49
13194-48-4	Ethoprop	0.49	U	0.49	0.25
115-90-2	Fensulfothion	4.9	U	4.9	2.5
55-38-9	Fenthion	0.98	U	0.98	0.49
121-75-5	Malathion	0.98	U	0.98	0.49
150-50-5	Merphos	1.5	U	1.5	0.74
298-00-0	Methyl parathion	0.49	U	0.49	0.25
7786-34-7	Mevinphos	2.0	U	2.0	0.98
6923-22-4	Monochrotophos	9.8	U	9.8	4.9
300-76-5	Naled	4.9	U	4.9	2.5
56-38-2	Parathion	0.98	U	0.98	0.49
298-02-2	Phorate	0.98	U	0.98	0.49
52-85-7	Famphur	2.0	U	2.0	0.98
299-84-3	Ronnel	0.98	U	0.98	0.49
22248-79-9	Stirophos	0.98	U	0.98	0.49
3689-24-5	Sulfotepp	0.49	U	0.49	0.25
34643-46-4	Tokuthion	0.98	U	0.98	0.49
327-98-0	Trichloronate	0.98	U	0.98	0.49
297-97-2	Thionazin	0.98	U	0.98	0.49

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	104	26-134	

SJC 7/2/2010

024

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-2

SDG No.: CLJ55796-2

Client Sample ID: IR69-EB01-031410-GW | Lab Sample ID: 680-55975-7

Matrix: Water | Lab File ID: oc29056.d

Analysis Method: 8141A | Date Collected: 03/14/2010 09:00

Extraction Method: 3520C | Date Extracted: 03/19/2010 12:42

Sample wt/vol: 1050(mL) | Date Analyzed: 03/30/2010 12:42

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164554 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.2
126-75-0	Demeton-S	2.4	U ~~Q~~ WT BSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U	9.5	4.8
300-76-5	Naled	4.8	U	4.8	2.4
56-38-2	Parathion	0.95	U	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
52-85-7	Famphur	1.9	U	1.9	0.95
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U	0.48	0.24
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48
297-97-2	Thionazin	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	87	26-134	

JBC 5/2010

025

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-2

SDG No.: CLJ55796-2

Client Sample ID: IR69-EB01-031410-SD | Lab Sample ID: 680-55975-8

Matrix: Water | Lab File ID: oc23060.d

Analysis Method: 8141A | Date Collected: 03/14/2010 11:00

Extraction Method: 3520C | Date Extracted: 03/19/2010 12:42

Sample wt/vol: 1030(mL) | Date Analyzed: 03/25/2010 01:53

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164210 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.97	U	0.97	0.49
35400-43-2	Bolstar	0.97	U	0.97	0.49
2921-88-2	Chlorpyrifos	0.97	U	0.97	0.49
56-72-4	Coumaphos	0.97	U	0.97	0.49
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.3
126-75-0	Demeton-S	2.4	U ~~Q~~ U.J BEL	2.4	1.3
333-41-5	Diazinon	0.97	U	0.97	0.49
62-73-7	Dichlorvos	1.9	U	1.9	0.97
60-51-5	Dimethoate	1.9	U	1.9	0.97
298-04-4	Disulfoton	1.9	U	1.9	0.97
2104-64-5	EPN	0.97	U	0.97	0.49
13194-48-4	Ethoprop	0.49	U	0.49	0.24
115-90-2	Fensulfothion	4.9	U	4.9	2.4
55-38-9	Fenthion	0.97	U	0.97	0.49
121-75-5	Malathion	0.97	U	0.97	0.49
150-50-5	Merphos	1.5	U	1.5	0.73
298-00-0	Methyl parathion	0.49	U	0.49	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.97
6923-22-4	Monochrotophos	9.7	U	9.7	4.9
300-76-5	Naled	4.9	U	4.9	2.4
56-38-2	Parathion	0.97	U	0.97	0.49
298-02-2	Phorate	0.97	U	0.97	0.49
52-85-7	Famphur	1.9	U	1.9	0.97
299-84-3	Ronnel	0.97	U	0.97	0.49
22248-79-9	Stirophos	0.97	U	0.97	0.49
3689-24-5	Sulfotepp	0.49	U	0.49	0.24
34643-46-4	Tokuthion	0.97	U	0.97	0.49
327-98-0	Trichloronate	0.97	U	0.97	0.49
297-97-2	Thionazin	0.97	U	0.97	0.49

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	113	26-134	

JAC 5/20/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-2

SDG No.: CLJ55796-2

Client Sample ID: IR69-GW06-10A MS | Lab Sample ID: 680-55796-22 MS

Matrix: Water | Lab File ID: oc17060.d

Analysis Method: 8141A | Date Collected: 03/09/2010 11:15

Extraction Method: 3520C | Date Extracted: 03/15/2010 14:22

Sample wt/vol: 500(mL) | Date Analyzed: 03/18/2010 11:28

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163438 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	5.42		1.0	0.50
35400-43-2	Bolstar	4.34		1.0	0.50
2921-88-2	Chlorpyrifos	3.97		1.0	0.50
56-72-4	Coumaphos	4.21		1.0	0.50
298-03-3	Demeton-O	10.2	J	2.5	1.3
126-75-0	Demeton-S	2.5	U J	2.5	1.3
333-41-5	Diazinon	3.54		1.0	0.50
62-73-7	Dichlorvos	4.01		2.0	1.0
298-04-4	Disulfoton	3.73		2.0	1.0
13194-48-4	Ethoprop	3.67		0.50	0.25
115-90-2	Fensulfothion	5.20		5.0	2.5
55-38-9	Fenthion	3.59	M	1.0	0.50
150-50-5	Merphos	2.59		1.5	0.75
298-00-0	Methyl parathion	3.73		0.50	0.25
7786-34-7	Mevinphos	2.64		2.0	1.0
300-76-5	Naled	5.0	U J	5.0	2.5
298-02-2	Phorate	2.80		1.0	0.50
299-84-3	Ronnel	4.10		1.0	0.50
22248-79-9	Stirophos	3.93		1.0	0.50
34643-46-4	Tokuthion	3.80		1.0	0.50
327-98-0	Trichloronate	3.91	M	1.0	0.50

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	96	26-134	

JAC 3/26/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-2

SDG No.: CLJ55796-2

Client Sample ID: IR69-GW06-10A MS | Lab Sample ID: 680-55796-22 MS

Matrix: Water | Lab File ID: ocl7062.d

Analysis Method: 8141A | Date Collected: 03/09/2010 11:15

Extraction Method: 3520C | Date Extracted: 03/15/2010 14:22

Sample wt/vol: 500(mL) | Date Analyzed: 03/18/2010 12:18

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163438 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
60-51-5	Dimethoate	4.58		2.0	1.0
2104-64-5	EPN	4.17		1.0	0.50
52-85-7	Famphur	4.25		2.0	1.0
121-75-5	Malathion	4.01		1.0	0.50
6923-22-4	Monochrotophos	22.8		10	5.0
56-38-2	Parathion	4.05		1.0	0.50
3689-24-5	Sulfotepp	3.91		0.50	0.25
297-97-2	Thionazin	3.98		1.0	0.50

JJC 7/26/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-2

SDG No.: CLJ55796-2

Client Sample ID: IR69-GW06-10A MSD | Lab Sample ID: 680-55796-22 MSD

Matrix: Water | Lab File ID: oc17061.d

Analysis Method: 8141A | Date Collected: 03/09/2010 11:15

Extraction Method: 3520C | Date Extracted: 03/15/2010 14:22

Sample wt/vol: 500(mL) | Date Analyzed: 03/18/2010 11:53

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163438 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	4.56		1.0	0.50
35400-43-2	Bolstar	4.11		1.0	0.50
2921-88-2	Chlorpyrifos	3.93		1.0	0.50
56-72-4	Coumaphos	4.61		1.0	0.50
298-03-3	Demeton-O	9.83	~~J~~	2.5	1.3
126-75-0	Demeton-S	2.5	U ~~J~~	2.5	1.3
333-41-5	Diazinon	3.54		1.0	0.50
62-73-7	Dichlorvos	3.91		2.0	1.0
298-04-4	Disulfoton	3.56		2.0	1.0
13194-48-4	Ethoprop	3.74		0.50	0.25
115-90-2	Fensulfothion	5.78		5.0	2.5
55-38-9	Fenthion	3.84		1.0	0.50
150-50-5	Merphos	2.57		1.5	0.75
298-00-0	Methyl parathion	3.94		0.50	0.25
7786-34-7	Mevinphos	3.13		2.0	1.0
300-76-5	Naled	5.0	U ~~J~~	5.0	2.5
298-02-2	Phorate	2.93		1.0	0.50
299-84-3	Ronnel	3.69		1.0	0.50
22248-79-9	Stirophos	3.88		1.0	0.50
34643-46-4	Tokuthion	3.71		1.0	0.50
327-98-0	Trichloronate	3.13		1.0	0.50

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	104	26-134	

JAC 12/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-2

SDG No.: CLJ55796-2

Client Sample ID: IR69-GW06-10A MSD | Lab Sample ID: 680-55796-22 MSD

Matrix: Water | Lab File ID: oc17063.d

Analysis Method: 8141A | Date Collected: 03/09/2010 11:15

Extraction Method: 3520C | Date Extracted: 03/15/2010 14:22

Sample wt/vol: 500(mL) | Date Analyzed: 03/18/2010 12:43

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163438 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
60-51-5	Dimethoate	4.18		2.0	1.0
2104-64-5	EPN	3.54		1.0	0.50
52-85-7	Famphur	3.47		2.0	1.0
121-75-5	Malathion	3.48		1.0	0.50
6923-22-4	Monochrotophos	22.3		10	5.0
56-38-2	Parathion	3.66		1.0	0.50
3689-24-5	Sulfotepp	4.13		0.50	0.25
297-97-2	Thionazin	4.07		1.0	0.50

JPC 12/10

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

PROJECT REFERENCE: CTO-081	PROJECT NO.: 374082.FI.FI.69	PROJECT LOCATION: MCB Camp Lejeune
TESTAMERICA (LAB) PROJECT MANAGER: Abbie Yont	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Gwen Buckley	CLIENT PHONE: 757-671-6292	CLIENT FAX: 704-544-4041
CLIENT NAME: CH2M HILL	CLIENT EMAIL: Gwen.Buckley@CH2M.com	
CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226		
COMPANY CONTRACTING THIS WORK (if applicable):		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ○ DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○ DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

REQUIRED ANALYSES: OP Pesticides - Method 8141A - GW: 2 1-L Ambers - Soil:1-8 or 4-oz. Jar

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
3/13/10	1400	MRØ2-IR69-SSØ4-1ØA	C		X			1	
3/13/10	1430	MRØ2-IR69-SSØ6-1ØA	C		X			1	
3/13/10	1445	MRØ2-IR69-SSØ5-1ØA	C		X			1	
3/13/10	1045	IR69-EB-031310-SS	G	X				2	
3/13/10	1000	IR69-EB-031310-GW	G	X				2	
3/13/10	1230	MRØ2-IR69-SSØ2-1ØA	C		X			1	
3/14/10	0900	IR69-EB-031410-GW	G	X				2	
3/14/10	1100	IR69-EB-031410-SD	G	X				2	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3/17/10	1400						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/18/10	0423	YES ○ NO ○		680-55975	2.6°C

FCU052:01.02.08:2

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

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Savannah, GA 31404
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PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION
CTO-081	374082.FLFL69	MCB Camp Lejeune
TESTAMERICA (LAB) PROJECT MANAGER: Abbie Yont	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Gwen Buckley	CLIENT PHONE: 757-671-6292	CLIENT FAX: 704-544-4041
CLIENT NAME: CH2M HILL	CLIENT EMAIL: Gwen.Buckley@CH2M.com	

CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226

COMPANY CONTRACTING THIS WORK (if applicable):

PAGE 1 OF 1

STANDARD REPORT DELIVERY ( )
DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ( )
DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

REQUIRED ANALYSES: OP Pesticides - Method 8141A - GW: 2 1-L Ambers - Soil: 1-8 or 4-oz. Jar

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
3/14/10	1345	IR69-SW01-10A	G	X				2 X	
3/14/10	1350	IR69-SW01D-10A	G	X				2 X	
3/14/10	1735	IR69-GW04DW-10A	G	X				2 X	
3/15/10	1700	IR69-EB-031510-SD	G	X				2 X	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3/17/10	1300						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/18/10	0923	YES ( ) NO ( )		620-55946	2.6/3.1/2.4

FCU052:01.02.08:2

04/05/2010
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ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

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5102 LaRoche Avenue Phone: (912) 354-7858
Savannah, GA 31404 Fax: (912) 352-0165

PROJECT REFERENCE: CTO-081	PROJECT NO.: 374082.FI.FI.69	PROJECT LOCATION: MCB Camp Lejeune
TESTAMERICA (LAB) PROJECT MANAGER: Abbie Yont	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Gwen Buckley	CLIENT PHONE: 757-671-6292	CLIENT FAX: 704-544-4041
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PAGE 1 OF 1

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EXPEDITED REPORT DELIVERY (SURCHARGE) ○ DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	REQUIRED ANALYSES: OP Pesticides - Method 8141A - GW: 2 1-L Ambers - Soil: 1-8 or 4-oz. Jar	REMARKS
3/13/10	1235	IR69-GW11IW-10A	G	X				2	
3/13/10	1330	IR69-GW11DW-10A	G	X				2	
3/14/10	1220	IR69-GW05DW-10A	G	X				2	
3/14/10	1230	IR69-GW05IW-10A	G	X				2	
3/14/10	1245	IR69-GW15BCH-10A	G	X				2	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3/17/10	1300						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/18/10	0923	YES ○ NO ○		680-55946	

FCU052:01.02.08:2

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

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PROJECT REFERENCE: CTO-081	PROJECT NO.: 374062.FI.FI.69	PROJECT LOCATION: MCB Camp Lejeune
TESTAMERICA (LAB) PROJECT MANAGER: Abbie Yont	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Gwen Buckley	CLIENT PHONE: 757-671-6292	CLIENT FAX: 704-544-4041
CLIENT NAME: CH2M HILL	CLIENT EMAIL: Gwen.Buckley@CH2M.com	
CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226		
COMPANY CONTRACTING THIS WORK (if applicable):		

PAGE 1 OF 1

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EXPEDITED REPORT DELIVERY (SURCHARGE) ○ DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

REQUIRED ANALYSES: OPest 8141A

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
3-6-10	1115	IR69-GW01-10A	G	W				2	
3-9-10	1115	IR69-GW06-10A	G	W				2	
3-9-10	1115	IR69-GW06-10A-MS	G	W				2	
3-9-10	1115	IR69-GW06-10A-SD	G	W				2	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3/11/10	1500						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/12/10	0919	YES ○ NO ○		680-55796	0.2

FCU052:01.02.08:2

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PROJECT REFERENCE: CTO-081	PROJECT NO.: 374082.FI.FL69	PROJECT LOCATION: MCB Camp Lejeune
TESTAMERICA (LAB) PROJECT MANAGER: Abbie Yont	P.O. NUMBER	CONTRACT NO.
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NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	REQUIRED ANALYSES: OP Pesticides 8141A/ Amiprex	NUMBER OF CONTAINERS SUBMITTED	REMARKS
3/6/10	1800	IR69-GW09DW-10A	G	X				2		
3/6/10	1415	IR69-GW27IW-10A	G	X				2		
3/6/10	1650	IR69-GW27DW-10A	G	X				2		

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3/11/10	1300						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**
[signature]								

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
			YES ○ NO ○		680-55746	0.4

FCU052:01.02.08:2

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

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CTO-081	374082.FI.FI.69	MCB Camp Lejeune
TESTAMERICA (LAB) PROJECT MANAGER: Abbie Yont	P.O. NUMBER	CONTRACT NO.
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STANDARD REPORT DELIVERY ○ DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○ DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

REQUIRED ANALYSES: OP Pest 8141A

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
3-9-10	16:05	IR69-GW07D-10A	G	X				2	
3-6-10	11:20	IR69-GW01D-10A	G	X				2	
3-8-10	15:25	IR69-GW10-10A	G	X				2	
3-9-10	16:00	IR69-GW07-10A	G	X				2	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3/11/10	1200						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/12/10	0919	YES ○ NO ○		680-55796	0.3

FCU052:01.02.08:2

Holding Times

Sampling Date: 3/6-3/14
Received Date: 3/12, 3/18 at TestAmerica Cooler temps were within acceptable range.
Extraction Date: 3/12, 3/15, 3/19
Analysis Dates: 3/17, 3/18, 3/24, 3/25 & 3/30

All extraction and analysis holding times were met for the samples in this SDG. Sample receipt data is in order. Cooler temperature was within acceptable range. This analysis was sub-contracted to Test America Savannah by Compuchem.

Calibrations

Initial calibrations were performed according to the method with a eight-point curve for the organophosphorus pesticide target compounds. Calibration factors were calculated or LR curves were plotted. %RSDs or correlation coefficients were within QC limits. Continuing calibration standards were analyzed per the SW-846 methods requested. All %D criteria were not met. Please see the report for any necessary qualifications. Column resolution was acceptable. Retention time windows were provided, retention times were stable throughout the analytical sequence. All required instrument blanks were analyzed. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Any compound detected in the sample, and the associated blank, must be qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than five (5) times the blank concentration.
- Sample weight, volume or dilution factor must be taken into consideration when applying the 5X criteria.
- Apply the same data validation guidelines to any associated rinse and field blanks and all associated samples.
- Qualification/Action codes:
-

No Action -	The sample result is greater than the RL and greater than five times (5X) the blank value.
U at RL-	The sample result is less than the RL when the blank contamination level is less than the RL.

No contamination that resulted in qualification of the data was noted in the associated method or instrument blanks or the submitted field QC blanks.

SURROGATE RECOVERIES

Surrogate recoveries were acceptable.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

The associated MS/MSD pair of sample IR69-GW06-10A exhibited 0% in both the MS and the MSD for the compounds demeton-s and naled. The compound demeton-s was rejected in the native sample of the spike pair (IR69-GW06-10A) with a caution that the reported results should be considered significantly biased low. No other qualifications were required due to spike results.

LABORATORY CONTROL SAMPLES

The submitted LCS's and LCS/LCSD pairs submitted exhibited acceptable recoveries with the exception of demeton-s, demeton-o and naled. All samples were flagged as estimated for demeton-s. Demeton-o did not required qualifications because there were no positive results. The compound naled was qualified as estimated in only associated samples.

FIELD DUPLICATE SAMPLE SUMMARY

Sample ID: **Duplicate ID:**

Compound	Sample Conc.	Duplicate Conc.	RPD
			#DIV/0!

Comments: There were 3 field duplicate pairs submitted – no positive results were reported in any of the field samples.

SAMPLE RESULT VERIFICATION

Raw data was verified. Calculations were verified.

Reviewer JACleveland **Date:** 7 26 / 10

Test America Savannah
SDG 680-55796-2
OPP

Job Narrative
680-55796-2

Comments
No additional comments.

Receipt
The Chains-of-Custody (COCs) were not properly filled out. The equipment blanks were not listed on the COCs using the nomenclature defined by the client. The client submitted revised chains of custody to reflect the proper identification of the equipment blanks.

One container for the following sample(s) was received broken or leaking: IR69-GW06-10A (680-55796-22).

All other samples were received in good condition within temperature requirements.

GC Semi VOA
Method(s) 8141A: The laboratory control sample (LCS) for batch 680-162920 exceeded control limits for the following analytes: Demeton-S. The vendor purchased standard for Demeton-O and Demeton-S is expressed as a the value of the total concentration of the two analytes and not as the concentration of the individual analytes. The ratio of the LCS standard differs from the rations present in the calibration standards. The % recovery of the total od Demeton-O and Demeton-S was within limits.

Method(s) 8141A: A mix B laboratory control sample (LCS) and a laboratory control standard duplicate (LCSD) were performed for batch 680-162920. The LCS recoveries were within acceptable limits; however, the LCSD recoveries were outside acceptable limits. The data have been reported and qualified. The LCSD went dry during the extraction step of the process resulting in the low biased recoveries.

Method(s) 8141A: The laboratory control sample (LCS) for batch 680-163041 exceeded control limits for the following analytes: Demeton-S. The vendor purchased standard for Demeton-O and Demeton-S is expressed as a the value of the total concentration of the two analytes and not as the concentration of the individual analytes. The ratio of the LCS standard differs from the rations present in the calibration standards. The % recovery of the total od Demeton-O and Demeton-S was within limits.

Method(s) 8141A: The laboratory control sample (LCS) for batch 680-163041 exceeded control limits for the following analyte(s): Naled. Naled has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method(s) 8141A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 680-163041 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method(s) 8141A: The laboratory control sample (LCS) for batch 680-163485 exceeded control limits for the following analytes: Demeton-S. The vendor purchased standard for Demeton-O and Demeton-S is expressed as a the value of the total concentration of the two analytes and not as the concentration of the individual analytes. The ratio of the LCS standard differs from the rations present in the calibration standards. The % recovery of the total od Demeton-O and Demeton-S was within limits.

Method(s) 8141A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 680-163485 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method(s) 8141A: The capping continuing calibration verification (CCV) analyzed on 03/30/2010 after sample analysis recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. These samples had been analyzed on multiple runs with the capping CCV failing high after each attempted analysis; therefore sample matrix is suspected to have contributed to these failures.

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Initial Calibration Date: 3/16/2010

RRF and %RSD Calculations:

Compound Name: bolstar in level 4
Lab Value: 4393664.0000

Area of Compound	2196832
Conc. of Compound	0.5
Calculated RRF	4393664.0000

Compound Name: bolstar
Lab Value: 8.1

RRF of STD 1	4650720.0000
RRF of STD 2	3991920.0000
RRF of STD 3	4761128.0000
RRF of STD 4	4393664.0000
RRF of STD 3	5009332.0000
RRF of STD 4	4468265.0000
RRF of STD 5	4839163.0000
RRF of STD 6	5188140.0000
Calculated % RSD	8.10

Continuing Calibration File ID: oc15065.d

RRF and %D Calculations:

Compound Name: stirophos
Lab Value: 4361262.00000

Area of compound	2180631
Conc. Of compound	0.5
Calculated CF	4361262.00000

Compound Name: stirophos
Lab Value: 9.6

Avg. CF from ICAL	3978501.00000
CF of CCV	4361262.00000
Calculated % D	-9.6

Initial Calibration Date: 3/17/2010

RRF and %RSD Calculations:

Compound Name: parathion in level 1
Lab Value: 6410200.0000

Area of Compound	320510
Conc. of Compound	0.05
Calculated RRF	6410200.0000

Compound Name: parathion
Lab Value: 8.3

RRF of STD 1	6410200.0000
RRF of STD 2	5814370.0000
RRF of STD 3	6919304.0000
RRF of STD 4	6743898.0000
RRF of STD 3	7449757.0000
RRF of STD 4	7146476.0000
RRF of STD 5	7299523.0000
RRF of STD 6	
Calculated % RSD	8.30

Continuing Calibration File ID: oc17049

RRF and %D Calculations:

Compound Name: ronnel
Lab Value: 8471798.00000

Area of compound	4235899
Conc. Of compound	0.5
Calculated CF	8471798.00000

Compound Name: ronnel
Lab Value: 3.5

Avg. CF from ICAL	8183126.00000
CF of CCV	8471798.00000
Calculated % D	-3.5

Initial Calibration Date: 3/23/2010

RRF and %RSD Calculations:

Compound Name: disulfoton in level 5
Lab Value: 7471463.0000

Area of Compound	5603597
Conc. of Compound	0.75
Calculated RRF	7471462.6667

Compound Name: disulfoton
Lab Value: 7.0

RRF of STD 1	6117020.0000
RRF of STD 2	7233480.0000
RRF of STD 3	6613540.0000
RRF of STD 4	7057576.0000
RRF of STD 3	7471463.0000
RRF of STD 4	7513860.0000
RRF of STD 5	7331588.0000
RRF of STD 6	7477159.0000
Calculated % RSD	7.00

Continuing Calibration File ID:

RRF and %D Calculations:

Compound Name: coumaphos
Lab Value: 4366520.00000

Area of compound	2183260
Conc. Of compound	0.5
Calculated CF	4366520.00000

Compound Name: coumaphos
Lab Value: 17.1

Avg. CF from ICAL	3728703.00000
CF of CCV	4366520.00000
Calculated % D	-17.1

Initial Calibration Date: 3/30/2010

RRF and %RSD Calculations:

Compound Name: dichlorvos in level 1

Lab Value: 7581720.0000

Area of Compound	379086
Conc. of Compound	0.05
Calculated RRF	7581720.0000

Compound Name: dichlorvos

Lab Value: 12.4

RRF of STD 1	7581720.0000
RRF of STD 2	9060250.0000
RRF of STD 3	9481248.0000
RRF of STD 4	10714078.0000
RRF of STD 3	10819207.0000
RRF of STD 4	10932359.0000
RRF of STD 5	10626555.0000
RRF of STD 6	11217392.0000
Calculated % RSD	12.41

Continuing Calibration File ID: cc29050

RRF and %D Calculations:

Compound Name: diazinon

Lab Value: 9634842.00000

Area of compound	4817421
Conc. Of compound	0.5
Calculated CF	9634842.00000

Compound Name: diazinon

Lab Value:

Avg. CF from ICAL	8380033.00000
CF of CCV	9634842.00000
Calculated % D	-15.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 680-55796-2

SDG No.: CLJ55796-2

Lab Sample ID: CCV 680-163326/2 Calibration Date: 03/17/2010 06:39

Instrument ID: SGO Calib Start Date: 03/16/2010 17:46

GC Column: Rtx-OPP 2 ID: 0.32(mm) Calib End Date: 03/16/2010 20:41

Lab File ID: oc15052.d Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Thionazin	QuaF	6102685	7479102		50.0	0.500	8.0	
Sulfotepp	Ave	10939333	12390660		25.0	0.500	13.3	15.0
Monochrotophos	QuaF	3998769	5135420		500	5.00	2.3	
Dimethoate	LinF	5993036	5778992		100	0.500	-17.5	
Malathion	Ave	4861387	5047590		50.0	0.500	3.8	15.0
Parathion	Ave	5397511	6005646		50.0	0.500	11.3	15.0
Famphur	Ave	3904761	4661294		100	0.500	19.4*	15.0
EPN	Ave	3662336	4188622		50.0	0.500	14.4	15.0
Triphenylphosphate	Ave	3456209	3877186		0.561	0.500	12.2	15.0

NQ

IR69-GW01-10A
GW09DW
GW27IW
GW27DW
GW01B

NC due to increase in response - no + results.

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 680-55796-2

SDG No.: CLJ55796-2

Lab Sample ID: CCV 680-163438/2 Calibration Date: 03/18/2010 06:55

Instrument ID: SGO Calib Start Date: 03/17/2010 16:01

GC Column: Rtx-OPP 2 ID: 0.32(mm) Calib End Date: 03/17/2010 18:54

Lab File ID: oc17049.d Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D	
Dichlorvos	Ave	9204419	9635008		100	0.500	4.7	15.0	
Mevinphos	QuaF	4325526	4126304		100	0.500	-11.0		
Demeton-O	Ave	1811930	1945042		130	0.500	7.3	15.0	
Ethoprop	Ave	8472436	8517664		25.0	0.500	0.5	15.0	
Naled	QuaF	1202727	1145688		250	0.500	-11.9		
Phorate	Ave	7358206	7442780		50.0	0.500	1.1	15.0	
Demeton-S	QuaF	4424764	4873150		130	0.500	-5.4		
Diazinon	Ave	6903049	7185136		50.0	0.500	4.1	15.0	
Disulfoton	Ave	7316498	7526732		100	0.500	2.9	15.0	
Methyl parathion	QuaF	4797111	5648098		25.0	0.500	3.0		
Ronnel	Ave	8183126	8471798		50.0	0.500	3.5	15.0	
Chlorpyrifos	Ave	6071099	6465840		50.0	0.500	6.5	15.0	
Trichloronate	Ave	4806338	5298106		50.0	0.500	10.2	15.0	
Fenthion	Ave	9391408	9171732		50.0	0.500	-2.3	15.0	
Stirophos	Ave	5026936	6902980		50.0	0.500	37.3*	15.0	NQ
Tokuthion	Ave	5482783	5233848		50.0	0.500	-4.5	15.0	
Fensulfothion	QuaF	2753556	2405560		250	0.500	-17.8		
Bolstar	Ave	5772317	6153826		50.0	0.500	6.6	15.0	
Azinphos-methyl	Ave	3189586	3791616		50.0	0.500	18.9*	15.0	NQ
Coumaphos	Ave	3345386	3519738		50.0	0.500	5.2	15.0	
Merphos	Ave	5629980	5147430		75.0	0.500	-8.6	15.0	

IR69-GW06-10A
GW07D
GW10
GW07

NQ-NC due to ↑ in response - No + results

FORM VII 8141A

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 680-55796-2

SDG No.: CLJ55796-2

Lab Sample ID: CCV 680-164210/1 Calibration Date: 03/24/2010 22:09

Instrument ID: SGO Calib Start Date: 03/23/2010 15:18

GC Column: Rtx-OPP 2 ID: 0.32(mm) Calib End Date: 03/23/2010 18:12

Lab File ID: oc23051.d Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D	
Dichlorvos	QuaF	9293839	9823836		100	0.500	4.7		
Mevinphos	QuaF	4611530	5281674		100	0.500	5.5		
Demeton-O	Ave	1840721	2201834		130	0.500	19.6*	15.0	NQ
Ethoprop	Ave	8274273	8948590		25.0	0.500	8.1	15.0	
Naled	QuaF	1192204	1709708		250	0.500	16.0		
Phorate	Ave	7188323	7328290		50.0	0.500	1.9	15.0	
Demeton-S	Ave	4636824	4742318		130	0.500	2.3	15.0	
Diazinon	Ave	6867639	7142196		50.0	0.500	4.0	15.0	
Disulfoton	Ave	7101961	7638312		100	0.500	7.6	15.0	
Methyl parathion	Ave	6786378	5825900		25.0	0.500	-14.2	15.0	
Ronnel	QuaF	6971084	8270582		50.0	0.500	1.3		
Chlorpyrifos	Ave	6077915	6431626		50.0	0.500	5.8	15.0	
Trichloronate	QuaF	5168343	4896912		50.0	0.500	-3.8		
Fenthion	Ave	8706585	10404430		50.0	0.500	19.5*	15.0	NQ
Stirophos	Ave	4802799	5633516		50.0	0.500	17.3*	15.0	
Tokuthion	Ave	5240821	5376028		50.0	0.500	2.6	15.0	
Fensulfothion	QuaF	3208789	3471308		250	0.500	2.5		
Bolstar	Ave	5752875	6156926		50.0	0.500	7.0	15.0	
Azinphos-methyl	Ave	3749391	4335726		50.0	0.500	15.6*	15.0	NQ
Coumaphos	Ave	3728703	4366520		50.0	0.500	17.1*	15.0	
Merphos	Ave	5687909	6421162		75.0	0.500	12.9	15.0	

1R69-SW01-10A
SW01D
GW04DW
GW11DW
GW05DW
EB01-031510-SD
EB01-031310-SS
EB01-031310-GW
EB01-031410-SD

NQ - NC due to ↑ in response - no + results

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 680-55796-2

SDG No.: CLJ55796-2

Lab Sample ID: CCV 680-164211/1 Calibration Date: 03/25/2010 07:41

Instrument ID: SGO Calib Start Date: 03/23/2010 18:37

GC Column: Rtx-OPP 2 ID: 0.32(mm) Calib End Date: 03/23/2010 21:30

Lab File ID: oc23074.d Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Thionazin	Ave	9019761	10371910		50.0	0.500	15.0	15.0
Sulfotepp	Ave	13480450	15819270		25.0	0.500	17.3*	15.0
Monochrotophos	QuaF	6237928	9248668		500	5.00	19.8	
Dimethoate	QuaF	8147861	8714028		100	0.500	-4.3	
Malathion	Ave	6439265	6877384		50.0	0.500	6.8	15.0
Parathion	Ave	7188347	7870766		50.0	0.500	9.5	15.0
Famphur	Ave	5995942	6921946		100	0.500	15.4*	15.0
EPN	Ave	5472768	5858380		50.0	0.500	7.0	15.0
Triphenylphosphate	Ave	4693291	5342792		0.569	0.500	13.8	15.0

NQ

NQ

IRG9-EB01-03131055
031310-GW
031410-SD

NQ-NC due to ↑ in response - no + results

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 680-55796-2

SDG No.: CLJ55796-2

Lab Sample ID: CCV 680-164211/2 Calibration Date: 03/25/2010 08:06

Instrument ID: SGO Calib Start Date: 03/23/2010 15:18

GC Column: Rtx-OPP 2 ID: 0.32(mm) Calib End Date: 03/23/2010 18:12

Lab File ID: oc23075.d Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorvos	QuaF	9293839	10610130		100	0.500	13.0	
Mevinphos	QuaF	4611530	5545246		100	0.500	10.5	
Demeton-O	Ave	1840721	2197434		130	0.500	19.4*	15.0
Ethoprop	Ave	8274273	9288532		25.0	0.500	12.3	15.0
Naled	QuaF	1192204	1383040		250	0.500	-5.7	
Phorate	Ave	7188323	8217014		50.0	0.500	14.3	15.0
Demeton-S	Ave	4636824	5458966		130	0.500	17.7*	15.0
Diazinon	Ave	6867639	7857018		50.0	0.500	14.4	15.0
Disulfoton	Ave	7101961	8256218		100	0.500	16.3*	15.0
Methyl parathion	Ave	6786378	5919466		25.0	0.500	-12.8	15.0
Ronnel	QuaF	6971084	9162532		50.0	0.500	12.7	
Chlorpyrifos	Ave	6077915	6499326		50.0	0.500	6.9	15.0
Trichloronate	QuaF	5168343	6115108		50.0	0.500	18.9	
Fenthion	Ave	8706585	8881684		50.0	0.500	2.0	15.0
Stirophos	Ave	4802799	5518724		50.0	0.500	14.9	15.0
Tokuthion	Ave	5240821	5377934		50.0	0.500	2.6	15.0
Fensulfothion	QuaF	3208789	3609480		250	0.500	6.3	
Bolstar	Ave	5752875	6531902		50.0	0.500	13.5	15.0
Azinphos-methyl	Ave	3749391	4306160		50.0	0.500	14.8	15.0
Coumaphos	Ave	3728703	4345428		50.0	0.500	16.5*	15.0
Merphos	Ave	5687909	6689162		75.0	0.500	17.6*	15.0

See prev. page - no quals

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 680-55796-2

SDG No.: CLJ55796-2

Lab Sample ID: CCV 680-164558/2 Calibration Date: 03/30/2010 13:32

Instrument ID: SGO Calib Start Date: 03/29/2010 23:57

GC Column: Rtx-OPP 2 ID: 0.32(mm) Calib End Date: 03/30/2010 02:49

Lab File ID: oc29051.d Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D	
Thionazin	LinF	10298575	13622110		50.0	0.500	23.7		
Sulfotepp	Ave	15435492	20647390		25.0	0.500	33.8*	15.0	NQ
Monochrotophos	QuaF	7349962	8228842		500	5.00	-2.0		
Dimethoate	Ave	10003386	11131620		100	0.500	11.3	15.0	
Malathion	Ave	6846420	9075484		50.0	0.500	32.6*	15.0	NQ
Parathion	Ave	7668649	10522000		50.0	0.500	37.2*	15.0	NQ
Famphur	Ave	6971971	7440288		100	0.500	6.7	15.0	
EPN	Ave	6130047	6711284		50.0	0.500	9.5	15.0	
Triphenylphosphate	Ave	5212250	6045480		0.580	0.500	16.0*	15.0	NQ

1R69-EB01-031410-GW

NQ - NC due to ↑ in response - no + results

FORM IV
GC SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 680-55796-2

SDG No.: CLJ55796-2

Lab Sample ID: MB 680-162920/2-A

Matrix: Water Date Extracted: 03/12/2010 14:20

Lab File ID:(1) oc15034.d Lab File ID:(2)

Date Analyzed:(1) 03/16/2010 23:11 Date Analyzed:(2)

Instrument ID:(1) SGO Instrument ID:(2)

GC Column:(1) Rtx-OPP 2 ID: 0.32(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 680-162920/12-A		03/16/2010 23:35
	LCSD 680-162920/13-A		03/17/2010 00:01
	LCS 680-162920/14-A		03/17/2010 00:25
	LCSD 680-162920/15-A		03/17/2010 00:50
IR69-GW01-10A	680-55796-21		03/17/2010 09:59
IR69-GW09DW-10A	680-55796-23		03/17/2010 10:24
IR69-GW27IW-10A	680-55796-24		03/17/2010 10:49
IR69-GW27DW-10A	680-55796-25		03/17/2010 11:14
IR69-GW01D-10A	680-55796-27		03/17/2010 11:38

FORM III
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55796-2

SDG No.: CLJ55796-2

Matrix: Water Level: Low Lab File ID: oc15035.d

Lab ID: LCS 680-162920/12-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Azinphos-methyl	4.00	3.36	84	10-155	
Bolstar	4.00	3.74	94	62-130	
Chlorpyrifos	4.00	3.70	92	66-130	
Coumaphos	4.00	3.60	90	53-130	
Demeton-O	4.00	9.32	233	30-130	Q
Demeton-S	4.00	1.3 U	19	30-130	Q
Diazinon	4.00	3.55	89	53-138	
Dichlorvos	4.00	3.95	99	52-130	
Disulfoton	4.00	3.59	90	57-130	
Ethoprop	4.00	3.44	86	57-130	
Fensulfothion	4.00	3.97 J	99	16-184	
Fenthion	4.00	3.54	89	10-181	M
Merphos	4.00	3.64	91	10-135	
Methyl parathion	4.00	3.21	80	31-130	
Mevinphos	4.00	2.45	61	38-131	
Naled	4.00	2.5 U	57	54-130	
Phorate	4.00	2.73	68	49-130	
Ronnel	4.00	3.90	97	46-142	
Stirophos	4.00	3.74	94	70-130	
Tokuthion	4.00	3.67	92	63-130	
Trichloronate	4.00	3.33	83	26-145	M

NQ
J/UJ

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55796-2

SDG No.: CLJ55796-2

Matrix: Water Level: Low Lab File ID: oc15037.d

Lab ID: LCS 680-162920/14-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Dimethoate	4.00	2.71	68	31-130	
EPN	4.00	2.66	66	53-130	
Malathion	4.00	2.80	70	56-130	
Monochrotophos	40.0	16.2	41	10-130	
Parathion	4.00	2.81	70	45-132	
Famphur	4.00	2.77	69	54-130	
Sulfotepp	4.00	3.05	76	53-130	
Thionazin	4.00	3.19	80	37-134	

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55796-2

SDG No.: CLJ55796-2

Matrix: Water Level: Low Lab File ID: oc15036.d

Lab ID: LCSD 680-162920/13-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Azinphos-methyl	4.00	2.82	71	17	40	10-155	
Bolstar	4.00	3.34	84	11	40	62-130	
Chlorpyrifos	4.00	3.16	79	16	40	66-130	
Coumaphos	4.00	3.26	81	10	40	53-130	
Demeton-O	4.00	8.03	201	15	40	70-130	Q
Demeton-S	4.00	1.3 U	19	0	40	70-130	Q
Diazinon	4.00	3.07	77	15	40	53-138	
Dichlorvos	4.00	3.36	84	16	40	52-130	
Disulfoton	4.00	3.14	78	14	40	57-130	
Ethoprop	4.00	3.19	80	8	40	57-130	
Fensulfothion	4.00	4.64 J	116	16	40	16-184	
Fenthion	4.00	2.85	71	22	40	10-181	M
Merphos	4.00	2.98	75	20	40	10-135	
Methyl parathion	4.00	2.85	71	12	40	31-130	
Mevinphos	4.00	2.47	62	1	40	38-131	
Naled	4.00	2.68 J	67	17	40	54-130	
Phorate	4.00	2.44	61	11	40	49-130	
Ronnel	4.00	3.45	86	12	40	46-142	
Stirophos	4.00	3.15	79	17	40	70-130	
Tokuthion	4.00	2.88	72	24	40	63-130	
Trichloronate	4.00	3.22	80	3	40	26-145	

NQ
J/UJ

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55796-2

SDG No.: CLJ55796-2

Matrix: Water Level: Low Lab File ID: oc15038.d

Lab ID: LCSD 680-162920/15-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Dimethoate	4.00	1.0 U	16	123	40	31-130	Q
EPN	4.00	1.85	46	36	40	53-130	Q
Malathion	4.00	1.29	32	74	40	56-130	Q
Monochrotophos	40.0	5.0 U	3	174	40	10-130	Q
Parathion	4.00	1.37	34	69	40	45-132	Q
Famphur	4.00	1.54 J	38	57	40	54-130	Q
Sulfotepp	4.00	1.03	26	99	40	53-130	Q
Thionazin	4.00	0.988 J	25	105	40	37-134	Q

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM IV
GC SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 680-55796-2

SDG No.: CLJ55796-2

Lab Sample ID: MB 680-163041/12-A

Matrix: Water Date Extracted: 03/15/2010 14:22

Lab File ID:(1) oc17034.d Lab File ID:(2)

Date Analyzed:(1) 03/18/2010 00:41 Date Analyzed:(2)

Instrument ID:(1) SGO Instrument ID:(2)

GC Column:(1) Rtx-OPP 2 ID: 0.32(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 680-163041/21-A		03/18/2010 01:06
	LCS 680-163041/24-A		03/18/2010 01:31
IR69-GW06-10A	680-55796-22		03/18/2010 09:49
IR69-GW07D-10A	680-55796-26		03/18/2010 10:14
IR69-GW10-10A	680-55796-28		03/18/2010 10:39
IR69-GW07-10A	680-55796-29		03/18/2010 11:04
IR69-GW06-10A MS	680-55796-22 MS	03/18/2010 11:28	03/18/2010 12:18
IR69-GW06-10A MSD	680-55796-22 MSD	03/18/2010 11:53	03/18/2010 12:43

FORM III
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55796-2

SDG No.: CLJ55796-2

Matrix: Water Level: Low Lab File ID: oc17035.d

Lab ID: LCS 680-163041/21-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#	
Azinphos-methyl	4.00	4.19	105	10-155		
Bolstar	4.00	4.10	102	62-130		
Chlorpyrifos	4.00	3.73	93	66-130		
Coumaphos	4.00	4.26	106	53-130		
Demeton-O	4.00	11.4	285	70-130	Q	NQ
Demeton-S	4.00	1.3 U	19	70-130	Q	J/UJ
Diazinon	4.00	3.60	90	53-138		
Dichlorvos	4.00	4.24	106	52-130		
Disulfoton	4.00	3.60	90	57-130		
Ethoprop	4.00	3.91	98	57-130		
Fensulfothion	4.00	5.21	130	16-184		
Fenthion	4.00	3.49	87	10-181	M	
Merphos	4.00	3.51	88	10-135		
Methyl parathion	4.00	3.66	91	31-130		
Mevinphos	4.00	3.00	75	38-131		
Naled	4.00	2.5 U	36	54-130	Q	J/UJ
Phorate	4.00	2.94	73	49-130		
Ronnel	4.00	3.91	98	46-142		
Stirophos	4.00	3.83	96	70-130		
Tokuthion	4.00	3.50	87	63-130		
Trichloronate	4.00	3.49	87	26-145	M	

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55796-2

SDG No.: CLJ55796-2

Matrix: Water Level: Low Lab File ID: oc17036.d

Lab ID: LCS 680-163041/24-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Dimethoate	4.00	3.17	79	31-130	
EPN	4.00	3.41	85	53-130	
Malathion	4.00	3.41	85	56-130	
Monochrotophos	40.0	8.88 J	22	10-130	
Parathion	4.00	3.56	89	45-132	
Famphur	4.00	3.07	77	54-130	
Sulfotepp	4.00	3.40	85	53-130	
Thionazin	4.00	3.20	80	37-134	

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM IV
GC SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 680-55796-2

SDG No.: CLJ55796-2

Lab Sample ID: MB 680-163485/16-A

Matrix: Water Date Extracted: 03/19/2010 12:42

Lab File ID:(1) oc23934.d Lab File ID:(2)

Date Analyzed:(1) 03/24/2010 15:07 Date Analyzed:(2)

Instrument ID:(1) SGO Instrument ID:(2)

GC Column:(1) Rtx-OPP 2 ID: 0.32(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 680-163485/17-A		03/24/2010 15:33
	LCS 680-163485/20-A		03/24/2010 15:57
IR69-SW01-10A	680-55946-1		03/24/2010 16:22
IR69-SW01D-10A	680-55946-2		03/24/2010 16:47
IR69-GW04DW-10A	680-55946-3		03/24/2010 17:12
IR69-EB01-031510-SD	680-55946-4		03/24/2010 17:37
IR69-GW11IW-10A	680-55946-5		03/24/2010 18:01
IR69-GW11DW-10A	680-55946-6		03/24/2010 18:26
IR69-GW05DW-10A	680-55946-7		03/24/2010 18:51
IR69-EB01-031310-SS	680-55975-4		03/25/2010 00:38
IR69-EB01-031310-GW	680-55975-5		03/25/2010 01:03
IR69-EB01-031410-SD	680-55975-8		03/25/2010 01:53
IR69-EB01-031410-GW	680-55975-7		03/30/2010 12:42

FORM III
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55796-2

SDG No.: CLJ55796-2

Matrix: Water Level: Low Lab File ID: oc23035.d

Lab ID: LCS 680-163485/17-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Azinphos-methyl	4.00	5.03	126	10-155	
Bolstar	4.00	4.85	121	62-130	
Chlorpyrifos	4.00	4.30	107	66-130	
Coumaphos	4.00	5.03	126	53-130	
Demeton-O	4.00	13.3	331	70-130	Q
Demeton-S	4.00	1.3 U	17	70-130	Q
Diazinon	4.00	4.09	102	53-138	
Dichlorvos	4.00	4.57	114	52-130	
Disulfoton	4.00	4.32	108	57-130	
Ethoprop	4.00	4.31	108	57-130	
Fensulfothion	4.00	6.90	172	16-184	
Fenthion	4.00	4.37	109	10-181	
Merphos	4.00	2.32	58	10-135	
Methyl parathion	4.00	3.73	93	31-130	
Mevinphos	4.00	3.70	92	38-131	
Naled	4.00	4.28 J	107	54-130	
Phorate	4.00	3.47	87	49-130	
Ronnel	4.00	4.33	108	46-142	
Stirophos	4.00	4.88	122	70-130	
Tokuthion	4.00	5.07	127	63-130	
Trichloronate	4.00	4.32	108	26-145	

NQ J/UJ

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55796-2

SDG No.: CLJ55796-2

Matrix: Water Level: Low Lab File ID: oc23036.d

Lab ID: LCS 680-163485/20-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Dimethoate	4.00	3.79	95	31-130	
EPN	4.00	3.95	99	53-130	
Malathion	4.00	3.74	93	56-130	
Monochrotophos	40.0	24.2	60	10-130	
Parathion	4.00	3.83	96	45-132	
Famphur	4.00	4.15	104	54-130	
Sulfotepp	4.00	3.90	97	53-130	
Thionazin	4.00	3.79	95	37-134	

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55796-2

SDG No.: CLJ55796-2

Matrix: Water Level: Low Lab File ID: ocl7060.d

Lab ID: 680-55796-22 MS Client ID: IR69-GW06-10A MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Azinphos-methyl	4.00	0.49 U	5.42	136	10-155	
Bolstar	4.00	0.49 U	4.34	109	62-130	
Chlorpyrifos	4.00	0.49 U	3.97	99	66-130	
Coumaphos	4.00	0.49 U	4.21	105	53-130	
Demeton-O	4.00	1.3 U	10.2	256	70-130	J
Demeton-S	4.00	1.3 U	1.3 U	0	70-130	J
Diazinon	4.00	0.49 U	3.54	89	53-138	
Dichlorvos	4.00	0.97 U	4.01	100	52-130	
Disulfoton	4.00	0.97 U	3.73	93	57-130	
Ethoprop	4.00	0.24 U	3.67	92	57-130	
Fensulfothion	4.00	2.4 U	5.20	130	16-184	
Fenthion	4.00	0.49 U	3.59	90	10-181	M
Merphos	4.00	0.73 U	2.59	65	10-135	
Methyl parathion	4.00	0.24 U	3.73	93	31-130	
Mevinphos	4.00	0.97 U	2.64	66	38-131	
Naled	4.00	2.4 U	2.5 U	0	54-130	J
Phorate	4.00	0.49 U	2.80	70	49-130	
Ronnel	4.00	0.49 U	4.10	103	46-142	
Stirophos	4.00	0.49 U	3.93	98	70-130	
Tokuthion	4.00	0.49 U	3.80	95	63-130	
Trichloronate	4.00	0.49 U	3.91	98	26-145	M

NQ J/R
J/UJ

J/R

JJC 12/2/10

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55796-2

SDG No.: CLJ55796-2

Matrix: Water Level: Low Lab File ID: oc17062.d

Lab ID: 680-55796-22 MS Client ID: IR69-GW06-10A MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Dimethoate	4.00	0.97 U	4.58	115	31-130	
EPN	4.00	0.49 U	4.17	104	53-130	
Famphur	4.00	0.97 U	4.25	106	54-130	
Malathion	4.00	0.49 U	4.01	100	56-130	
Monochrotophos	40.0	4.9 U	22.8	57	10-130	
Parathion	4.00	0.49 U	4.05	101	45-132	
Sulfotepp	4.00	0.24 U	3.91	98	53-130	
Thionazin	4.00	0.49 U	3.98	100	37-134	

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55796-2

SDG No.: CLJ55796-2

Matrix: Water Level: Low Lab File ID: oc17061.d

Lab ID: 680-55796-22 MSD Client ID: IR69-GW06-10A MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#	
Azinphos-methyl	4.00	4.56	114	17	40	10-155		
Bolstar	4.00	4.11	103	5	40	62-130		
Chlorpyrifos	4.00	3.93	98	1	40	66-130		
Coumaphos	4.00	4.61	115	9	40	53-130		
Demeton-O	4.00	9.83	246	4	40	70-130	J	NQ
Demeton-S	4.00	1.3 U	0	NC	40	70-130	J	J/R
Diazinon	4.00	3.54	88	0	40	53-138		
Dichlorvos	4.00	3.91	98	2	40	52-130		
Disulfoton	4.00	3.56	89	5	40	57-130		
Ethoprop	4.00	3.74	93	2	40	57-130		
Fensulfothion	4.00	5.78	145	11	40	16-184		
Fenthion	4.00	3.84	96	7	40	10-181		
Merphos	4.00	2.57	64	1	40	10-135		
Methyl parathion	4.00	3.94	99	6	40	31-130		
Mevinphos	4.00	3.13	78	17	40	38-131		
Naled	4.00	2.5 U	0	NC	40	54-130	J	J/R
Phorate	4.00	2.93	73	5	40	49-130		
Ronnel	4.00	3.69	92	11	40	46-142		
Stirophos	4.00	3.88	97	1	40	70-130		
Tokuthion	4.00	3.71	93	2	40	63-130		
Trichloronate	4.00	3.13	78	22	40	26-145		

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-55796-2

SDG No.: CLJ55796-2

Matrix: Water Level: Low Lab File ID: oc17063.d

Lab ID: 680-55796-22 MSD Client ID: IR69-GW06-10A MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Dimethoate	4.00	4.18	105	9	40	31-130	
EPN	4.00	3.54	89	16	40	53-130	
Famphur	4.00	3.47	87	20	40	54-130	
Malathion	4.00	3.48	87	14	40	56-130	
Monochrotophos	40.0	22.3	56	2	40	10-130	
Parathion	4.00	3.66	91	10	40	45-132	
Sulfotepp	4.00	4.13	103	5	40	53-130	
Thionazin	4.00	4.07	102	2	40	37-134	

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

SAMPLE CALCULATION

Sample ID: IR69-GW06-10A MSD
Standard ID: ICAL curve3/17/10
Compound: Azinothos-methyl
Concnetration: 4.56 ug/L

	Water (ug/L)	Soil (ug/Kg)
Area of Compound	1453492	
Calibration Factor of Compound	3189588	
Dilution Factor	1	
Weight/Volume of Sample	500	
Final Volume extract	5000	
% Moisture	NA	
conversion factor	1	
Concentration	4.55699	#DIV/0!

Summary of Data Qualifications

Organophosphorous Pesticides

Sample ID	Compound	Results	Q-Flag	Q Code
all samples	demeton-s	+/-	J/UJ	BSL
IR69-GW06-10A, IR69-GW07D-10A, IR69-GW10-10A, IR69-GW07-10A	naled	+/-	J/UJ	BSL
IR69-GW06-10A	demeton-s naled	+/-	J/R	MSL

*final qualifier code for sample IR69-GW06-10A was MSL

DataQual

Environmental Services, LLC

CH2M HILL
5700 Cleveland Street
Suite 101
Virginia Beach, VA 23462

July 27, 2010
TestAmerica-Savannah, SDG# CLJ55796-3
MCB Camp Lejeune, CTO-81

Dear Ms. Buckley,

The following Data Validation report is provided as requested for the parameters noted in the table below for SDG # CLJ55796-3. The data validation was performed in accordance with the SW846 Method 8141A for organophosphorous pesticides (OPP) and good professional judgment. Also used in the validation of these samples were The National Functional Guidelines for Organic Data Review (June, 2008), as applicable. All areas of concern are discussed in the body of the report and a summary of data qualifications is provided.

Sample ID	Lab ID	Matrix	OPP
MR02-IR69-SS01-10A	680-55796-30	soil	X
MR02-IR69-SS01D-10A	680-55796-31	soil	X
IR69-SS01-10A	680-55796-32	soil	X
IR69-SS01D-10A	680-55796-33	soil	X
IR69-SS03-10A	680-55796-34	soil	X
IR69-SS04-10A	680-55796-35	soil	X
IR69-SS05-10A	680-55796-36	soil	X
IR69-SS06-10A	680-55796-37	soil	X
IR69-SB01-01-02-10A	680-55796-38	soil	X
IR69-SB01D-01-02-10A	680-55796-39	soil	X
IR69-SB04-06-07-10A	680-55796-40	soil	X
IR69-SB05-06-07-10A	680-55796-41	soil	X
IR69-SB06-06-07-10A	680-55796-42	soil	X
IR69-SD01-10A	680-55946-10	soil	X
IR69-SD01D-10A	680-55946-11	soil	X
IR69-SS04-10A	680-55975-1	soil	X
MR02-IR69-SS06-10A	680-55975-2	soil	X
MR02-IR69-SS05-10A	680-55975-3	soil	X
MR02-IR69-SS02-10A	680-55975-6	soil	X
IR69-SB06-06-07-10AMS	680-55796-42MS	soil	X
IR69-SB06-06-07-10AMSD	680-55796-42MSD	soil	X

The following quality control samples were provided with this SDG: sample IR69-SS01D-10A-field duplicate of sample IR69-SS01-10A; sample IR69-SB01D-01-02-10A-field duplicate of sample IR69-SB01-01-02-10A; sample IR69-SD01D-10A-field duplicate of sample IR69-SD01-10A; and sample MR02-IR69-SS01D-10A-field duplicate of sample MR02-IR69-SS01-10A.

The samples were evaluated based on the following criteria:

5830 Amberway Drive • St. Louis, MO 63128 • 314-330-1327 • Fax 314-849-6264

- Data Completeness *
- Technical Holding Times *
- GC Performance *
- Initial/Continuing Calibrations
- Blanks *
- Surrogates *
- Laboratory Control Samples
- Matrix Spike Recoveries
- Field Duplicates *
- Identification/Quantitation *
- Reporting Limits *

* - indicates that no qualifications were required based on this criteria

Overall Evaluation of Data/Potential Usability Issues

A summary of qualifications applied to the sample results are noted below for the fractions validated. Specific details regarding qualification of the data are addressed in the Specific Evaluation section of this narrative. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte the validator has chosen the qualifier that best indicates possible bias in the results and flagged the data accordingly. However, information regarding all quality control issues is provided in the body of the report and on the qualification summary page. Please note that when a compound or analyte is flagged due to blank contamination the BL qualifier code takes precedence over all other qualifier codes except a code that explains rejected data.

Organophosphorous Pesticides (OPP)

One continuing calibration standard exhibited one compound which was non-compliant due to a decrease in analytical response. Qualifications were required in the associated samples.

The laboratory control samples associated with samples exhibited non-compliant recoveries for one compound that resulted in the qualification of results.

The MS/MSD pair of sample IR69-SB06-06-07-10A exhibited non-compliant %Rs that resulted in the qualification of some sample results.

Specific Evaluation of Data

Data Completeness

This SDG was received complete and intact. Resubmissions were not required.

Technical Holding Times

According to chain of custody records, sampling was performed on 3/04-14/10 and samples were received at the laboratory on 3/12/10 and 3/18/10. All sample preparation and analysis was performed within method holding time requirements.

Initial/Continuing Calibrations

OPP

One calibration standard exhibited a high %Ds that was due to a decrease in sensitivity. A summary of this non-compliance and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	%D	Samples	Q Flag	Q Code
oc30041.d	naled	-59.2	MR02-IR69-SS04-10A, MR02-IR69-SS06-10A, MR02-IR69-SS05-10A, MR02-IR69-SS02-10A, IR69-SD01-10A, IR69-SD01D-10A	J/UJ	CCL

Laboratory Control Samples

OPP

The laboratory control samples associated with the samples in this SDG exhibited low recoveries for the compound demeton-s (24%/24%). The compound was qualified as estimated J/UJ in all field and QC blank samples with a qualifier code of BSL.

Matrix Spike Recoveries

OPP

The MS/MSD of sample IR69-SB06-06-07-10A exhibited 0% recoveries for the compounds demeton-s, dimethoate, monochrotophos and naled. These compounds were rejected R in the native sample only with a qualifier code of MSL.

A summary of qualifications required is provided on the following page. Please do not hesitate to contact DataQual ES with any questions regarding this validation report.

Sincerely,

Jacqueline Cleveland

Jacqueline Cleveland
Vice-President

Summary of Data Qualifications

Organophosphorous Pesticides

Sample ID	Compound	Results	Q-Flag	Q Code
MR02-IR69-SS04-10A, MR02-IR69-SS06-10A, MR02-IR69-SS05-10A, MR02-IR69-SS02-10A, IR69-SD01-10A, IR69-SD01D-10A	naled	+/-	J/UJ	CCL
all samples	demeton-s*	+/-	J/UJ	BSL
IR69-SB06-06-07-10A	demeton-s naled dimethoate monochrotophos	+/-	J/R	MSL

*final qualifier code for sample IR69-SB06-06-07-10A was MSL

Glossary of Qualification Flags and Abbreviations

Qualification Flags (Q-Flags)

U	not detected above the reported sample quantitation limit
J	estimated value
UJ	reported quantitation limit is qualified as estimated
R	result is rejected; the presence or absence of the analyte cannot be verified
D	result value is based on dilution analysis result
NJ	analyte has been tentatively identified, estimated value
L	analyte present, biased low
UL	not detected, quantitation limit is probably higher
K	analyte present, biased high

Inorganic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 10X the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL and the result is raised to the RL and flagged U.
R or J+	The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator. (see NFG, Rev. date 10/04, p. 17 for extracted blanks (PB))

Organic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 5X (10X for common laboratory contaminants) the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is raised to the RL and flagged U.
U	The sample result for the blank contaminant is greater than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is flagged U at the reported value.

General Abbreviations

RL / MDL	reporting limit/method detection limit
CRQL	contract required quantitation limit
Q Code	qualifier code
+	positive result
-	non-detect result

QUALIFIER CODE REFERENCE

Qualifier	Description
TN	Tune
BSL	Blank Spike/LCS - High Recovery
BSH	Blank Spike/LCS - Low Recovery
BD	Blank Spike/Blank Spike Duplicate (LCS/LCSD) Precision
BRL	Below Reporting Limit
ISL	Internal Standard - Low Recovery
ISH	Internal Standard - High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate - Low Recovery
MSH	Matrix Spike and/or Matrix Spike Duplicate - High Recovery
MI	Matrix interference obscuring the raw data
MDP	Matrix Spike/Matrix Spike Duplicate Precision
2S	Second Source - Bad reproducibility between tandem detectors
SSL	Spiked Surrogate - Low Recovery
SSH	Spiked Surrogate - High Recovery
SD	Serial Dilution Reproducibility
ICL	Initial Calibration - Low Relative Response Factors (RRF)
ICH	Initial Calibration - High Relative Response Factors (RRF)
ICB	Initial Calibration - Bad Linearity or Curve Function
CCL	Continuing Calibration - Low Recovery or %Difference
CCH	Continuing Calibration - High Recovery or %Difference
LD	Lab Duplicate Reproducibility
HT	Holding Time
PD	Pesticide Degradation
2C	Second Column - Poor Dual Column Reproducibility
LR	Concentration Exceeds Linear Range
BL	Blank Contamination (MBL, EBL, FBL, TBL)
RE	Redundant Result - due to Re-analysis or Re-extraction
DL	Redundant Result - due to Dilution
FD	Field Duplicate
OT	Other - explained in data validation report
%SOL	High moisture content

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-3

SDG No.: CLJ55796-3

Client Sample ID: MR02-IR69-SS01-10A | Lab Sample ID: 680-55796-30

Matrix: Solid | Lab File ID: oc17075.d

Analysis Method: 8141A | Date Collected: 03/04/2010 15:15

Extraction Method: 3550B | Date Extracted: 03/14/2010 08:30

Sample wt/vol: 15.07(g) | Date Analyzed: 03/18/2010 17:18

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 32.5 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163439 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	49	U	49	25
35400-43-2	Bolstar	49	U	49	25
2921-88-2	Chlorpyrifos	49	U	49	25
56-72-4	Coumaphos	49	U	49	25
298-03-3	Demeton-O	120	U ~~Q~~	120	62
126-75-0	Demeton-S	120	~~U Q~~ UJ BSL	120	62
333-41-5	Diazinon	49	U	49	25
62-73-7	Dichlorvos	99	U	99	50
60-51-5	Dimethoate	99	U	99	50
298-04-4	Disulfoton	99	U	99	50
2104-64-5	EPN	49	U	49	25
13194-48-4	Ethoprop	25	U	25	13
56-38-2	Ethyl Parathion	49	U	49	25
52-85-7	Famphur	99	U	99	50
115-90-2	Fensulfothion	250	U	250	130
55-38-9	Fenthion	49	U	49	25
121-75-5	Malathion	49	U	49	25
150-50-5	Merphos	74	U	74	37
298-00-0	Methyl parathion	25	U	25	13
7786-34-7	Mevinphos	99	U	99	50
6923-22-4	Monochrotophos	490	U	490	250
300-76-5	Naled	250	U	250	130
298-02-2	Phorate	49	U	49	25
299-84-3	Ronnel	49	U	49	25
22248-79-9	Stirophos	49	U	49	25
3689-24-5	Sulfotepp	25	U	25	13
297-97-2	Thionazin	49	U	49	25
34643-46-4	Tokuthion	49	U	49	25
327-98-0	Trichloronate	49	U	49	25

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	92	42-128	

QC 12710

007

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-3

SDG No.: CLJ55796-3

Client Sample ID: MR02-IR69-SS01D-10A | Lab Sample ID: 680-55796-31

Matrix: Solid | Lab File ID: oc17076.d

Analysis Method: 8141A | Date Collected: 03/04/2010 15:20

Extraction Method: 3550B | Date Extracted: 03/14/2010 08:30

Sample wt/vol: 15.10(g) | Date Analyzed: 03/18/2010 17:42

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 33.5 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163439 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	49	U	49	25
35400-43-2	Bolstar	49	U	49	25
2921-88-2	Chlorpyrifos	49	U	49	25
56-72-4	Coumaphos	49	U	49	25
298-03-3	Demeton-O	120	U Ø	120	63
126-75-0	Demeton-S	120	U Ø WJ BSL	120	63
333-41-5	Diazinon	49	U	49	25
62-73-7	Dichlorvos	100	U	100	51
60-51-5	Dimethoate	100	U	100	51
298-04-4	Disulfoton	100	U	100	51
2104-64-5	EPN	49	U	49	25
13194-48-4	Ethoprop	25	U	25	13
56-38-2	Ethyl Parathion	49	U	49	25
52-85-7	Famphur	100	U	100	51
115-90-2	Fensulfothion	250	U	250	130
55-38-9	Fenthion	49	U	49	25
121-75-5	Malathion	49	U	49	25
150-50-5	Merphos	75	U	75	37
298-00-0	Methyl parathion	25	U	25	13
7786-34-7	Mevinphos	100	U	100	51
6923-22-4	Monochrotophos	490	U	490	250
300-76-5	Naled	250	U	250	130
298-02-2	Phorate	49	U	49	25
299-84-3	Ronnel	49	U	49	25
22248-79-9	Stirophos	49	U	49	25
3689-24-5	Sulfotepp	25	U	25	13
297-97-2	Thionazin	49	U	49	25
34643-46-4	Tokuthion	49	U	49	25
327-98-0	Trichloronate	49	U	49	25

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	93	42-128	

OAC 12/10

008

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-3

SDG No.: CLJ55796-3

Client Sample ID: IR69-SS01-10A | Lab Sample ID: 680-55796-32

Matrix: Solid | Lab File ID: oc17077.d

Analysis Method: 8141A | Date Collected: 03/04/2010 09:15

Extraction Method: 3550B | Date Extracted: 03/14/2010 08:30

Sample wt/vol: 15.11(g) | Date Analyzed: 03/18/2010 18:07

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 38.4 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163439 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	53	U	53	27
35400-43-2	Bolstar	53	U	53	27
2921-88-2	Chlorpyrifos	53	U	53	27
56-72-4	Coumaphos	53	U	53	27
298-03-3	Demeton-O	130	U Ø	130	68
126-75-0	Demeton-S	130	~~U~~ Ø UJ BSL	130	68
333-41-5	Diazinon	53	U	53	27
62-73-7	Dichlorvos	110	U	110	55
60-51-5	Dimethoate	110	U	110	55
298-04-4	Disulfoton	110	U	110	55
2104-64-5	EPN	53	U	53	27
13194-48-4	Ethoprop	27	U	27	14
56-38-2	Ethyl Parathion	53	U	53	27
52-85-7	Famphur	110	U	110	55
115-90-2	Fensulfothion	270	U	270	140
55-38-9	Fenthion	53	U	53	27
121-75-5	Malathion	53	U	53	27
150-50-5	Merphos	81	U	81	40
298-00-0	Methyl parathion	27	U	27	14
7786-34-7	Mevinphos	110	U	110	55
6923-22-4	Monochrotophos	530	U	530	270
300-76-5	Naled	270	U	270	140
298-02-2	Phorate	53	U	53	27
299-84-3	Ronnel	53	U	53	27
22248-79-9	Stirophos	53	U	53	27
3689-24-5	Sulfotepp	27	U	27	14
297-97-2	Thionazin	53	U	53	27
34643-46-4	Tokuthion	53	U	53	27
327-98-0	Trichloronate	53	U	53	27

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	98	42-128	

AC 4/27/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-3

SDG No.: CLJ55796-3

Client Sample ID: IR69-SS01D-10A | Lab Sample ID: 680-55796-33

Matrix: Solid | Lab File ID: oc17078.d

Analysis Method: 8141A | Date Collected: 03/04/2010 09:20

Extraction Method: 3550B | Date Extracted: 03/14/2010 08:30

Sample wt/vol: 15.06(g) | Date Analyzed: 03/18/2010 18:33

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 38.5 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163439 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	53	U	53	28
35400-43-2	Bolstar	53	U	53	28
2921-88-2	Chlorpyrifos	53	U	53	28
56-72-4	Coumaphos	53	U	53	28
298-03-3	Demeton-O	130	U ~~Q~~	130	68
126-75-0	Demeton-S	130	~~U~~ ~~Q~~ UJ BSL	130	68
333-41-5	Diazinon	53	U	53	28
62-73-7	Dichlorvos	110	U	110	55
60-51-5	Dimethoate	110	U	110	55
298-04-4	Disulfoton	110	U	110	55
2104-64-5	EPN	53	U	53	28
13194-48-4	Ethoprop	28	U	28	14
56-38-2	Ethyl Parathion	53	U	53	28
52-85-7	Famphur	110	U	110	55
115-90-2	Fensulfothion	280	U	280	140
55-38-9	Fenthion	53	U	53	28
121-75-5	Malathion	53	U	53	28
150-50-5	Merphos	81	U	81	40
298-00-0	Methyl parathion	28	U	28	14
7786-34-7	Mevinphos	110	U	110	55
6923-22-4	Monochrotophos	530	U	530	280
300-76-5	Naled	280	~~U~~ UJ ~~CCL~~	280	140
298-02-2	Phorate	53	U	53	28
299-84-3	Ronnel	53	U	53	28
22248-79-9	Stirophos	53	U	53	28
3689-24-5	Sulfotepp	28	U	28	14
297-97-2	Thionazin	53	U	53	28
34643-46-4	Tokuthion	53	U	53	28
327-98-0	Trichloronate	53	U	53	28

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CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	95	42-128	

JAC 72710

110

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-3

SDG No.: CLJ55796-3

Client Sample ID: IR69-SS03-10A | Lab Sample ID: 680-55796-34

Matrix: Solid | Lab File ID: oc17079.d

Analysis Method: 8141A | Date Collected: 03/04/2010 10:15

Extraction Method: 3550B | Date Extracted: 03/14/2010 08:30

Sample wt/vol: 15.01(g) | Date Analyzed: 03/18/2010 18:57

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 31.5 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163439 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	48	U	48	25
35400-43-2	Bolstar	48	U	48	25
2921-88-2	Chlorpyrifos	48	U	48	25
56-72-4	Coumaphos	48	U	48	25
298-03-3	Demeton-O	120	U ~~Q~~	120	61
126-75-0	Demeton-S	120	~~U~~ PUJ BSL	120	61
333-41-5	Diazinon	48	U	48	25
62-73-7	Dichlorvos	98	U	98	50
60-51-5	Dimethoate	98	U	98	50
298-04-4	Disulfoton	98	U	98	50
2104-64-5	EPN	48	U	48	25
13194-48-4	Ethoprop	25	U	25	12
56-38-2	Ethyl Parathion	48	U	48	25
52-85-7	Famphur	98	U	98	50
115-90-2	Fensulfothion	250	U	250	120
55-38-9	Fenthion	48	U	48	25
121-75-5	Malathion	48	U	48	25
150-50-5	Merphos	73	U	73	36
298-00-0	Methyl parathion	25	U	25	12
7786-34-7	Mevinphos	98	U	98	50
6923-22-4	Monochrotophos	480	U	480	250
300-76-5	Naled	250	U	250	120
298-02-2	Phorate	48	U	48	25
299-84-3	Ronnel	48	U	48	25
22248-79-9	Stirophos	48	U	48	25
3689-24-5	Sulfotepp	25	U	25	12
297-97-2	Thionazin	48	U	48	25
34643-46-4	Tokuthion	48	U	48	25
327-98-0	Trichloronate	48	U	48	25

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	84	42-128	

AC 12/10

011

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-3

SDG No.: CLJ55796-3

Client Sample ID: IR69-SS04-10A | Lab Sample ID: 680-55796-35

Matrix: Solid | Lab File ID: oc17080.d

Analysis Method: 8141A | Date Collected: 03/04/2010 10:40

Extraction Method: 3550B | Date Extracted: 03/14/2010 08:30

Sample wt/vol: 15.00(g) | Date Analyzed: 03/18/2010 19:22

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 28.9 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163439 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	46	U	46	24
35400-43-2	Bolstar	46	U	46	24
2921-88-2	Chlorpyrifos	46	U	46	24
56-72-4	Coumaphos	46	U	46	24
298-03-3	Demeton-O	120	U ~~Ø~~	120	59
126-75-0	Demeton-S	120	~~U~~ ~~Ø~~ UJ BSL	120	59
333-41-5	Diazinon	46	U	46	24
62-73-7	Dichlorvos	94	U	94	48
60-51-5	Dimethoate	94	U	94	48
298-04-4	Disulfoton	94	U	94	48
2104-64-5	EPN	46	U	46	24
13194-48-4	Ethoprop	24	U	24	12
56-38-2	Ethyl Parathion	46	U	46	24
52-85-7	Famphur	94	U	94	48
115-90-2	Fensulfothion	240	U	240	120
55-38-9	Fenthion	46	U	46	24
121-75-5	Malathion	46	U	46	24
150-50-5	Merphos	70	U	70	35
298-00-0	Methyl parathion	24	U	24	12
7786-34-7	Mevinphos	94	U	94	48
6923-22-4	Monochrotophos	460	U	460	240
300-76-5	Naled	240	U	240	120
298-02-2	Phorate	46	U	46	24
299-84-3	Ronnel	46	U	46	24
22248-79-9	Stirophos	46	U	46	24
3689-24-5	Sulfotepp	24	U	24	12
297-97-2	Thionazin	46	U	46	24
34643-46-4	Tokuthion	46	U	46	24
327-98-0	Trichloronate	46	U	46	24

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	70	42-128	

JLC 12/10

012

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-3

SDG No.: CLJ55796-3

Client Sample ID: IR69-SS05-10A | Lab Sample ID: 680-55796-36

Matrix: Solid | Lab File ID: oc17081.d

Analysis Method: 8141A | Date Collected: 03/04/2010 11:20

Extraction Method: 3550B | Date Extracted: 03/14/2010 08:30

Sample wt/vol: 15.01(g) | Date Analyzed: 03/18/2010 19:48

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 28.9 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163439 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	46	U	46	24
35400-43-2	Bolstar	46	U	46	24
2921-88-2	Chlorpyrifos	46	U	46	24
56-72-4	Coumaphos	46	U	46	24
298-03-3	Demeton-O	120	U Ø	120	59
126-75-0	Demeton-S	120	U Ø UJ BSL	120	59
333-41-5	Diazinon	46	U	46	24
62-73-7	Dichlorvos	94	U	94	48
60-51-5	Dimethoate	94	U	94	48
298-04-4	Disulfoton	94	U	94	48
2104-64-5	EPN	46	U	46	24
13194-48-4	Ethoprop	24	U	24	12
56-38-2	Ethyl Parathion	46	U	46	24
52-85-7	Famphur	94	U	94	48
115-90-2	Fensulfothion	240	U	240	120
55-38-9	Fenthion	46	U	46	24
121-75-5	Malathion	46	U	46	24
150-50-5	Merphos	70	U	70	35
298-00-0	Methyl parathion	24	U	24	12
7786-34-7	Mevinphos	94	U	94	48
6923-22-4	Monochrotophos	460	U	460	240
300-76-5	Naled	240	U	240	120
298-02-2	Phorate	46	U	46	24
299-84-3	Ronnel	46	U	46	24
22248-79-9	Stirophos	46	U	46	24
3689-24-5	Sulfotepp	24	U	24	12
297-97-2	Thionazin	46	U	46	24
34643-46-4	Tokuthion	46	U	46	24
327-98-0	Trichloronate	46	U	46	24

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	92	42-128	

JLC 4/27/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-3

SDG No.: CLJ55796-3

Client Sample ID: IR69-SS06-10A | Lab Sample ID: 680-55796-37

Matrix: Solid | Lab File ID: oc17082.d

Analysis Method: 8141A | Date Collected: 03/04/2010 11:45

Extraction Method: 3550B | Date Extracted: 03/14/2010 08:30

Sample wt/vol: 15.03(g) | Date Analyzed: 03/18/2010 20:12

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 51.5 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163439 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	68	U	68	35
35400-43-2	Bolstar	68	U	68	35
2921-88-2	Chlorpyrifos	68	U	68	35
56-72-4	Coumaphos	68	U	68	35
298-03-3	Demeton-O	170	U ~~Q~~	170	87
126-75-0	Demeton-S	170	U ~~Q~~ UJ BSL	170	87
333-41-5	Diazinon	68	U	68	35
62-73-7	Dichlorvos	140	U	140	70
60-51-5	Dimethoate	140	U	140	70
298-04-4	Disulfoton	140	U	140	70
2104-64-5	EPN	68	U	68	35
13194-48-4	Ethoprop	35	U	35	18
56-38-2	Ethyl Parathion	68	U	68	35
52-85-7	Famphur	140	U	140	70
115-90-2	Fensulfothion	350	U	350	180
55-38-9	Fenthion	68	U	68	35
121-75-5	Malathion	68	U	68	35
150-50-5	Merphos	100	U	100	51
298-00-0	Methyl parathion	35	U	35	18
7786-34-7	Mevinphos	140	U	140	70
6923-22-4	Monochrotophos	680	U	680	350
300-76-5	Naled	350	U	350	180
298-02-2	Phorate	68	U	68	35
299-84-3	Ronnel	68	U	68	35
22248-79-9	Stirophos	68	U	68	35
3689-24-5	Sulfotepp	35	U	35	18
297-97-2	Thionazin	68	U	68	35
34643-46-4	Tokuthion	68	U	68	35
327-98-0	Trichloronate	68	U	68	35

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	96	42-128	

JC 12710

014

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-3

SDG No.: CLJ55796-3

Client Sample ID: IR69-SB01-01-02-10A | Lab Sample ID: 680-55796-38

Matrix: Solid | Lab File ID: oc17067.d

Analysis Method: 8141A | Date Collected: 03/07/2010 13:30

Extraction Method: 3550B | Date Extracted: 03/14/2010 08:30

Sample wt/vol: 15.04(g) | Date Analyzed: 03/18/2010 14:23

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 23.5 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163438 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	43	U	43	22
35400-43-2	Bolstar	43	U	43	22
2921-88-2	Chlorpyrifos	43	U	43	22
56-72-4	Coumaphos	43	U	43	22
298-03-3	Demeton-O	110	U Ø	110	55
126-75-0	Demeton-S	110	~~U~~ Ø UJ BSL	110	55
333-41-5	Diazinon	43	U	43	22
62-73-7	Dichlorvos	87	U	87	44
60-51-5	Dimethoate	87	U	87	44
298-04-4	Disulfoton	87	U	87	44
2104-64-5	EPN	43	U	43	22
13194-48-4	Ethoprop	22	U	22	11
56-38-2	Ethyl Parathion	43	U	43	22
52-85-7	Famphur	87	U	87	44
115-90-2	Fensulfothion	220	U	220	110
55-38-9	Fenthion	43	U	43	22
121-75-5	Malathion	43	U	43	22
150-50-5	Merphos	65	U	65	33
298-00-0	Methyl parathion	22	U	22	11
7786-34-7	Mevinphos	87	U	87	44
6923-22-4	Monochrotophos	430	U	430	220
300-76-5	Naled	220	U	220	110
298-02-2	Phorate	43	U	43	22
299-84-3	Ronnel	43	U	43	22
22248-79-9	Stirophos	43	U	43	22
3689-24-5	Sulfotepp	22	U	22	11
297-97-2	Thionazin	43	U	43	22
34643-46-4	Tokuthion	43	U	43	22
327-98-0	Trichloronate	43	U	43	22

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	67	42-128	

JAC 7/2/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-3

SDG No.: CLJ55796-3

Client Sample ID: IR69-SB01D-01-02-10A | Lab Sample ID: 680-55796-39

Matrix: Solid | Lab File ID: oc17068.d

Analysis Method: 8141A | Date Collected: 03/07/2010 13:30

Extraction Method: 3550B | Date Extracted: 03/14/2010 08:30

Sample wt/vol: 15.04(g) | Date Analyzed: 03/18/2010 14:47

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 19.9 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163438 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	41	U	41	21
35400-43-2	Bolstar	41	U	41	21
2921-88-2	Chlorpyrifos	41	U	41	21
56-72-4	Coumaphos	41	U	41	21
298-03-3	Demeton-O	100	U ~~Q~~	100	52
126-75-0	Demeton-S	100	~~U~~ ~~Q~~ UJ BSL	100	52
333-41-5	Diazinon	41	U	41	21
62-73-7	Dichlorvos	83	U	83	42
60-51-5	Dimethoate	83	U	83	42
298-04-4	Disulfoton	83	U	83	42
2104-64-5	EPN	41	U	41	21
13194-48-4	Ethoprop	21	U	21	11
56-38-2	Ethyl Parathion	41	U	41	21
52-85-7	Famphur	83	U	83	42
115-90-2	Fensulfothion	210	U	210	110
55-38-9	Fenthion	41	U	41	21
121-75-5	Malathion	41	U	41	21
150-50-5	Merphos	62	U	62	31
298-00-0	Methyl parathion	21	U	21	11
7786-34-7	Mevinphos	83	U	83	42
6923-22-4	Monochrotophos	410	U	410	210
300-76-5	Naled	210	U	210	110
298-02-2	Phorate	41	U	41	21
299-84-3	Ronnel	41	U	41	21
22248-79-9	Stirophos	41	U	41	21
3689-24-5	Sulfotepp	21	U	21	11
297-97-2	Thionazin	41	U	41	21
34643-46-4	Tokuthion	41	U	41	21
327-98-0	Trichloronate	41	U	41	21

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	49	42-128	

JC 12/10

016

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-3

SDG No.: CLJ55796-3

Client Sample ID: IR69-SB04-06-07-10A | Lab Sample ID: 680-55796-40

Matrix: Solid | Lab File ID: oc17069.d

Analysis Method: 8141A | Date Collected: 03/07/2010 16:00

Extraction Method: 3550B | Date Extracted: 03/14/2010 08:30

Sample wt/vol: 15.07(g) | Date Analyzed: 03/18/2010 15:12

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 23.5 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163438 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	43	U	43	22
35400-43-2	Bolstar	43	U	43	22
2921-88-2	Chlorpyrifos	43	U	43	22
56-72-4	Coumaphos	43	U	43	22
298-03-3	Demeton-O	110	U ~~Q~~	110	55
126-75-0	Demeton-S	110	~~U~~ ~~Q~~ UJ BSL	110	55
333-41-5	Diazinon	43	U	43	22
62-73-7	Dichlorvos	87	U	87	44
60-51-5	Dimethoate	87	U	87	44
298-04-4	Disulfoton	87	U	87	44
2104-64-5	EPN	43	U	43	22
13194-48-4	Ethoprop	22	U	22	11
56-38-2	Ethyl Parathion	43	U	43	22
52-85-7	Famphur	87	U	87	44
115-90-2	Fensulfothion	220	U	220	110
55-38-9	Fenthion	43	U	43	22
121-75-5	Malathion	43	U	43	22
150-50-5	Merphos	65	U	65	33
298-00-0	Methyl parathion	22	U	22	11
7786-34-7	Mevinphos	87	U	87	44
6923-22-4	Monochrotophos	430	U	430	220
300-76-5	Naled	220	U	220	110
298-02-2	Phorate	43	U	43	22
299-84-3	Ronnel	43	U	43	22
22248-79-9	Stirophos	43	U	43	22
3689-24-5	Sulfotepp	22	U	22	11
297-97-2	Thionazin	43	U	43	22
34643-46-4	Tokuthion	43	U	43	22
327-98-0	Trichloronate	43	U	43	22

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	75	42-128	

JAC 4/27/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-3

SDG No.: CLJ55796-3

Client Sample ID: IR69-SB05-06-07-10A | Lab Sample ID: 680-55796-41

Matrix: Solid | Lab File ID: oc17083.d

Analysis Method: 8141A | Date Collected: 03/07/2010 09:30

Extraction Method: 3550B | Date Extracted: 03/14/2010 08:30

Sample wt/vol: 15.08(g) | Date Analyzed: 03/18/2010 20:37

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 23.3 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163439 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	43	U	43	22
35400-43-2	Bolstar	43	U	43	22
2921-88-2	Chlorpyrifos	43	U	43	22
56-72-4	Coumaphos	43	U	43	22
298-03-3	Demeton-O	110	U ~~Ø~~	110	54
126-75-0	Demeton-S	110	U ~~Ø~~ UJ BSL	110	54
333-41-5	Diazinon	43	U	43	22
62-73-7	Dichlorvos	87	U	87	44
60-51-5	Dimethoate	87	U	87	44
298-04-4	Disulfoton	87	U	87	44
2104-64-5	EPN	43	U	43	22
13194-48-4	Ethoprop	22	U	22	11
56-38-2	Ethyl Parathion	43	U	43	22
52-85-7	Famphur	87	U	87	44
115-90-2	Fensulfothion	220	U	220	110
55-38-9	Fenthion	43	U	43	22
121-75-5	Malathion	43	U	43	22
150-50-5	Merphos	65	U	65	32
298-00-0	Methyl parathion	22	U	22	11
7786-34-7	Mevinphos	87	U	87	44
6923-22-4	Monochrotophos	430	U	430	220
300-76-5	Naled	220	U	220	110
298-02-2	Phorate	43	U	43	22
299-84-3	Ronnel	43	U	43	22
22248-79-9	Stirophos	43	U	43	22
3689-24-5	Sulfotepp	22	U	22	11
297-97-2	Thionazin	43	U	43	22
34643-46-4	Tokuthion	43	U	43	22
327-98-0	Trichloronate	43	U	43	22

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	69	42-128	

JAC 12/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-3

SDG No.: CLJ55796-3

Client Sample ID: IR69-SB06-06-07-10A | Lab Sample ID: 680-55796-42

Matrix: Solid | Lab File ID: oc17084.d

Analysis Method: 8141A | Date Collected: 03/07/2010 11:45

Extraction Method: 3550B | Date Extracted: 03/14/2010 08:30

Sample wt/vol: 15.06(g) | Date Analyzed: 03/18/2010 21:02

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 26.1 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163439 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	45	U	45	23
35400-43-2	Bolstar	45	U	45	23
2921-88-2	Chlorpyrifos	45	U	45	23
56-72-4	Coumaphos	45	U	45	23
298-03-3	Demeton-O	110	U ~~Q~~ ~~J~~	110	57
126-75-0	Demeton-S	110	~~U Q J~~	R MSL 110	57
333-41-5	Diazinon	45	U	45	23
62-73-7	Dichlorvos	90	U	90	46
60-51-5	Dimethoate	90	~~U J~~	R MSL 90	46
298-04-4	Disulfoton	90	U	90	46
2104-64-5	EPN	45	U	45	23
13194-48-4	Ethoprop	23	U	23	11
56-38-2	Ethyl Parathion	45	U	45	23
52-85-7	Famphur	90	U	90	46
115-90-2	Fensulfothion	230	U ~~J~~	230	110
55-38-9	Fenthion	45	U	45	23
121-75-5	Malathion	45	U	45	23
150-50-5	Merphos	67	U	67	34
298-00-0	Methyl parathion	23	U	23	11
7786-34-7	Mevinphos	90	U ~~J~~	90	46
6923-22-4	Monochrotophos	450	~~U J~~ R	MSL 450	230
300-76-5	Naled	230	~~U J~~ R	MSL 230	110
298-02-2	Phorate	45	U	45	23
299-84-3	Ronnel	45	U	45	23
22248-79-9	Stirophos	45	U	45	23
3689-24-5	Sulfotepp	23	U	23	11
297-97-2	Thionazin	45	U	45	23
34643-46-4	Tokuthion	45	U	45	23
327-98-0	Trichloronate	45	U	45	23

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	70	42-128	

JC 12/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-3

SDG No.: CLJ55796-3

Client Sample ID: IR69-SD01-10A | Lab Sample ID: 680-55946-10

Matrix: Solid | Lab File ID: oc30031.d

Analysis Method: 8141A | Date Collected: 03/14/2010 15:00

Extraction Method: 3550B | Date Extracted: 03/23/2010 12:32

Sample wt/vol: 30.48(g) | Date Analyzed: 03/31/2010 03:36

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 83.3 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164569 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	190	U	190	100
35400-43-2	Bolstar	190	U	190	100
2921-88-2	Chlorpyrifos	190	U	190	100
56-72-4	Coumaphos	190	U	190	100
298-03-3	Demeton-O	490	U ~~Q~~	490	250
126-75-0	Demeton-S	490	U ~~Q~~ WJ BSL	490	250
333-41-5	Diazinon	190	U	190	100
62-73-7	Dichlorvos	390	U	390	200
60-51-5	Dimethoate	390	U	390	200
298-04-4	Disulfoton	390	U	390	200
2104-64-5	EPN	190	U	190	100
13194-48-4	Ethoprop	100	U	100	50
56-38-2	Ethyl Parathion	190	U	190	100
115-90-2	Fensulfothion	1000	U	1000	500
55-38-9	Fenthion	190	U	190	100
121-75-5	Malathion	190	U	190	100
150-50-5	Merphos	290	U	290	150
298-00-0	Methyl parathion	100	U	100	50
7786-34-7	Mevinphos	390	U	390	200
6923-22-4	Monochrotophos	1900	U	1900	1000
300-76-5	Naled	1000	~~U~~ WJ CCL	1000	500
298-02-2	Phorate	190	U	190	100
52-85-7	Famphur	390	U	390	200
299-84-3	Ronnel	190	U	190	100
22248-79-9	Stirophos	190	U	190	100
3689-24-5	Sulfotepp	100	U	100	50
34643-46-4	Tokuthion	190	U	190	100
327-98-0	Trichloronate	190	U	190	100
297-97-2	Thionazin	190	U	190	100

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	83	42-128	

SAC 12/10

0120

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-3

SDG No.: CLJ55796-3

Client Sample ID: IR69-SD01D-10A | Lab Sample ID: 680-55946-11

Matrix: Solid | Lab File ID: oc30032.d

Analysis Method: 8141A | Date Collected: 03/14/2010 15:05

Extraction Method: 3550B | Date Extracted: 03/23/2010 12:32

Sample wt/vol: 30.20(g) | Date Analyzed: 03/31/2010 04:00

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 81.3 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164569 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	180	U	180	90
35400-43-2	Bolstar	180	U	180	90
2921-88-2	Chlorpyrifos	180	U	180	90
56-72-4	Coumaphos	180	U	180	90
298-03-3	Demeton-O	440	U ~~Q~~	440	220
126-75-0	Demeton-S	440	~~U~~ ~~Q~~ UJ BSL	440	220
333-41-5	Diazinon	180	U	180	90
62-73-7	Dichlorvos	360	U	360	180
60-51-5	Dimethoate	360	U	360	180
298-04-4	Disulfoton	360	U	360	180
2104-64-5	EPN	180	U	180	90
13194-48-4	Ethoprop	90	U	90	45
56-38-2	Ethyl Parathion	180	U	180	90
115-90-2	Fensulfothion	900	U	900	450
55-38-9	Fenthion	180	U	180	90
121-75-5	Malathion	180	U	180	90
150-50-5	Merphos	270	U	270	130
298-00-0	Methyl parathion	90	U	90	45
7786-34-7	Mevinphos	360	U	360	180
6923-22-4	Monochrotophos	1800	U	1800	900
300-76-5	Naled	900	~~U~~ UJ CCL	900	450
298-02-2	Phorate	180	U	180	90
52-85-7	Famphur	360	U	360	180
299-84-3	Ronnel	180	U	180	90
22248-79-9	Stirophos	180	U	180	90
3689-24-5	Sulfotepp	90	U	90	45
34643-46-4	Tokuthion	180	U	180	90
327-98-0	Trichloronate	180	U	180	90
297-97-2	Thionazin	180	U	180	90

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	90	42-128	

AC 12/10

021

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 680-55796-3
SDG No.: CLJ55796-3
Client Sample ID: MR02-IR69-SS04-10A
Lab Sample ID: 680-55975-1
Matrix: Solid
Lab File ID: oc30033.d
Analysis Method: 8141A
Date Collected: 03/13/2010 14:00
Extraction Method: 3550B
Date Extracted: 03/23/2010 12:32
Sample wt/vol: 30.18(g)
Date Analyzed: 03/31/2010 04:25
Con. Extract Vol.: 10(mL)
Dilution Factor: 1
Injection Volume: 2(uL)
GC Column: Rtx-OPP 2 ID: 0.32(mm)
% Moisture: 20.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 164569
Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	41	U	41	21
35400-43-2	Bolstar	41	U	41	21
2921-88-2	Chlorpyrifos	41	U	41	21
56-72-4	Coumaphos	41	U	41	21
298-03-3	Demeton-O	100	U ~~Q~~	100	52
126-75-0	Demeton-S	100	~~U~~ ~~Q~~ UJ BSL	100	52
333-41-5	Diazinon	41	U	41	21
62-73-7	Dichlorvos	84	U	84	42
60-51-5	Dimethoate	84	U	84	42
298-04-4	Disulfoton	84	U	84	42
2104-64-5	EPN	41	U	41	21
13194-48-4	Ethoprop	21	U	21	11
56-38-2	Ethyl Parathion	41	U	41	21
115-90-2	Fensulfothion	210	U	210	110
55-38-9	Fenthion	41	U	41	21
121-75-5	Malathion	41	U	41	21
150-50-5	Merphos	62	U	62	31
298-00-0	Methyl parathion	21	U	21	11
7786-34-7	Mevinphos	84	U	84	42
6923-22-4	Monochrotophos	410	U	410	210
300-76-5	Naled	210	~~U~~ UJ CCL	210	110
298-02-2	Phorate	41	U	41	21
52-85-7	Famphur	84	U	84	42
299-84-3	Ronnel	41	U	41	21
22248-79-9	Stirophos	41	U	41	21
3689-24-5	Sulfotepp	21	U	21	11
34643-46-4	Tokuthion	41	U	41	21
327-98-0	Trichloronate	41	U	41	21
297-97-2	Thionazin	41	U	41	21

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	80	42-128	

JMC 12-7-10

022

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-3

SDG No.: CLJ55796-3

Client Sample ID: MR02-IR69-SS06-10A | Lab Sample ID: 680-55975-2

Matrix: Solid | Lab File ID: oc30034.d

Analysis Method: 8141A | Date Collected: 03/13/2010 14:30

Extraction Method: 3550B | Date Extracted: 03/23/2010 12:32

Sample wt/vol: 30.34(g) | Date Analyzed: 03/31/2010 04:50

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 19.1 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164569 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	40	U	40	21
35400-43-2	Bolstar	40	U	40	21
2921-88-2	Chlorpyrifos	40	U	40	21
56-72-4	Coumaphos	40	U	40	21
298-03-3	Demeton-O	100	U ~~Ø~~	100	51
126-75-0	Demeton-S	100	~~Ø~~ ~~Ø~~ UJ BEL	100	51
333-41-5	Diazinon	40	U	40	21
62-73-7	Dichlorvos	82	U	82	42
60-51-5	Dimethoate	82	U	82	42
298-04-4	Disulfoton	82	U	82	42
2104-64-5	EPN	40	U	40	21
13194-48-4	Ethoprop	21	U	21	10
56-38-2	Ethyl Parathion	40	U	40	21
115-90-2	Fensulfothion	210	U	210	100
55-38-9	Fenthion	40	U	40	21
121-75-5	Malathion	40	U	40	21
150-50-5	Merphos	61	U	61	31
298-00-0	Methyl parathion	21	U	21	10
7786-34-7	Mevinphos	82	U	82	42
6923-22-4	Monochrotophos	400	U	400	210
300-76-5	Naled	210	~~Ø~~ UJ CCL	210	100
298-02-2	Phorate	40	U	40	21
52-85-7	Famphur	82	U	82	42
299-84-3	Ronnel	40	U	40	21
22248-79-9	Stirophos	40	U	40	21
3689-24-5	Sulfotepp	21	U	21	10
34643-46-4	Tokuthion	40	U	40	21
327-98-0	Trichloronate	40	U	40	21
297-97-2	Thionazin	40	U	40	21

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	59	42-128	

SAC 12/10

1123

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-3

SDG No.: CLJ55796-3

Client Sample ID: MR02-IR69-SS05-10A | Lab Sample ID: 680-55975-3

Matrix: Solid | Lab File ID: oc30035.d

Analysis Method: 8141A | Date Collected: 03/13/2010 14:45

Extraction Method: 3550B | Date Extracted: 03/23/2010 12:32

Sample wt/vol: 30.03(g) | Date Analyzed: 03/31/2010 05:15

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 12.9 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164569 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	38	U	38	20
35400-43-2	Bolstar	38	U	38	20
2921-88-2	Chlorpyrifos	38	U	38	20
56-72-4	Coumaphos	38	U	38	20
298-03-3	Demeton-O	95	U ~~Q~~	95	48
126-75-0	Demeton-S	95	~~U~~ ~~Q~~ UJ BSL	95	48
333-41-5	Diazinon	38	U	38	20
62-73-7	Dichlorvos	77	U	77	39
60-51-5	Dimethoate	77	U	77	39
298-04-4	Disulfoton	77	U	77	39
2104-64-5	EPN	38	U	38	20
13194-48-4	Ethoprop	20	U	20	9.8
56-38-2	Ethyl Parathion	38	U	38	20
115-90-2	Fensulfothion	200	U	200	98
55-38-9	Fenthion	38	U	38	20
121-75-5	Malathion	38	U	38	20
150-50-5	Merphos	57	U	57	29
298-00-0	Methyl parathion	20	U	20	9.8
7786-34-7	Mevinphos	77	U	77	39
6923-22-4	Monochrotophos	380	U	380	200
300-76-5	Naled	200	~~U~~ UJ CCL	200	98
298-02-2	Phorate	38	U	38	20
52-85-7	Famphur	77	U	77	39
299-84-3	Ronnel	38	U	38	20
22248-79-9	Stirophos	38	U	38	20
3689-24-5	Sulfotepp	20	U	20	9.8
34643-46-4	Tokuthion	38	U	38	20
327-98-0	Trichloronate	38	U	38	20
297-97-2	Thionazin	38	U	38	20

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	76	42-128	

JC 12/10

1124

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-3

SDG No.: CLJ55796-3

Client Sample ID: MR02-IR69-SS02-10A | Lab Sample ID: 680-55975-6

Matrix: Solid | Lab File ID: oc30036.d

Analysis Method: 8141A | Date Collected: 03/13/2010 12:30

Extraction Method: 3550B | Date Extracted: 03/23/2010 12:32

Sample wt/vol: 30.30(g) | Date Analyzed: 03/31/2010 05:40

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 16.8 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164569 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	39	U	39	20
35400-43-2	Bolstar	39	U	39	20
2921-88-2	Chlorpyrifos	39	U	39	20
56-72-4	Coumaphos	39	U	39	20
298-03-3	Demeton-O	99	U Ø	99	50
126-75-0	Demeton-S	99	~~U~~ Ø WJ BSL	99	50
333-41-5	Diazinon	39	U	39	20
62-73-7	Dichlorvos	80	U	80	40
60-51-5	Dimethoate	80	U	80	40
298-04-4	Disulfoton	80	U	80	40
2104-64-5	EPN	39	U	39	20
13194-48-4	Ethoprop	20	U	20	10
56-38-2	Ethyl Parathion	39	U	39	20
115-90-2	Fensulfothion	200	U	200	100
55-38-9	Fenthion	39	U	39	20
121-75-5	Malathion	39	U	39	20
150-50-5	Merphos	60	U	60	30
298-00-0	Methyl parathion	20	U	20	10
7786-34-7	Mevinphos	80	U	80	40
6923-22-4	Monochrotophos	390	U	390	200
300-76-5	Naled	200	~~U~~ WJ CCL	200	100
298-02-2	Phorate	39	U	39	20
52-85-7	Famphur	80	U	80	40
299-84-3	Ronnel	39	U	39	20
22248-79-9	Stirophos	39	U	39	20
3689-24-5	Sulfotepp	20	U	20	10
34643-46-4	Tokuthion	39	U	39	20
327-98-0	Trichloronate	39	U	39	20
297-97-2	Thionazin	39	U	39	20

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	98	42-128	

JC 7/2/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-3

SDG No.: CLJ55796-3

Client Sample ID: IR69-SB06-06-07-10A MS | Lab Sample ID: 680-55796-42 MS

Matrix: Solid | Lab File ID: oc17085.d

Analysis Method: 8141A | Date Collected: 03/07/2010 11:45

Extraction Method: 3550B | Date Extracted: 03/14/2010 08:30

Sample wt/vol: 15.06(g) | Date Analyzed: 03/18/2010 21:27

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 26.1 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163439 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	118		45	23
35400-43-2	Bolstar	138		45	23
2921-88-2	Chlorpyrifos	135		45	23
56-72-4	Coumaphos	164		45	23
298-03-3	Demeton-O	498	J	110	57
126-75-0	Demeton-S	110	U J	110	57
333-41-5	Diazinon	118		45	23
62-73-7	Dichlorvos	149		90	46
298-04-4	Disulfoton	123		90	46
13194-48-4	Ethoprop	127		23	11
115-90-2	Fensulfothion	230	U J	230	110
55-38-9	Fenthion	136		45	23
150-50-5	Merphos	84.9		67	34
298-00-0	Methyl parathion	144		23	11
7786-34-7	Mevinphos	90	U J	90	46
300-76-5	Naled	230	U J	230	110
298-02-2	Phorate	104		45	23
299-84-3	Ronnel	128		45	23
22248-79-9	Stirophos	120		45	23
34643-46-4	Tokuthion	132		45	23
327-98-0	Trichloronate	113		45	23

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	68	42-128	

JMC 4/27/10

026

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-3

SDG No.: CLJ55796-3

Client Sample ID: IR69-SB06-06-07-10A MS | Lab Sample ID: 680-55796-42 MS

Matrix: Solid | Lab File ID: oc17087.d

Analysis Method: 8141A | Date Collected: 03/07/2010 11:45

Extraction Method: 3550B | Date Extracted: 03/14/2010 08:30

Sample wt/vol: 15.06(g) | Date Analyzed: 03/18/2010 22:18

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 26.1 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163439 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
60-51-5	Dimethoate	90	U J	90	46
2104-64-5	EPN	156		45	23
56-38-2	Ethyl Parathion	143		45	23
121-75-5	Malathion	132		45	23
6923-22-4	Monochrotophos	450	U J	450	230
52-85-7	Famphur	143		90	46
3689-24-5	Sulfotepp	129		23	11
297-97-2	Thionazin	133		45	23

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	84	42-128	

JC 7/27/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-3

SDG No.: CLJ55796-3

Client Sample ID: IR69-SB06-06-07-10A MSD | Lab Sample ID: 680-55796-42 MSD

Matrix: Solid | Lab File ID: oc17086.d

Analysis Method: 8141A | Date Collected: 03/07/2010 11:45

Extraction Method: 3550B | Date Extracted: 03/14/2010 08:30

Sample wt/vol: 15.06(g) | Date Analyzed: 03/18/2010 21:53

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 26.1 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163439 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	136		45	23
35400-43-2	Bolstar	120		45	23
2921-88-2	Chlorpyrifos	116		45	23
56-72-4	Coumaphos	124		45	23
298-03-3	Demeton-O	432	J	110	57
126-75-0	Demeton-S	110	U J	110	57
333-41-5	Diazinon	103		45	23
62-73-7	Dichlorvos	139		90	46
298-04-4	Disulfoton	106		90	46
13194-48-4	Ethoprop	110		23	11
115-90-2	Fensulfothion	161	J	230	110
55-38-9	Fenthion	101	M	45	23
150-50-5	Merphos	71.3		67	34
298-00-0	Methyl parathion	129		23	11
7786-34-7	Mevinphos	62.5	J	90	46
300-76-5	Naled	230	U J	230	110
298-02-2	Phorate	88.2		45	23
299-84-3	Ronnel	114		45	23
22248-79-9	Stirophos	114		45	23
34643-46-4	Tokuthion	112		45	23
327-98-0	Trichloronate	122	M	45	23

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	64	42-128	

JAC 13710

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55796-3

SDG No.: CLJ55796-3

Client Sample ID: IR69-SB06-06-07-10A MSD | Lab Sample ID: 680-55796-42 MSD

Matrix: Solid | Lab File ID: oc17088.d

Analysis Method: 8141A | Date Collected: 03/07/2010 11:45

Extraction Method: 3550B | Date Extracted: 03/14/2010 08:30

Sample wt/vol: 15.06(g) | Date Analyzed: 03/18/2010 22:43

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 26.1 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 163439 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
60-51-5	Dimethoate	90	U J	90	46
2104-64-5	EPN	132		45	23
56-38-2	Ethyl Parathion	125		45	23
121-75-5	Malathion	118		45	23
6923-22-4	Monochrotophos	450	U J	450	230
52-85-7	Famphur	123		90	46
3689-24-5	Sulfotepp	116		23	11
297-97-2	Thionazin	121		45	23

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	71	42-128	

gic 7/8/10

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION
CTO-081	374082.FI.FI.69	MCB Camp Lejeune

TESTAMERICA (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
Abbie Yont		

CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
Gwen Buckley	757-671-6292	704-544-4041

CLIENT NAME	CLIENT EMAIL
CH2M HILL	Gwen.Buckley@CH2M.com

CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226

COMPANY CONTRACTING THIS WORK (if applicable):

PAGE 1 OF 2

STANDARD REPORT DELIVERY ○ DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○ DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 3

REQUIRED ANALYSES: Method 8141A: OP Pesticides — None

NUMBER OF CONTAINERS SUBMITTED = 6

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	Method 8141A: OP Pesticides	REMARKS
3/4/2010	15:15	MR02-IR69-SS01-10A	C		X			X	
3/4/2010	15:20	MR02-IR69-SS01D-10A	C		X			X	
3/4/2010	9:15	IR69-SS01-10A	C		X			X	
3/4/2010	9:20	IR69-SS01D-10A	C		X			X	
3/4/2010	10:15	IR69-SS03-10A	C		X			X	
3/4/2010	10:40	IR69-SS04-10A	C		X			X	
3/4/2010	11:20	IR69-SS05-10A	C		X			X	
3/4/2010	11:45	IR69-SS06-10A	C		X			X	
3/7/2010	13:30	IR69-SB01-01-02-10A	C		X			X	
3/7/2010	13:30	IR69-SB01D-01-02-10A	C		X			X	
3/7/2010	16:00	IR69-SB04-06-07-10A	C		X			X	
3/7/2010	9:30	IR69-SB05-06-07-10A	C		X			X	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3/10/10	1400						

RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/12/10	0919	YES ○ NO ○		630-55796	0.8

FCU052:01.02.08:2

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04/05/2010 13:30

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

PROJECT REFERENCE: CTO-081	PROJECT NO.: 374082.FI.FI.69	PROJECT LOCATION: MCB Camp Lejeune
TESTAMERICA (LAB) PROJECT MANAGER: Abbie Yont	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Gwen Buckley	CLIENT PHONE: 757-671-6292	CLIENT FAX: 704-544-4041
CLIENT NAME: CH2M HILL	CLIENT EMAIL: Gwen.Buckley@CH2M.com	
CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226		
COMPANY CONTRACTING THIS WORK (if applicable):		

PAGE 2 OF 2

STANDARD REPORT DELIVERY ○ DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○ DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 3

REQUIRED ANALYSES: None

NUMBER OF CONTAINERS SUBMITTED = 6

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	Method 8141A: OP Pesticides	REMARKS
3/7/2010	11:45	IR69-SB06-06-07-10A	C		X			X	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3/10/10	1400						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/12/10	0919	YES ○ NO ○		630-55796	

FCU052:01.02.08:2

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION
CTO-081	374082.FI.FI.69	MCB Camp Lejeune

TESTAMERICA (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
Abbie Yont		

CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
Gwen Buckley	757-671-6292	704-544-4041

CLIENT NAME	CLIENT EMAIL
CH2M HILL	Gwen.Buckley@CH2M.com

CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226

COMPANY CONTRACTING THIS WORK (if applicable):

PAGE 1 OF 1

STANDARD REPORT DELIVERY ○

DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○

DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

REQUIRED ANALYSES: OP Pesticides - Method 8141A - GW: 2 1-L Ambers - Soil:1-8 or 4-oz. Jar

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
3/14/10	1500	IR69-SD01-10A	C		X			~~X~~ 1	
3/14/10	1505	IR69-SD01D-10A	C		X			~~X~~ 1	
3/14/10	1635	IR69-GW04-10A	G	X				2	
3/14/10	1635	IR69-GW04-10A-MS	G	X				2	MATRIX SPIKE
3/14/10	1635	IR69-GW04-10A-SD	G	X				2	MATRIX SPIKE DUPLICATE
3/15/10	1715	IR69-EB-031510-GW	G	X				2	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3/17/10	1300						

RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/18/10	0923	YES ○ NO ○		680-55946	

FCU052:01.02.08:2

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

PROJECT REFERENCE: CTO-081	PROJECT NO.: 374082.FI.FI.69	PROJECT LOCATION: MCB Camp Lejeune
TESTAMERICA (LAB) PROJECT MANAGER: Abbie Yont	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Gwen Buckley	CLIENT PHONE: 757-671-6292	CLIENT FAX: 704-544-4041
CLIENT NAME: CH2M HILL	CLIENT EMAIL: Gwen.Buckley@CH2M.com	
CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226		
COMPANY CONTRACTING THIS WORK (if applicable):		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ○
DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

REQUIRED ANALYSES: OP Pesticides - Method 8141A - GW: 2 1-L Ambers - Soil:1-8 or 4-oz. Jar

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
3/13/10	1400	MRØ2-IR69-SSØ4-1ØA	C		X			1	
3/13/10	1430	MRØ2-IR69-SSØ6-1ØA	C		X			1	
3/13/10	1445	MRØ2-IR69-SSØ5-1ØA	C		X			1	
3/13/10	1045	IR69-EB-031310-SS	G	X				2	
3/13/10	1000	IR69-EB-031310-GW	G	X				2	
3/13/10	1230	MRØ2-IR69-SSØ2-1ØA	C		X			1	
3/14/10	0900	IR69-EB-031410-GW	G	X				2	
3/14/10	1100	IR69-EB-031410-SD	G	X				2	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3/17/10	1400						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/18/10	0423	YES ○ NO ○		680-55975	2.6°C

FCU052:01.02.08:2

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04/05/2010
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Holding Times

Sampling Date: 3/4-3/14
Received Date: 3/12, 3/18 at TestAmerica Cooler temps were within acceptable range.
Extraction Date: 3/14, 3/23
Analysis Dates: 3/18, 3/31

All extraction and analysis holding times were met for the samples in this SDG. Sample receipt data is in order. Cooler temperature was within acceptable range. This analysis was sub-contracted to Test America Savannah by Compuchem.

Calibrations

Initial calibrations were performed according to the method with a eight-point curve for the organophosphorus pesticide target compounds. Calibration factors were calculated or LR curves were plotted. %RSDs or correlation coefficients were within QC limits. Continuing calibration standards were analyzed per the SW-846 methods requested. All %D criteria were not met. Please see the report for any necessary qualifications. Column resolution was acceptable. Retention time windows were provided, retention times were stable throughout the analytical sequence. All required instrument blanks were analyzed. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Any compound detected in the sample, and the associated blank, must be qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than five (5) times the blank concentration.
- Sample weight, volume or dilution factor must be taken into consideration when applying the 5X criteria.
- Apply the same data validation guidelines to any associated rinse and field blanks and all associated samples.
- Qualification/Action codes:
-

No Action -	The sample result is greater than the RL and greater than five times (5X) the blank value.
U at RL-	The sample result is less than the RL when the blank contamination level is less than the RL.

No contamination that resulted in qualification of the data was noted in the associated method or instrument blanks or the submitted field QC blanks.

SURROGATE RECOVERIES

Surrogate recoveries were acceptable.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

The associated MS/MSD pair of sample IR69-SB06-06-07-10A exhibited 0% in both the MS and the MSD for the compounds demeton-s, dimethoate, monochrotophos and naled. The compounds were rejected in the native sample of the spike pair (IR69-SB06-06-07-10A) with a caution that the reported results should be considered significantly biased low. No other qualifications were required due to spike results.

LABORATORY CONTROL SAMPLES

The submitted LCS's submitted exhibited acceptable recoveries with the exception of demeton-s and demeton-o. All samples were flagged as estimated for demeton-s. Demeton-o did not required qualifications because there were no positive results.

FIELD DUPLICATE SAMPLE SUMMARY

Sample ID: **Duplicate ID:**

Compound	Sample Conc.	Duplicate Conc.	RPD
			#DIV/0!

Comments: There were 4 field duplicate pairs submitted – no positive results were reported in any of the field samples.

SAMPLE RESULT VERIFICATION

Raw data was verified. Calculations were verified.

Reviewer JACleveland **Date:** 7/27/10

Test America Savannah
SDG 680-55796-3
OPP

Job Narrative
680-55796-3

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC Semi VOA
Method(s) 8141A: The laboratory control sample (LCS) for batch 680-162999 exceeded control limits for the following analytes: Demeton-S. The vendor purchased standard for Demeton-O and Demeton-S is expressed as a the value of the total concentration of the two analytes and not as the concentration of the individual analytes. The ratio of the LCS standard differs from the rations present in the calibration standards. The % recovery of the total od Demeton-O and Demeton-S was within limits.

Method(s) 8141A: The capping continuing calibration verification (CCV) analyzed after the analysis of the samples did not meet control limits for Naled. Sample matrix is suspected to have contributed to this failure.

Method(s) 8141A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 680-162999 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method(s) 8141A: The laboratory control sample (LCS) for batch 680-163722 exceeded control limits for the following analytes: Demeton-S. The vendor purchased standard for Demeton-O and Demeton-S is expressed as a the value of the total concentration of the two analytes and not as the concentration of the individual analytes. The ratio of the LCS standard differs from the rations present in the calibration standards. The % recovery of the total od Demeton-O and Demeton-S was within limits.

Method(s) 8141A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 680-163722 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method(s) 8141A: The capping continuing calibration verification (CCV) analyzed on 03/31/2010 after sample analysis did not meet control limits for dichlorvos and Naled. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. These samples had been analyzed on multiple runs in which the capping CCV failedin the same manner after each attempted analysis, therefore sample matrix is suspected to have contributed to these failures.

No other analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 680-55796-3

SDG No.: CLJ55796-3

Lab Sample ID: CCV 680-164578/1 Calibration Date: 03/31/2010 07:44

Instrument ID: SGO Calib Start Date: 03/30/2010 16:25

GC Column: Rtx-OPP 2 ID: 0.32(mm) Calib End Date: 03/30/2010 19:19

Lab File ID: oc30041.d Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorvos	Ave	12254704	15788360		100	0.500	28.8*	15.0
Mevinphos	QuaF	6159674	6753058		100	0.500	0.6	
Demeton-O	Ave	2761671	3211932		130	0.500	16.3*	15.0
Ethoprop	Ave	10622082	12060150		26.0	0.500	13.5	15.0
Naled	QuaF	1512157	704412		260	0.500	-59.2	
Phorate	Ave	9421280	11171850		51.0	0.500	18.6*	15.0
Demeton-S	QuaF	5716453	6461026		130	0.500	3.9	
Diazinon	Ave	8956538	10491140		51.0	0.500	17.1*	15.0
Disulfoton	Ave	9123995	10935560		100	0.500	19.9*	15.0
Methyl parathion	QuaF	7130674	9081804		26.0	0.500	18.9	
Ronnel	Ave	9828792	11199680		51.0	0.500	13.9	15.0
Chlorpyrifos	Ave	7547324	8819906		51.0	0.500	16.9*	15.0
Trichloronate	Ave	6479840	7090098		51.0	0.500	9.4	15.0
Fenthion	Ave	11091424	12790380		51.0	0.500	15.3*	15.0
Stirophos	Ave	6413213	7581704		51.0	0.500	18.2*	15.0
Tokuthion	Ave	6740896	7673378		51.0	0.500	13.8	15.0
Fensulfothion	QuaF	4250882	4145958		260	0.500	-5.0	
Bolstar	Ave	7351198	8515140		51.0	0.500	15.8*	15.0
Azinphos-methyl	Ave	4892985	5414426		51.0	0.500	10.7	15.0
Coumaphos	Ave	5097580	5343044		51.0	0.500	4.8	15.0
Merphos	Ave	7210787	8544268		75.0	0.500	18.5*	15.0

J/UJ

Note - all but Naled are due to an increase in response - no + in samples so no quals.
Naled - decrease in response. Flag as estimated J/UJ in assoc samples

1R69-SD01-10A
SD01A-10A
MR02-1R69-SS04-10A
SS06
SS05
SS02

Initial Calibration Date: 3/17/2010

RRF and %RSD Calculations:

Compound Name: parathion in level 1
Lab Value: 6410200.0000

Area of Compound	320510
Conc. of Compound	0.05
Calculated RRF	6410200.0000

Compound Name: parathion
Lab Value: 8.3

RRF of STD 1	6410200.0000
RRF of STD 2	5814370.0000
RRF of STD 3	6919304.0000
RRF of STD 4	6743898.0000
RRF of STD 3	7449757.0000
RRF of STD 4	7146476.0000
RRF of STD 5	7299523.0000
RRF of STD 6	
Calculated % RSD	8.30

Continuing Calibration File ID: oc17049

RRF and %D Calculations:

Compound Name: ronnel
Lab Value: 8471798.00000

Area of compound	4235899
Conc. Of compound	0.5
Calculated CF	8471798.00000

Compound Name: ronnel
Lab Value: 3.5

Avg. CF from ICAL	8183126.00000
CF of CCV	8471798.00000
Calculated % D	-3.5

Initial Calibration Date: 3/30/2010

RRF and %RSD Calculations:

Compound Name: dichlorvos in level 1
Lab Value: 11824380.0000

Area of Compound	
Conc. of Compound	0.05
Calculated RRF	0.0000

Compound Name: dichlorvos
Lab Value: 2.6

RRF of STD 1	11824380.0000
RRF of STD 2	12357880.0000
RRF of STD 3	11992304.0000
RRF of STD 4	11996362.0000
RRF of STD 3	12149720.0000
RRF of STD 4	12404053.0000
RRF of STD 5	12679139.0000
RRF of STD 6	12633798.0000
Calculated % RSD	2.56

Continuing Calibration File ID: oc30041.d

RRF and %D Calculations:

Compound Name: fenthion
Lab Value: 12790380.00000

Area of compound	6395192
Conc. Of compound	0.5
Calculated CF	12790384.00000

Compound Name: fenthion
Lab Value: 15.3

Avg. CF from ICAL	11091424.00000
CF of CCV	12790380.00000
Calculated % D	-15.3

SAMPLE CALCULATION

Sample ID: IR69-SB06-06-07-10A MSD
Standard ID: ICAL curve3/17/10
Compound: ronnel
Concnetration: 114 ug/Kg

	Water (ug/L)	Soil (ug/Kg)
Area of Compound		2072986
Calibration Factor of Compound		8183128
Dilution Factor		1
Weight/Volume of Sample		15.06
Final Volume extract		5000
% Moisture	NA	0.739
conversion factor	1	1
Concentration	#DIV/0!	113.81

Client: Compuchem Environmental Corporation

Job Number: 680-55796-3
Sdg Number: CLJ55796-3

Lab Control Sample - Batch: 680-162999

Method: 8141A
Preparation: 3550B

Lab Sample ID: LCS 680-162999/15-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/18/2010 1333
Date Prepared: 03/14/2010 0830

Analysis Batch: 680-163438
Prep Batch: 680-162999
Units: ug/Kg

Instrument ID: SGO
Lab File ID: oc17065.d
Initial Weight/Volume: 15.00 g
Final Weight/Volume: 5 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Azinphos-methyl	133	141	105	30 - 130	
Bolstar	133	142	106	30 - 130	
Chlorpyrifos	133	134	100	30 - 130	
Coumaphos	133	142	107	30 - 130	
Demeton-O	133	476	357	30 - 130	Q NQ
Demeton-S	133	42	24	30 - 130	UQ J/UJ
Diazinon	133	122	91	30 - 146	
Dichlorvos	133	133	100	30 - 130	Flag in all ESSEC
Disulfoton	133	128	96	30 - 130	
Ethoprop	133	129	97	30 - 130	
Fensulfothion	133	150	112	30 - 130	J
Fenthion	133	122	92	30 - 130	
Merphos	133	133	99	30 - 130	
Methyl parathion	133	119	90	18 - 124	
Mevinphos	133	96.8	73	30 - 130	
Naled	133	129	97	30 - 130	J
Phorate	133	101	76	30 - 130	
Ronnel	133	126	95	28 - 141	
Stirophos	133	124	93	30 - 130	
Tokuthion	133	124	93	30 - 130	
Trichloronate	133	119	89	30 - 130	

Lab Control Sample - Batch: 680-162999

Method: 8141A
Preparation: 3550B

Lab Sample ID: LCS 680-162999/18-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/18/2010 1358
Date Prepared: 03/14/2010 0830

Analysis Batch: 680-163438
Prep Batch: 680-162999
Units: ug/Kg

Instrument ID: SGO
Lab File ID: oc17066.d
Initial Weight/Volume: 15.00 g
Final Weight/Volume: 5 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Dimethoate	133	126	94	30 - 130	
EPN	133	123	93	30 - 130	
Ethyl Parathion	133	128	96	35 - 134	
Malathion	133	121	91	30 - 130	
Monochrotophos	1330	715	54	30 - 130	
Famphur	133	121	91	30 - 130	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Compuchem Environmental Corporation

Job Number: 680-55796-3
Sdg Number: CLJ55796-3

Lab Control Sample - Batch: 680-162999

Method: 8141A
Preparation: 3550B

Lab Sample ID:	LCS 680-162999/18-A	Analysis Batch:	680-163438	Instrument ID:	SGO
Client Matrix:	Solid	Prep Batch:	680-162999	Lab File ID:	oc17066.d
Dilution:	1.0	Units:	ug/Kg	Initial Weight/Volume:	15.00 g
Date Analyzed:	03/18/2010 1358			Final Weight/Volume:	5 mL
Date Prepared:	03/14/2010 0830			Injection Volume:	2 uL
				Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sulfotepp	133	118	88	30 - 130	
Thionazin	133	116	87	31 - 118	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Compuchem Environmental Corporation

Job Number: 680-55796-3
Sdg Number: CLJ55796-3

Lab Control Sample - Batch: 680-163722

Method: 8141A
Preparation: 3550B

Lab Sample ID: LCS 680-163722/15-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/31/2010 0131
Date Prepared: 03/23/2010 1232

Analysis Batch: 680-164569
Prep Batch: 680-163722
Units: ug/Kg

Instrument ID: SGO
Lab File ID: oc30026.d
Initial Weight/Volume: 30.00 g
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Dimethoate	133	102	76	30 - 130	
EPN	133	130	98	30 - 130	
Ethyl Parathion	133	124	93	35 - 134	
Malathion	133	118	88	30 - 130	
Monochrotophos	1330	693	52	30 - 130	
Famphur	133	124	93	30 - 130	
Sulfotepp	133	115	86	30 - 130	
Thionazin	133	106	80	31 - 118	

Lab Control Sample - Batch: 680-163722

Method: 8141A
Preparation: 3550B

Lab Sample ID: LCS 680-163722/12-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/31/2010 0156
Date Prepared: 03/23/2010 1232

Analysis Batch: 680-164569
Prep Batch: 680-163722
Units: ug/Kg

Instrument ID: SGO
Lab File ID: oc30027.d
Initial Weight/Volume: 30.00 g
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Azinphos-methyl	133	134	100	30 - 130	
Bolstar	133	131	98	30 - 130	
Chlorpyrifos	133	129	96	30 - 130	
Coumaphos	133	127	95	30 - 130	
Demeton-O	133	375	281	30 - 130	Q NQ
Demeton-S	133	42	24	30 - 130	U Q J/UJ
Diazinon	133	119	90	30 - 146	M
Dichlorvos	133	123	92	30 - 130	
Disulfoton	133	117	88	30 - 130	Flag in all assoc
Ethoprop	133	122	92	30 - 130	
Fensulfothion	133	165	124	30 - 130	J
Fenthion	133	118	88	30 - 130	
Merphos	133	62.0	47	30 - 130	
Methyl parathion	133	132	99	18 - 124	
Mevinphos	133	109	82	30 - 130	
Naled	133	152	114	30 - 130	J
Phorate	133	94.8	71	30 - 130	
Ronnel	133	122	92	28 - 141	
Stirophos	133	125	94	30 - 130	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Compuchem Environmental Corporation

Job Number: 680-55796-3
Sdg Number: CLJ55796-3

Lab Control Sample - Batch: 680-163722

Method: 8141A
Preparation: 3550B

Lab Sample ID: LCS 680-163722/12-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/31/2010 0156
Date Prepared: 03/23/2010 1232

Analysis Batch: 680-164569
Prep Batch: 680-163722
Units: ug/Kg

Instrument ID: SGO
Lab File ID: oc30027.d
Initial Weight/Volume: 30.00 g
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Tokuthion	133	126	94	30 - 130	M
Trichloronate	133	120	90	30 - 130	

Calculations are performed before rounding to avoid round-off errors in calculated results.

1R69-SB06-06-07-10A MS/MSD

Quality Control Results

Client: Compuchem Environmental Corporation

Job Number: 680-55796-3
Sdg Number: CLJ55796-3

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-162999

Method: 8141A
Preparation: 3550B

MS Lab Sample ID:	680-55796-42	Analysis Batch: 680-163439	Instrument ID: SGO
Client Matrix:	Solid	Prep Batch: 680-162999	Lab File ID: oc17085.d
Dilution:	1.0		Initial Weight/Volume: 15.06 g
Date Analyzed:	03/18/2010 2127		Final Weight/Volume: 5 mL
Date Prepared:	03/14/2010 0830		Injection Volume: 2 uL
			Column ID: PRIMARY

MSD Lab Sample ID:	680-55796-42	Analysis Batch: 680-163439	Instrument ID: SGO
Client Matrix:	Solid	Prep Batch: 680-162999	Lab File ID: oc17086.d
Dilution:	1.0		Initial Weight/Volume: 15.06 g
Date Analyzed:	03/18/2010 2153		Final Weight/Volume: 5 mL
Date Prepared:	03/14/2010 0830		Injection Volume: 2 uL
			Column ID: PRIMARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual	
Azinphos-methyl	65	75	30 - 130	14	50			
Bolstar	77	67	30 - 130	13	50			
Chlorpyrifos	75	65	30 - 130	14	50			
Coumaphos	91	69	30 - 130	28	50			
Demeton-O	277	240	30 - 130	14	50	J	J	NQ
Demeton-S	0	0	30 - 130	NC	50	U J	U J	J/R
Diazinon	65	57	30 - 146	13	50			
Dichlorvos	83	77	30 - 130	7	50			
Disulfoton	69	59	30 - 130	15	50			
Ethoprop	71	61	30 - 130	15	50			
Fensulfothion	0	90	30 - 130	NC	50	U J	J	NQ - MSD OK
Fenthion	76	56	30 - 130	30	50		M	
Merphos	47	40	30 - 130	17	50			
Methyl parathion	80	72	18 - 124	11	50			
Mevinphos	0	35	30 - 130	NC	50	U J	J	NQ MSD OK
Naled	0	0	30 - 130	NC	50	U J	U J	J/R
Phorate	58	49	30 - 130	16	50			
Ronnel	71	63	28 - 141	11	50			
Stirophos	67	63	30 - 130	5	50			
Tokuthion	73	62	30 - 130	17	50			
Trichloronate	63	68	30 - 130	7	50		M	

Flag in native sample only

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Compuchem Environmental Corporation

Job Number: 680-55796-3
Sdg Number: CLJ55796-3

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-162999

Method: 8141A
Preparation: 3550B

MS Lab Sample ID:	680-55796-42	Analysis Batch: 680-163439	Instrument ID: SGO
Client Matrix:	Solid	Prep Batch: 680-162999	Lab File ID: oc17087.d
Dilution:	1.0		Initial Weight/Volume: 15.06 g
Date Analyzed:	03/18/2010 2218		Final Weight/Volume: 5 mL
Date Prepared:	03/14/2010 0830		Injection Volume: 2 uL
			Column ID: PRIMARY

MSD Lab Sample ID:	680-55796-42	Analysis Batch: 680-163439	Instrument ID: SGO
Client Matrix:	Solid	Prep Batch: 680-162999	Lab File ID. oc17088.d
Dilution:	1.0		Initial Weight/Volume: 15.06 g
Date Analyzed:	03/18/2010 2243		Final Weight/Volume: 5 mL
Date Prepared:	03/14/2010 0830		Injection Volume: 2 uL
			Column ID: PRIMARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual	
Dimethoate	0	0	30 - 130	NC	50	U J	U J	JTR
EPN	87	74	30 - 130	16	50			
Ethyl Parathion	79	69	35 - 134	13	50			
Malathion	73	65	30 - 130	11	50			
Monochrotophos	0	0	30 - 130	NC	50	U J	U J	JTR
Famphur	79	68	30 - 130	15	50			
Sulfotepp	72	65	30 - 130	10	50			
Thionazin	74	67	31 - 118	10	50			

Flag in native sample only

Calculations are performed before rounding to avoid round-off errors in calculated results.

DataQual

Environmental Services, LLC

CH2M HILL
5700 Cleveland Street
Suite 101
Virginia Beach, VA 23462

July 27, 2010
TestAmerica-Savannah, SDG# CLJ55946
MCB Camp Lejeune, CTO-81

Dear Ms. Buckley,

The following Data Validation report is provided as requested for the parameters noted in the table below for SDG # CLJ55946. The data validation was performed in accordance with the SW846 Method 8141A for organophosphorous pesticides (OPP) and good professional judgment. Also used in the validation of these samples were The National Functional Guidelines for Organic Data Review (June, 2008), as applicable. All areas of concern are discussed in the body of the report and a summary of data qualifications is provided.

Sample ID	Lab ID	Matrix	OPP
IR69-GW05IW-10A	680-55946-8	water	X
IR69-GW15BCH-10A	680-55946-9	water	X
IR69-GW04-10A	680-55946-12	water	X
IR69-EB01-031510-GW	680-55946-13	water	X
IR69-GW04-10AMS	680-55946-12MS	water	X
IR69-GW04-10AMSD	680-55946-12MSD	water	X

The following quality control samples were provided with this SDG: sample IR69-EB01-031510-GW-rinse blank.

The samples were evaluated based on the following criteria:

- Data Completeness *
- Technical Holding Times *
- GC Performance *
- Initial/Continuing Calibrations *
- Blanks *
- Surrogates *
- Laboratory Control Samples
- Matrix Spike Recoveries
- Field Duplicates *
- Identification/Quantitation *
- Reporting Limits *

* - indicates that no qualifications were required based on this criteria

5830 Amberway Drive • St. Louis, MO 63128 • 314-330-1327 • Fax 314-849-6264

Overall Evaluation of Data/Potential Usability Issues

A summary of qualifications applied to the sample results are noted below for the fractions validated. Specific details regarding qualification of the data are addressed in the Specific Evaluation section of this narrative. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte the validator has chosen the qualifier that best indicates possible bias in the results and flagged the data accordingly. However, information regarding all quality control issues is provided in the body of the report and on the qualification summary page. Please note that when a compound or analyte is flagged due to blank contamination the BL qualifier code takes precedence over all other qualifier codes except a code that explains rejected data.

Organophosphorous Pesticides (OPP)

The laboratory control samples associated with samples exhibited non-compliant recoveries for one compound that resulted in the qualification of results.

The MS/MSD pair of sample IR69-GW04-10A exhibited non-compliant %Rs that resulted in the qualification of some sample results.

Specific Evaluation of Data

Data Completeness

This SDG was received complete and intact. Resubmissions were not required.

Technical Holding Times

According to chain of custody records, sampling was performed on 3/14-15/10 and samples were received at the laboratory on 3/18/10. All sample preparation and analysis was performed within method holding time requirements.

Laboratory Control Samples

OPP

The laboratory control sample associated with the samples in this SDG exhibited a low recovery for the compound demeton-s (17%). The compound was qualified as estimated J/UJ in all field and QC blank samples with a qualifier code of BSL.

Matrix Spike Recoveries

OPP

The MS/MSD of sample IR69-GW04-10A exhibited 0% recoveries for the compound demeton-s. This compound was rejected R in the native sample only with a qualifier code of MSL.

A summary of qualifications required is provided on the following page. Please do not hesitate to contact DataQual ES with any questions regarding this validation report.

Sincerely,

Jacqueline Cleveland

Jacqueline Cleveland
Vice-President

Summary of Data Qualifications

Organophosphorous Pesticides

Sample ID	Compound	Results	Q-Flag	Q Code
all samples	demeton-s*	+/-	J/UJ	BSL
IR69-GW04-10A	demeton-s	+/-	J/R	MSL

*final qualifier code for sample IR69-GW04-10A was MSL

Glossary of Qualification Flags and Abbreviations

Qualification Flags (Q-Flags)

U	not detected above the reported sample quantitation limit
J	estimated value
UJ	reported quantitation limit is qualified as estimated
R	result is rejected; the presence or absence of the analyte cannot be verified
D	result value is based on dilution analysis result
NJ	analyte has been tentatively identified, estimated value
L	analyte present, biased low
UL	not detected, quantitation limit is probably higher
K	analyte present, biased high

Inorganic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 10X the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL and the result is raised to the RL and flagged U.
R or J+	The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator. (see NFG, Rev. date 10/04, p. 17 for extracted blanks (PB))

Organic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 5X (10X for common laboratory contaminants) the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is raised to the RL and flagged U.
U	The sample result for the blank contaminant is greater than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is flagged U at the reported value.

General Abbreviations

RL / MDL	reporting limit/method detection limit
CRQL	contract required quantitation limit
Q Code	qualifier code
+	positive result
-	non-detect result

QUALIFIER CODE REFERENCE

Qualifier	Description
TN	Tune
BSL	Blank Spike/LCS - High Recovery
BSH	Blank Spike/LCS - Low Recovery
BD	Blank Spike/Blank Spike Duplicate (LCS/LCSD) Precision
BRL	Below Reporting Limit
ISL	Internal Standard - Low Recovery
ISH	Internal Standard - High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate - Low Recovery
MSH	Matrix Spike and/or Matrix Spike Duplicate - High Recovery
MI	Matrix interference obscuring the raw data
MDP	Matrix Spike/Matrix Spike Duplicate Precision
2S	Second Source - Bad reproducibility between tandem detectors
SSL	Spiked Surrogate - Low Recovery
SSH	Spiked Surrogate - High Recovery
SD	Serial Dilution Reproducibility
ICL	Initial Calibration - Low Relative Response Factors (RRF)
ICH	Initial Calibration - High Relative Response Factors (RRF)
ICB	Initial Calibration - Bad Linearity or Curve Function
CCL	Continuing Calibration - Low Recovery or %Difference
CCH	Continuing Calibration - High Recovery or %Difference
LD	Lab Duplicate Reproducibility
HT	Holding Time
PD	Pesticide Degradation
2C	Second Column - Poor Dual Column Reproducibility
LR	Concentration Exceeds Linear Range
BL	Blank Contamination (MBL, EBL, FBL, TBL)
RE	Redundant Result - due to Re-analysis or Re-extraction
DL	Redundant Result - due to Dilution
FD	Field Duplicate
OT	Other - explained in data validation report
%SOL	High moisture content

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 680-55946-1
SDG No.: CLJ55946
Client Sample ID: IR69-GW05IW-10A
Lab Sample ID: 680-55946-8
Matrix: Water
Lab File ID: oc23044.d
Analysis Method: 8141A
Date Collected: 03/14/2010 12:30
Extraction Method: 3520C
Date Extracted: 03/19/2010 12:42
Sample wt/vol: 1060(mL)
Date Analyzed: 03/24/2010 19:16
Con. Extract Vol.: 10(mL)
Dilution Factor: 1
Injection Volume: 2(uL)
GC Column: Rtx-OPP 2 ID: 0.32(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 164209
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	2.4	U Ø	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ Ø UJ BSL	2.4	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monochrotophos	9.4	U	9.4	4.7
300-76-5	Naled	4.7	U	4.7	2.4
56-38-2	Parathion	0.94	U	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
52-85-7	Famphur	1.9	U	1.9	0.94
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U	0.47	0.24
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47
297-97-2	Thionazin	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	107	26-134	

QC 72710

FORM I 8141A

007

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55946-1

SDG No.: CLJ55946

Client Sample ID: IR69-GW15BCH-10A | Lab Sample ID: 680-55946-9

Matrix: Water | Lab File ID: oc23045.d

Analysis Method: 8141A | Date Collected: 03/14/2010 12:45

Extraction Method: 3520C | Date Extracted: 03/19/2010 12:42

Sample wt/vol: 1050(mL) | Date Analyzed: 03/24/2010 19:40

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164209 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ ~~Q~~ UJ BSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U	9.5	4.8
300-76-5	Naled	4.8	U	4.8	2.4
56-38-2	Parathion	0.95	U	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
52-85-7	Famphur	1.9	U	1.9	0.95
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U	0.48	0.24
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48
297-97-2	Thionazin	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	114	26-134	

JLC 72710

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 680-55946-1
SDG No.: CLJ55946
Client Sample ID: IR69-GW04-10A
Lab Sample ID: 680-55946-12
Matrix: Water
Lab File ID: oc23046.d
Analysis Method: 8141A
Date Collected: 03/14/2010 16:35
Extraction Method: 3520C
Date Extracted: 03/19/2010 12:42
Sample wt/vol: 500(mL)
Date Analyzed: 03/24/2010 20:05
Con. Extract Vol.: 5(mL)
Dilution Factor: 1
Injection Volume: 2(uL)
GC Column: Rtx-OPP 2 ID: 0.32(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 164209
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	1.0	U	1.0	0.50
35400-43-2	Bolstar	1.0	U	1.0	0.50
2921-88-2	Chlorpyrifos	1.0	U	1.0	0.50
56-72-4	Coumaphos	1.0	U ~~J~~	1.0	0.50
298-03-3	Demeton-O	2.5	U ~~J~~ J	2.5	1.3
126-75-0	Demeton-S	2.5	~~U J~~ R MSL	2.5	1.3
333-41-5	Diazinon	1.0	U	1.0	0.50
62-73-7	Dichlorvos	2.0	U	2.0	1.0
60-51-5	Dimethoate	2.0	U	2.0	1.0
298-04-4	Disulfoton	2.0	U	2.0	1.0
2104-64-5	EPN	1.0	U	1.0	0.50
13194-48-4	Ethoprop	0.50	U	0.50	0.25
115-90-2	Fensulfothion	5.0	U J	5.0	2.5
55-38-9	Fenthion	1.0	U	1.0	0.50
121-75-5	Malathion	1.0	U	1.0	0.50
150-50-5	Merphos	1.5	U	1.5	0.75
298-00-0	Methyl parathion	0.50	U ~~J~~	0.50	0.25
7786-34-7	Mevinphos	2.0	U	2.0	1.0
6923-22-4	Monochrotophos	10	U	10	5.0
300-76-5	Naled	5.0	U J	5.0	2.5
56-38-2	Parathion	1.0	U	1.0	0.50
298-02-2	Phorate	1.0	U	1.0	0.50
52-85-7	Famphur	2.0	U	2.0	1.0
299-84-3	Ronnel	1.0	U	1.0	0.50
22248-79-9	Stirophos	1.0	U	1.0	0.50
3689-24-5	Sulfotepp	0.50	U	0.50	0.25
34643-46-4	Tokuthion	1.0	U	1.0	0.50
327-98-0	Trichloronate	1.0	U	1.0	0.50
297-97-2	Thionazin	1.0	U	1.0	0.50

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	105	26-134	

FORM I 8141A

JBC 72710

06/15/2010

009

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 680-55946-1
SDG No.: CLJ55946
Client Sample ID: IR69-EB01-031510-GW
Lab Sample ID: 680-55946-13
Matrix: Water
Lab File ID: oc23056.d
Analysis Method: 8141A
Date Collected: 03/15/2010 17:15
Extraction Method: 3520C
Date Extracted: 03/19/2010 12:42
Sample wt/vol: 1060(mL)
Date Analyzed: 03/25/2010 00:13
Con. Extract Vol.: 10(mL)
Dilution Factor: 1
Injection Volume: 2(uL)
GC Column: Rtx-OPP 2 ID: 0.32(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 164210
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ ~~Q~~ UJ BSL	2.4	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monochrotophos	9.4	U	9.4	4.7
300-76-5	Naled	4.7	U	4.7	2.4
56-38-2	Parathion	0.94	U	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
52-85-7	Famphur	1.9	U	1.9	0.94
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U	0.47	0.24
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47
297-97-2	Thionazin	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	101	26-134	

JC 7/27/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55946-1

SDG No.: CLJ55946

Client Sample ID: IR69-GW04-10A MS | Lab Sample ID: 680-55946-12 MS

Matrix: Water | Lab File ID: oc29055.d

Analysis Method: 8141A | Date Collected: 03/14/2010 16:35

Extraction Method: 3520C | Date Extracted: 03/19/2010 12:42

Sample wt/vol: 500(mL) | Date Analyzed: 03/30/2010 12:18

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164554 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	5.55		1.0	0.50
35400-43-2	Bolstar	5.02		1.0	0.50
2921-88-2	Chlorpyrifos	5.12		1.0	0.50
56-72-4	Coumaphos	4.39	~~M~~	1.0	0.50
298-03-3	Demeton-O	10.2	~~J~~	2.5	1.3
126-75-0	Demeton-S	2.5	U ~~J~~	2.5	1.3
333-41-5	Diazinon	4.56		1.0	0.50
62-73-7	Dichlorvos	5.70	~~J~~	2.0	1.0
298-04-4	Disulfoton	4.16		2.0	1.0
13194-48-4	Ethoprop	5.07		0.50	0.25
115-90-2	Fensulfothion	8.22	~~J~~	5.0	2.5
55-38-9	Fenthion	4.17		1.0	0.50
150-50-5	Merphos	2.40		1.5	0.75
298-00-0	Methyl parathion	6.49	~~J~~	0.50	0.25
7786-34-7	Mevinphos	5.01		2.0	1.0
300-76-5	Naled	5.82	~~J~~	5.0	2.5
298-02-2	Phorate	3.47		1.0	0.50
299-84-3	Ronnel	4.53		1.0	0.50
22248-79-9	Stirophos	5.64	~~J~~	1.0	0.50
34643-46-4	Tokuthion	5.56	~~J~~	1.0	0.50
327-98-0	Trichloronate	5.25		1.0	0.50

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	128	26-134	

JC 12/7/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-55946-1

SDG No.: CLJ55946

Client Sample ID: IR69-GW04-10A MS | Lab Sample ID: 680-55946-12 MS

Matrix: Water | Lab File ID: oc23049.d

Analysis Method: 8141A | Date Collected: 03/14/2010 16:35

Extraction Method: 3520C | Date Extracted: 03/19/2010 12:42

Sample wt/vol: 500(mL) | Date Analyzed: 03/24/2010 21:19

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164209 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
60-51-5	Dimethoate	3.69		2.0	1.0
2104-64-5	EPN	4.18		1.0	0.50
121-75-5	Malathion	4.11		1.0	0.50
6923-22-4	Monochrotophos	22.1		10	5.0
56-38-2	Parathion	4.34		1.0	0.50
52-85-7	Famphur	4.25		2.0	1.0
3689-24-5	Sulfotepp	4.11		0.50	0.25
297-97-2	Thionazin	3.90		1.0	0.50

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	108	26-134	

JAC 7/27/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 680-55946-1
SDG No.: CLJ55946
Client Sample ID: IR69-GW04-10A MSD
Lab Sample ID: 680-55946-12 MSD
Matrix: Water
Lab File ID: oc23048.d
Analysis Method: 8141A
Date Collected: 03/14/2010 16:35
Extraction Method: 3520C
Date Extracted: 03/19/2010 12:42
Sample wt/vol: 500(mL)
Date Analyzed: 03/24/2010 20:54
Con. Extract Vol.: 5(mL)
Dilution Factor: 1
Injection Volume: 2(uL)
GC Column: Rtx-OPP 2 ID: 0.32(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 164209
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	5.38		1.0	0.50
35400-43-2	Bolstar	4.39		1.0	0.50
2921-88-2	Chlorpyrifos	4.19		1.0	0.50
56-72-4	Coumaphos	5.45	~~J~~	1.0	0.50
298-03-3	Demeton-O	9.45	~~J~~	2.5	1.3
126-75-0	Demeton-S	2.5	U ~~M~~ ~~J~~	2.5	1.3
333-41-5	Diazinon	3.80		1.0	0.50
62-73-7	Dichlorvos	4.24		2.0	1.0
298-04-4	Disulfoton	3.53		2.0	1.0
13194-48-4	Ethoprop	4.07		0.50	0.25
115-90-2	Fensulfothion	7.49	~~J~~	5.0	2.5
55-38-9	Fenthion	4.15		1.0	0.50
150-50-5	Merphos	2.32		1.5	0.75
298-00-0	Methyl parathion	3.88	~~J~~	0.50	0.25
7786-34-7	Mevinphos	4.00		2.0	1.0
300-76-5	Naled	5.57	~~J~~	5.0	2.5
298-02-2	Phorate	3.02		1.0	0.50
299-84-3	Ronnel	3.98		1.0	0.50
22248-79-9	Stirophos	4.96		1.0	0.50
34643-46-4	Tokuthion	4.74		1.0	0.50
327-98-0	Trichloronate	3.70		1.0	0.50

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	113	26-134	

JC 7/29/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah
Job No.: 680-55946-1
SDG No.: CLJ55946
Client Sample ID: IR69-GW04-10A MSD
Lab Sample ID: 680-55946-12 MSD
Matrix: Water
Lab File ID: oc23050.d
Analysis Method: 8141A
Date Collected: 03/14/2010 16:35
Extraction Method: 3520C
Date Extracted: 03/19/2010 12:42
Sample wt/vol: 500(mL)
Date Analyzed: 03/24/2010 21:44
Con. Extract Vol.: 5(mL)
Dilution Factor: 1
Injection Volume: 2(uL)
GC Column: Rtx-OPP 2 ID: 0.32(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 164209
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
60-51-5	Dimethoate	3.15		2.0	1.0
2104-64-5	EPN	3.98		1.0	0.50
121-75-5	Malathion	3.81		1.0	0.50
6923-22-4	Monochrotophos	19.0		10	5.0
56-38-2	Parathion	3.88		1.0	0.50
52-85-7	Famphur	4.01		2.0	1.0
3689-24-5	Sulfotepp	3.82		0.50	0.25
297-97-2	Thionazin	3.84		1.0	0.50

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	103	26-134	

JPC 12710

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION
CTO-081	374082.FI.FI.69	MCB Camp Lejeune
TESTAMERICA (LAB) PROJECT MANAGER: Abbie Yont	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Gwen Buckley	CLIENT PHONE: 757-671-6292	CLIENT FAX: 704-544-4041
CLIENT NAME: CH2M HILL	CLIENT EMAIL: Gwen.Buckley@CH2M.com	

CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226

COMPANY CONTRACTING THIS WORK (if applicable):

PAGE 1 OF 1

STANDARD REPORT DELIVERY ( )
DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ( )
DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

REQUIRED ANALYSES: OP Pesticides - Method 8141A - GW: 2 1-L Ambers - Soil:1-8 or 4-oz. Jar

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
3/13/10	1235	IR69-GW11IW-10A	G	X				2	
3/13/10	1330	IR69-GW11DW-10A	G	X				2	
3/14/10	1220	IR69-GW05DW-10A	G	X				2	
3/14/10	1230	IR69-GW05IW-10A	G	X				2	
3/14/10	1245	IR69-GW15BCH-10A	G	X				2	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3/17/10	1300						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/18/10	0923	YES ( ) NO ( )		680-55946	

FCU052:01.02.08:2

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION
CTO-081	374082.FI.FI.69	MCB Camp Lejeune
TESTAMERICA (LAB) PROJECT MANAGER: Abbie Yont	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Gwen Buckley	CLIENT PHONE: 757-671-6292	CLIENT FAX: 704-544-4041
CLIENT NAME: CH2M HILL	CLIENT EMAIL: Gwen.Buckley@CH2M.com	

CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226

COMPANY CONTRACTING THIS WORK (if applicable):

PAGE 1 OF 1

STANDARD REPORT DELIVERY ( )
DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ( )
DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

MATRIX TYPE: COMPOSITE (C) OR GRAB (G) INDICATE; AQUEOUS (WATER); SOLID OR SEMISOLID; AIR; NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)

REQUIRED ANALYSES: OP Pesticides - Method 8141A - GW: 2 1-L Ambers - Soil:1-8 or 4-oz. Jar

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G)	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID	NUMBER OF CONTAINERS SUBMITTED	REMARKS
3/14/10	1500	IR69-SD01-10A	C		X			~~X~~ 1	
3/14/10	1505	IR69-SD01D-10A	C		X			~~X~~ 1	
3/14/10	1635	IR69-GW04-10A	G	X				2	
3/14/10	1635	IR69-GW04-10A-MS	G	X				2	MATRIX SPIKE
3/14/10	1635	IR69-GW04-10A-SD	G	X				2	MATRIX SPIKE DUPLICATE
3/15/10	1715	IR69-EB-031510-GW	G	X				2	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3/17/10	1300						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/18/10	0923	YES ( ) NO ( )		680-55946	

FCU052:01.02.08:2

04/05/2010
016

Holding Times

Sampling Date: 3/14-15/10
Received Date: 3/18 at TestAmerica Cooler temps were within acceptable range.
Extraction Date: 3/19
Analysis Dates: 3/24-25/10, 3/30/10

All extraction and analysis holding times were met for the samples in this SDG. Sample receipt data is in order. Cooler temperature was within acceptable range. This analysis was sub-contracted to Test America Savannah by Compuchem.

Calibrations

Initial calibrations were performed according to the method with a eight-point curve for the organophosphorus pesticide target compounds. Calibration factors were calculated or LR curves were plotted. %RSDs or correlation coefficients were within QC limits. Continuing calibration standards were analyzed per the SW-846 methods requested. All %D criteria were not met. Please see the report for any necessary qualifications. Column resolution was acceptable. Retention time windows were provided, retention times were stable throughout the analytical sequence. All required instrument blanks were analyzed. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Any compound detected in the sample, and the associated blank, must be qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than five (5) times the blank concentration.
- Sample weight, volume or dilution factor must be taken into consideration when applying the 5X criteria.
- Apply the same data validation guidelines to any associated rinse and field blanks and all associated samples.
- Qualification/Action codes:
-

No Action -	The sample result is greater than the RL and greater than five times (5X) the blank value.
U at RL-	The sample result is less than the RL when the blank contamination level is less than the RL.

No contamination that resulted in qualification of the data was noted in the associated method or instrument blanks or the submitted field QC blanks.

SURROGATE RECOVERIES

Surrogate recoveries were acceptable.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

The associated MS/MSD pair of sample IR69-GW04-10A exhibited 0% in both the MS and the MSD for the compound demeton-s. The compounds were rejected in the native sample of the spike pair (IR69-GW04-10A) with a caution that the reported results should be considered significantly biased low. No other qualifications were required due to spike results.

LABORATORY CONTROL SAMPLES

The submitted LCS's submitted exhibited acceptable recoveries with the exception of demeton-s and demeton-o. All samples were flagged as estimated for demeton-s. Demeton-o did not required qualifications because there were no positive results.

FIELD DUPLICATE SAMPLE SUMMARY

Sample ID: **Duplicate ID:**

Compound	Sample Conc.	Duplicate Conc.	RPD
			#DIV/0!

Comments: There were 0 field duplicate pairs submitted --

SAMPLE RESULT VERIFICATION

Raw data was verified. Calculations were verified.

Reviewer JACleveland **Date:** 7/27/10

Test America Savannah
SDG 680-55946
OPP

Job Narrative
680-55946-1

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC Semi VOA
Method(s) 8141A: The laboratory control sample (LCS) for batch 680-163485 exceeded control limits for the following analytes: Demeton-S. The vendor purchased standard for Demeton-O and Demeton-S is expressed as a the value of the total concentration of the two analytes and not as the concentration of the individual analytes. The ratio of the LCS standard differs from the rations present in the calibration standards. The % recovery of the total od Demeton-O and Demeton-S was within limits.

Method(s) 8141A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 680-163485 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method(s) 8141A: The capping continuing calibration verification (CCV) analyzed on 03/30/2010 after sample analysis recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. These samples had been analyzed on multiple runs with the capping CCV failing high after each attempted analysis; therefore sample matrix is suspected to have contributed to these failures.

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 680-55946-1

SDG No.: CLJ55946

Lab Sample ID: CCV 680-164558/1 Calibration Date: 03/30/2010 13:07

Instrument ID: SGO Calib Start Date: 03/29/2010 20:40

GC Column: Rtx-OPP 2 ID: 0.32(mm) Calib End Date: 03/29/2010 23:32

Lab File ID: oc29050.d Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorvos	Ave	10054101	12767640		100	0.500	27.0*	15.0
Mevinphos	QuaF	5422393	7009706		100	0.500	22.5	
Demeton-O	Ave	2323870	2675510		130	0.500	15.1*	15.0
Mocap	Ave	9165945	11029900		25.0	0.500	20.3*	15.0
Naled	Ave	1313254	976428		250	0.500	-25.6*	15.0
Phorate	Ave	8932970	9654738		50.0	0.500	8.1	15.0
Demeton-S	QuaF	4906970	5992870		130	0.500	10.3	
Diazinon	Ave	8380033	9634842		50.0	0.500	15.0	15.0
Disulfoton	Ave	8866856	10073720		100	0.500	13.6	15.0
Methyl parathion	QuaF	5801297	9013828		25.0	0.500	45.4	
Ronnel	Ave	8947450	9294728		50.0	0.500	3.9	15.0
Chlorpyrifos	Ave	6699626	8223736		50.0	0.500	22.7*	15.0
Trichloronate	Ave	5691766	7876892		50.0	0.500	38.4*	15.0
Fenthion	Ave	10535381	10935060		50.0	0.500	3.8	15.0
Stirophos	Ave	5359702	6253026		50.0	0.500	16.7*	15.0
Tokuthion	Ave	5515938	6415296		50.0	0.500	16.3*	15.0
Fensulfothion	QuaF	3896941	3739754		250	0.500	-4.3	
Bolstar	Ave	6976103	7033940		50.0	0.500	0.8	15.0
Azinphos-methyl	Ave	4755999	4501036		50.0	0.500	-5.4	15.0
Coumaphos	Ave	4748519	4409792		50.0	0.500	-7.1	15.0
Merphos	Ave	6970810	7456058		75.0	0.500	7.0	15.0

MS only - no Quals

FORM VII 8141A

Initial Calibration Date: 3/30/2010

RRF and %RSD Calculations:

Compound Name: dichlorvos in level 1

Lab Value: 7581720.0000

Area of Compound	379086
Conc. of Compound	0.05
Calculated RRF	7581720.0000

Compound Name: dichlorvos

Lab Value: 12.4

RRF of STD 1	7581720.0000
RRF of STD 2	9060250.0000
RRF of STD 3	9481248.0000
RRF of STD 4	10714078.0000
RRF of STD 3	10819207.0000
RRF of STD 4	10932359.0000
RRF of STD 5	10626555.0000
RRF of STD 6	11217392.0000
Calculated % RSD	12.41

Continuing Calibration File ID: cc29050

RRF and %D Calculations:

Compound Name: diazinon

Lab Value: 9634842.00000

Area of compound	4817421
Conc. Of compound	0.5
Calculated CF	9634842.00000

Compound Name: diazinon

Lab Value:

Avg. CF from ICAL	8380033.00000
CF of CCV	9634842.00000
Calculated % D	-15.0

Initial Calibration Date: 3/23/2010

RRF and %RSD Calculations:

Compound Name: disulfoton in level 5
Lab Value: 7471463.0000

Area of Compound	5603597
Conc. of Compound	0.75
Calculated RRF	7471462.6667

Compound Name: disulfoton
Lab Value: 7.0

RRF of STD 1	6117020.0000
RRF of STD 2	7233480.0000
RRF of STD 3	6613540.0000
RRF of STD 4	7057576.0000
RRF of STD 3	7471463.0000
RRF of STD 4	7513860.0000
RRF of STD 5	7331588.0000
RRF of STD 6	7477159.0000
Calculated % RSD	7.00

Continuing Calibration File ID:

RRF and %D Calculations:

Compound Name: coumaphos
Lab Value: 4366520.00000

Area of compound	2183260
Conc. Of compound	0.5
Calculated CF	4366520.00000

Compound Name: coumaphos
Lab Value: 17.1

Avg. CF from ICAL	3728703.00000
CF of CCV	4366520.00000
Calculated % D	-17.1

Client: Compuchem Environmental Corporation

Job Number: 680-55946-1
Sdg Number: CLJ55946

Lab Control Sample - Batch: 680-163485

Method: 8141A
Preparation: 3520C

Lab Sample ID: LCS 680-163485/17-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/24/2010 1533
Date Prepared: 03/19/2010 1242

Analysis Batch: 680-164209
Prep Batch: 680-163485
Units: ug/L

Instrument ID: SGO
Lab File ID: oc23035.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Azinphos-methyl	4.00	5.03	126	10 - 155	
Bolstar	4.00	4.85	121	62 - 130	
Chlorpyrifos	4.00	4.30	107	66 - 130	
Coumaphos	4.00	5.03	126	53 - 130	
Demeton-O	4.00	13.3	331	70 - 130	Q NQ
Demeton-S	4.00	1.3	17	70 - 130	U Q J/UJ in
Diazinon	4.00	4.09	102	53 - 138	
Dichlorvos	4.00	4.57	114	52 - 130	all assoc.
Disulfoton	4.00	4.32	108	57 - 130	
Ethoprop	4.00	4.31	108	57 - 130	
Fensulfothion	4.00	6.90	172	16 - 184	
Fenthion	4.00	4.37	109	10 - 181	
Merphos	4.00	2.32	58	10 - 135	
Methyl parathion	4.00	3.73	93	31 - 130	
Mevinphos	4.00	3.70	92	38 - 131	
Naled	4.00	4.28	107	54 - 130	J
Phorate	4.00	3.47	87	49 - 130	
Ronnel	4.00	4.33	108	46 - 142	
Stirophos	4.00	4.88	122	70 - 130	
Tokuthion	4.00	5.07	127	63 - 130	
Trichloronate	4.00	4.32	108	26 - 145	

Surrogate	% Rec	Acceptance Limits
Triphenylphosphate	110	26 - 134

Lab Control Sample - Batch: 680-163485

Method: 8141A
Preparation: 3520C

Lab Sample ID: LCS 680-163485/20-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/24/2010 1557
Date Prepared: 03/19/2010 1242

Analysis Batch: 680-164209
Prep Batch: 680-163485
Units: ug/L

Instrument ID: SGO
Lab File ID: oc23036.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Dimethoate	4.00	3.79	95	31 - 130	
EPN	4.00	3.95	99	53 - 130	
Malathion	4.00	3.74	93	56 - 130	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Compuchem Environmental Corporation

Job Number: 680-55946-1
Sdg Number: CLJ55946

Lab Control Sample - Batch: 680-163485

Method: 8141A
Preparation: 3520C

Lab Sample ID: LCS 680-163485/20-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/24/2010 1557
Date Prepared: 03/19/2010 1242

Analysis Batch: 680-164209
Prep Batch: 680-163485
Units: ug/L

Instrument ID: SGO
Lab File ID: oc23036.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Monochrotophos	40.0	24.2	60	10 - 130	
Parathion	4.00	3.83	96	45 - 132	
Famphur	4.00	4.15	104	54 - 130	
Sulfotepp	4.00	3.90	97	53 - 130	
Thionazin	4.00	3.79	95	37 - 134	

Surrogate	% Rec	Acceptance Limits
Triphenylphosphate	106	26 - 134

Matrix Spike - Batch: 680-163485

Method: 8141A
Preparation: 3520C

Lab Sample ID: 680-55946-12
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/24/2010 2119
Date Prepared: 03/19/2010 1242

Analysis Batch: 680-164209
Prep Batch: 680-163485
Units: ug/L

Instrument ID: SGO
Lab File ID: oc23049.d
Initial Weight/Volume: 500 mL
Final Weight/Volume: 5 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Dimethoate	1.0	U	4.00	3.69	92	31 - 130	
EPN	0.50	U	4.00	4.18	105	53 - 130	
Malathion	0.50	U	4.00	4.11	103	56 - 130	
Monochrotophos	5.0	U	40.0	22.1	55	10 - 130	
Parathion	0.50	U	4.00	4.34	108	45 - 132	
Famphur	1.0	U	4.00	4.25	106	54 - 130	
Sulfotepp	0.25	U	4.00	4.11	103	53 - 130	
Thionazin	0.50	U	4.00	3.90	98	37 - 134	

Surrogate	% Rec	Acceptance Limits
Triphenylphosphate	108	26 - 134

Calculations are performed before rounding to avoid round-off errors in calculated results.

1R69-GW04-10A

Quality Control Results

Client: Compuchem Environmental Corporation

Job Number: 680-55946-1
Sdg Number: CLJ55946

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-163485

Method: 8141A
Preparation: 3520C

MS Lab Sample ID:	680-55946-12	Analysis Batch: 680-164554	Instrument ID: SGO
Client Matrix:	Water	Prep Batch: 680-163485	Lab File ID: oc29055.d
Dilution:	1.0		Initial Weight/Volume: 500 mL
Date Analyzed:	03/30/2010 1218		Final Weight/Volume: 5 mL
Date Prepared:	03/19/2010 1242		Injection Volume: 2 uL
			Column ID: PRIMARY

MSD Lab Sample ID:	680-55946-12	Analysis Batch: 680-164209	Instrument ID: SGO
Client Matrix:	Water	Prep Batch: 680-163485	Lab File ID: oc23048.d
Dilution:	1.0		Initial Weight/Volume: 500 mL
Date Analyzed:	03/24/2010 2054		Final Weight/Volume: 5 mL
Date Prepared:	03/19/2010 1242		Injection Volume: 2 uL
			Column ID: PRIMARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Azinphos-methyl	139	134	10 - 155	3	40		
Bolstar	125	110	62 - 130	13	40		
Chlorpyrifos	128	105	66 - 130	20	40		
Coumaphos	110	136	53 - 130	21	40	NQ MSOK J	J
Demeton-O	255	236	70 - 130	8	40	NQ - not J	J
Demeton-S	0	0	70 - 130	NC	40	J/R U J	U M J
Diazinon	114	95	53 - 138	18	40		
Dichlorvos	142	106	52 - 130	29	40	J	
Disulfoton	104	88	57 - 130	16	40		
Ethoprop	127	102	57 - 130	22	40		
Fensulfothion	206	187	16 - 184	9	40	not NQ J	J
Fenthion	104	104	10 - 181	0	40		
Merphos	60	58	10 - 135	3	40		
Methyl parathion	162	97	31 - 130	50	40	NQ MSOK J	J
Mevinphos	125	100	38 - 131	22	40		
Naled	145	139	54 - 130	4	40	NQ - not J	J
Phorate	87	76	49 - 130	14	40		
Ronnel	113	99	46 - 142	13	40		
Stirophos	141	124	70 - 130	13	40	NQ not J	
Tokuthion	139	118	63 - 130	16	40	J	
Trichloronate	131	93	26 - 145	35	40		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Triphenylphosphate	128	113	26 - 134
Triphenylphosphate	128	103	26 - 134

Calculations are performed before rounding to avoid round-off errors in calculated results.

SAMPLE CALCULATION

Sample ID: IR69-GW04-10A MS
Standard ID: ICAL curve3/29/10
Compound: coumaphos
Concnetration: 4.39 ug/L

	Water (ug/L)	Soil (ug/Kg)
Area of Compound	2086489	
Calibration Factor of Compound	4748519	
Dilution Factor	1	
Weight/Volume of Sample	500	
Final Volume extract	5000	
% Moisture	NA	
conversion factor	1	1
Concentration	4.39398	#DIV/0!

DataQual

Environmental Services, LLC

CH2M HILL
5700 Cleveland Street
Suite 101
Virginia Beach, VA 23462

July 27, 2010
TestAmerica-Savannah, SDG# CLJ56052-1
MCB Camp Lejeune, CTO-81

Dear Ms. Buckley,

The following Data Validation report is provided as requested for the parameters noted in the table below for SDG # CLJ56052-1. The data validation was performed in accordance with the SW846 Method 8141A for organophosphorous pesticides (OPP) and good professional judgment. Also used in the validation of these samples were The National Functional Guidelines for Organic Data Review (June, 2008), as applicable. All areas of concern are discussed in the body of the report and a summary of data qualifications is provided.

Sample ID	Lab ID	Matrix	OPP
IR69-GW19IW-10A	680-56052-2	water	X
IR69-GW19UW-10A	680-56052-3	water	X
IR69-EB01-031610-SB	680-56052-4	water	X
IR69-SW02-10A	680-56052-6	water	X
IR69-SW03-10A	680-56052-7	water	X
IR69-EB01-031610-GW	680-56052-8	water	X
IR69-GW26DW-10A	680-56052-9	water	X
IR69-GW26IN-10A	680-56052-10	water	X
IR69-GW04IW-10A	680-56052-11	water	X
IR69-GW15DW-10A	680-56052-12	water	X
IR69-GW13DW-10A	680-56101-1	water	X
IR69-GW28IW-10A	680-56101-2	water	X
IR69-GW28DW-10A	680-56101-3	water	X
IR69-EB01-031810-GW	680-56101-4	water	X
IR69-FB01-031910	680-56101-5	water	X
IR69-SW02-10A MS	680-56052-6MS	water	X
IR69-SW02-10A MSD	680-56052-6MSD	water	X
IR69-GW28IW-10A MS	680-56101-2MS	water	X
IR69-GW28IW-10A MSD	680-56101-2MS	water	X

The following quality control samples were provided with this SDG: samples IR69-EB01-031610-SB, IR69-EB01-031610-GW, IR69-EB01-031810-GW-equipment blanks; and IR69-FB01-031910-field blank.

5830 Amberway Drive • St. Louis, MO 63128 • 314-330-1327 • Fax 314-849-6264

Samples were evaluated based on the following criteria:

- Data Completeness *
- Technical Holding Times *
- GC Performance *
- Initial/Continuing Calibrations
- Blanks *
- Surrogates *
- Laboratory Control Samples
- Matrix Spike Recoveries
- Field Duplicates *
- Identification/Quantitation *
- Reporting Limits *

* - indicates that no qualifications were required based on this criteria

Overall Evaluation of Data/Potential Usability Issues

A summary of qualifications applied to the sample results are noted below for the fractions validated. Specific details regarding qualification of the data are addressed in the Specific Evaluation section of this narrative. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte the validator has chosen the qualifier that best indicates possible bias in the results and flagged the data accordingly. However, information regarding all quality control issues is provided in the body of the report and on the qualification summary page. Please note that when a compound or analyte is flagged due to blank contamination the BL qualifier code takes precedence over all other qualifier codes except a code that explains rejected data.

Organophosphorous Pesticides (OPP)

One continuing calibration standard exhibited one compound which was non-compliant due to a decrease in analytical response. Qualifications were required in the associated samples.

The laboratory control samples associated with samples exhibited non-compliant recoveries for some compounds that resulted in the qualification of results.

The MS/MSD pair of sample IR69-SW02-10A exhibited non-compliant %Rs that resulted in the qualification of some sample results.

Specific Evaluation of Data

Data Completeness

This SDG was received complete and intact. Resubmissions were not required.

Technical Holding Times

According to chain of custody records, sampling was performed on 3/15-19/10 and samples were received at the laboratory on 3/22/10 and 3/24/10. All sample preparation and analysis was performed within method holding time requirements.

Initial/Continuing Calibrations

OPP

One calibration standard exhibited a high %Ds that was due to a decrease in sensitivity. A summary of this non-compliance and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	%D	Samples	Q Flag	Q Code
oc29050.d	naled	-25.6	IR69-GW13DW-10A, IR69-GW28IW-10A, IR69-28DW-10A, IR69-EB01-031810-GW, IR69-FB01-031910, IR69-EB01-031610-GW, IR69-GW26DW-10A, IR69-GW26IN-10A, IR69-GW04IW-10A, IR69-GW15DW-10A	J/UJ	CCL

Laboratory Control Samples

OPP

The laboratory control samples associated with the samples in this SDG exhibited low recoveries for the compound demeton-s (18%/18%). The compound was qualified as estimated J/UJ in all field and QC blank samples with a qualifier code of BSL.

The compound naled was qualified as estimated in samples IR69-GW13DW-10A, IR69-GW28IW-10A, IR69-GW28DW-10A, IR69-EB01-031810-GW and IR69-FB01-031910 due to a low recovery of 40% in the associated LCS with a qualifier code of BSL.

Matrix Spike Recoveries

OPP

The MS/MSD of sample IR69-SW02-10A exhibited 0% recoveries for the compound demeton-s. The compound was rejected R in the native sample only with a qualifier code of MSL.

A summary of qualifications required is provided on the following page. Please do not hesitate to contact DataQual ES with any questions regarding this validation report.

Sincerely,

Jacqueline Cleveland

Jacqueline Cleveland
Vice-President

Summary of Data Qualifications

Organophosphorous Pesticides

Sample ID	Compound	Results	Q-Flag	Q Code
IR69-GW13DW-10A*, IR69-GW28IW-10A*, IR69-28DW-10A*, IR69-EB01-031810-GW*, IR69-FB01-031910*, IR69-EB01-031610-GW, IR69-GW26DW-10A, IR69-GW26IN-10A, IR69-GW04IW-10A, IR69-GW15DW-10A	naled	+/-	J/UJ	CCL
all samples	demeton-s**	+/-	J/UJ	BSL
IR69-GW13DW-10A, IR69-GW28IW-10A, IR69-GW28DW-10A, IR69-EB01-031810-GW, IR69-FB01-031910	naled	+/-	J/UJ	BSL
IR69-SW02-10A	demeton-s	+/-	J/R	MSL

*final qualifier code for naled in these samples is BSL

**final qualifier code for demeton-s in sample IR69-SW02-10A was MSL

Glossary of Qualification Flags and Abbreviations

Qualification Flags (Q-Flags)

U	not detected above the reported sample quantitation limit
J	estimated value
UJ	reported quantitation limit is qualified as estimated
R	result is rejected; the presence or absence of the analyte cannot be verified
D	result value is based on dilution analysis result
NJ	analyte has been tentatively identified, estimated value
L	analyte present, biased low
UL	not detected, quantitation limit is probably higher
K	analyte present, biased high

Inorganic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 10X the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL and the result is raised to the RL and flagged U.
R or J_+	The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator. (see NFG, Rev. date 10/04, p. 17 for extracted blanks (PB))

Organic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 5X (10X for common laboratory contaminants) the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is raised to the RL and flagged U.
U	The sample result for the blank contaminant is greater than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is flagged U at the reported value.

General Abbreviations

RL / MDL	reporting limit/method detection limit
CRQL	contract required quantitation limit
Q Code	qualifier code
+	positive result
-	non-detect result

QUALIFIER CODE REFERENCE

Qualifier	Description
TN	Tune
BSL	Blank Spike/LCS - High Recovery
BSH	Blank Spike/LCS - Low Recovery
BD	Blank Spike/Blank Spike Duplicate (LCS/LCSD) Precision
BRL	Below Reporting Limit
ISL	Internal Standard - Low Recovery
ISH	Internal Standard - High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate - Low Recovery
MSH	Matrix Spike and/or Matrix Spike Duplicate - High Recovery
MI	Matrix interference obscuring the raw data
MDP	Matrix Spike/Matrix Spike Duplicate Precision
2S	Second Source - Bad reproducibility between tandem detectors
SSL	Spiked Surrogate - Low Recovery
SSH	Spiked Surrogate - High Recovery
SD	Serial Dilution Reproducibility
ICL	Initial Calibration - Low Relative Response Factors (RRF)
ICH	Initial Calibration - High Relative Response Factors (RRF)
ICB	Initial Calibration - Bad Linearity or Curve Function
CCL	Continuing Calibration - Low Recovery or %Difference
CCH	Continuing Calibration - High Recovery or %Difference
LD	Lab Duplicate Reproducibility
HT	Holding Time
PD	Pesticide Degradation
2C	Second Column - Poor Dual Column Reproducibility
LR	Concentration Exceeds Linear Range
BL	Blank Contamination (MBL, EBL, FBL, TBL)
RE	Redundant Result - due to Re-analysis or Re-extraction
DL	Redundant Result - due to Dilution
FD	Field Duplicate
OT	Other - explained in data validation report
%SOL	High moisture content

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-1

SDG No.: CLJ56052-1

Client Sample ID: IR69-GW19IW-10A | Lab Sample ID: 680-56052-2

Matrix: Water | Lab File ID: oc23064.d

Analysis Method: 8141A | Date Collected: 03/16/2010 11:30

Extraction Method: 3520C | Date Extracted: 03/22/2010 14:09

Sample wt/vol: 1060(mL) | Date Analyzed: 03/25/2010 03:32

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164210 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	2.4	U	2.4	1.2
126-75-0	Demeton-S	2.4	U	2.4	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monochrotophos	9.4	U	9.4	4.7
300-76-5	Naled	4.7	U	4.7	2.4
56-38-2	Parathion	0.94	U	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
52-85-7	Famphur	1.9	U	1.9	0.94
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U	0.47	0.24
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47
297-97-2	Thionazin	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	102	26-134	

FORM I 8141A

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-1

SDG No.: CLJ56052-1

Client Sample ID: IR69-GW19UW-10A | Lab Sample ID: 680-56052-3

Matrix: Water | Lab File ID: oc23065.d

Analysis Method: 8141A | Date Collected: 03/16/2010 12:00

Extraction Method: 3520C | Date Extracted: 03/22/2010 14:09

Sample wt/vol: 1050(mL) | Date Analyzed: 03/25/2010 03:57

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164210 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U Q	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ Q UJ BSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U	9.5	4.8
300-76-5	Naled	4.8	U	4.8	2.4
56-38-2	Parathion	0.95	U	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
52-85-7	Famphur	1.9	U	1.9	0.95
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U	0.48	0.24
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48
297-97-2	Thionazin	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	111	26-134	

SAC 6-2-10

FORM I 8141A

009

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-1

SDG No.: CLJ56052-1

Client Sample ID: IR69-EB01-031610-SB | Lab Sample ID: 680-56052-4

Matrix: Water | Lab File ID: oc23066.d

Analysis Method: 8141A | Date Collected: 03/16/2010 16:30

Extraction Method: 3520C | Date Extracted: 03/22/2010 14:09

Sample wt/vol: 1050(mL) | Date Analyzed: 03/25/2010 04:22

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164210 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U Ø	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ Ø UJ BSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U	9.5	4.8
300-76-5	Naled	4.8	U	4.8	2.4
56-38-2	Parathion	0.95	U	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
52-85-7	Famphur	1.9	U	1.9	0.95
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U	0.48	0.24
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48
297-97-2	Thionazin	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	116	26-134	

JAC 4/27/10

010

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-1

SDG No.: CLJ56052-1

Client Sample ID: IR69-SW02-10A | Lab Sample ID: 680-56052-6

Matrix: Water | Lab File ID: oc23067.d

Analysis Method: 8141A | Date Collected: 03/15/2010 10:35

Extraction Method: 3520C | Date Extracted: 03/22/2010 14:09

Sample wt/vol: 500(mL) | Date Analyzed: 03/25/2010 04:47

Con. Extract Vol.: 5.0(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164210 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	1.0	U	1.0	0.50
35400-43-2	Bolstar	1.0	U	1.0	0.50
2921-88-2	Chlorpyrifos	1.0	U	1.0	0.50
56-72-4	Coumaphos	1.0	U	1.0	0.50
298-03-3	Demeton-O	2.5	U ~~J~~	2.5	1.3
126-75-0	Demeton-S	2.5	~~U J~~ R MDL	2.5	1.3
333-41-5	Diazinon	1.0	U	1.0	0.50
62-73-7	Dichlorvos	2.0	U	2.0	1.0
60-51-5	Dimethoate	2.0	U	2.0	1.0
298-04-4	Disulfoton	2.0	U	2.0	1.0
2104-64-5	EPN	1.0	U	1.0	0.50
13194-48-4	Ethoprop	0.50	U	0.50	0.25
115-90-2	Fensulfothion	5.0	U	5.0	2.5
55-38-9	Fenthion	1.0	U	1.0	0.50
121-75-5	Malathion	1.0	U	1.0	0.50
150-50-5	Merphos	1.5	U	1.5	0.75
298-00-0	Methyl parathion	0.50	U	0.50	0.25
7786-34-7	Mevinphos	2.0	U	2.0	1.0
6923-22-4	Monochrotophos	10	U	10	5.0
300-76-5	Naled	5.0	U	5.0	2.5
56-38-2	Parathion	1.0	U	1.0	0.50
298-02-2	Phorate	1.0	U	1.0	0.50
52-85-7	Famphur	2.0	U	2.0	1.0
299-84-3	Ronnel	1.0	U	1.0	0.50
22248-79-9	Stirophos	1.0	U	1.0	0.50
3689-24-5	Sulfotepp	0.50	U	0.50	0.25
34643-46-4	Tokuthion	1.0	U J	1.0	0.50
327-98-0	Trichloronate	1.0	U	1.0	0.50
297-97-2	Thionazin	1.0	U	1.0	0.50

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	108	26-134	

QC 72710

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-1

SDG No.: CLJ56052-1

Client Sample ID: IR69-SW03-10A | Lab Sample ID: 680-56052-7

Matrix: Water | Lab File ID: oc23068.d

Analysis Method: 8141A | Date Collected: 03/15/2010 15:30

Extraction Method: 3520C | Date Extracted: 03/22/2010 14:09

Sample wt/vol: 1050(mL) | Date Analyzed: 03/25/2010 05:12

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164210 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U Ø	2.4	1.2
126-75-0	Demeton-S	2.4	U Ø UJ BSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U	9.5	4.8
300-76-5	Naled	4.8	U	4.8	2.4
56-38-2	Parathion	0.95	U	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
52-85-7	Famphur	1.9	U	1.9	0.95
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U	0.48	0.24
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48
297-97-2	Thionazin	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	121	26-134	

JAC 4/27/10

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FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-1

SDG No.: CLJ56052-1

Client Sample ID: IR69-EB01-031610-GW | Lab Sample ID: 680-56052-8

Matrix: Water | Lab File ID: oc29045.d

Analysis Method: 8141A | Date Collected: 03/16/2010 13:30

Extraction Method: 3520C | Date Extracted: 03/22/2010 14:09

Sample wt/vol: 1060(mL) | Date Analyzed: 03/30/2010 10:14

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164554 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.2
126-75-0	Demeton-S	2.4	U ~~Q~~ WJ BSL	2.4	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monochrotophos	9.4	U	9.4	4.7
300-76-5	Naled	4.7	~~U~~ WJ CCL	4.7	2.4
56-38-2	Parathion	0.94	U	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
52-85-7	Famphur	1.9	U	1.9	0.94
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U	0.47	0.24
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47
297-97-2	Thionazin	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	95	26-134	

SMC 72710

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FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-1

SDG No.: CLJ56052-1

Client Sample ID: IR69-GW26DW-10A | Lab Sample ID: 680-56052-9

Matrix: Water | Lab File ID: oc29046.d

Analysis Method: 8141A | Date Collected: 03/16/2010 12:30

Extraction Method: 3520C | Date Extracted: 03/22/2010 14:09

Sample wt/vol: 1060(mL) | Date Analyzed: 03/30/2010 10:38

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164554 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ ~~Q~~ UJ BSL	2.4	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monochrotophos	9.4	U	9.4	4.7
300-76-5	Naled	4.7	~~U~~ UJ CCL	4.7	2.4
56-38-2	Parathion	0.94	U	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
52-85-7	Famphur	1.9	U	1.9	0.94
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U	0.47	0.24
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47
297-97-2	Thionazin	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	115	26-134	

QC 72710

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FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-1

SDG No.: CLJ56052-1

Client Sample ID: IR69-GW26IN-10A | Lab Sample ID: 680-56052-10

Matrix: Water | Lab File ID: oc29047.d

Analysis Method: 8141A | Date Collected: 03/16/2010 14:00

Extraction Method: 3520C | Date Extracted: 03/22/2010 14:09

Sample wt/vol: 1060(mL) | Date Analyzed: 03/30/2010 11:03

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164554 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.2
126-75-0	Demeton-S	2.4	~~U~~ ~~Q~~ UJ BSL	2.4	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monochrotophos	9.4	U	9.4	4.7
300-76-5	Naled	4.7	~~U~~ UJ CCL	4.7	2.4
56-38-2	Parathion	0.94	U	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
52-85-7	Famphur	1.9	U	1.9	0.94
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U	0.47	0.24
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47
297-97-2	Thionazin	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	107	26-134	

MC 72710

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-1

SDG No.: CLJ56052-1

Client Sample ID: IR69-GW04IW-10A | Lab Sample ID: 680-56052-11

Matrix: Water | Lab File ID: oc29048.d

Analysis Method: 8141A | Date Collected: 03/15/2010 12:00

Extraction Method: 3520C | Date Extracted: 03/22/2010 14:09

Sample wt/vol: 1060(mL) | Date Analyzed: 03/30/2010 11:28

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164554 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.94	U	0.94	0.47
35400-43-2	Bolstar	0.94	U	0.94	0.47
2921-88-2	Chlorpyrifos	0.94	U	0.94	0.47
56-72-4	Coumaphos	0.94	U	0.94	0.47
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.2
126-75-0	Demeton-S	2.4	~~Q~~ WJ BSL	2.4	1.2
333-41-5	Diazinon	0.94	U	0.94	0.47
62-73-7	Dichlorvos	1.9	U	1.9	0.94
60-51-5	Dimethoate	1.9	U	1.9	0.94
298-04-4	Disulfoton	1.9	U	1.9	0.94
2104-64-5	EPN	0.94	U	0.94	0.47
13194-48-4	Ethoprop	0.47	U	0.47	0.24
115-90-2	Fensulfothion	4.7	U	4.7	2.4
55-38-9	Fenthion	0.94	U	0.94	0.47
121-75-5	Malathion	0.94	U	0.94	0.47
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.47	U	0.47	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.94
6923-22-4	Monochrotophos	9.4	U	9.4	4.7
300-76-5	Naled	4.7	~~U~~ WJ CCL	4.7	2.4
56-38-2	Parathion	0.94	U	0.94	0.47
298-02-2	Phorate	0.94	U	0.94	0.47
52-85-7	Famphur	1.9	U	1.9	0.94
299-84-3	Ronnel	0.94	U	0.94	0.47
22248-79-9	Stirophos	0.94	U	0.94	0.47
3689-24-5	Sulfotepp	0.47	U	0.47	0.24
34643-46-4	Tokuthion	0.94	U	0.94	0.47
327-98-0	Trichloronate	0.94	U	0.94	0.47
297-97-2	Thionazin	0.94	U	0.94	0.47

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	92	26-134	

AC 5/10

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FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-1

SDG No.: CLJ56052-1

Client Sample ID: IR69-GW15DW-10A | Lab Sample ID: 680-56052-12

Matrix: Water | Lab File ID: oc29049.d

Analysis Method: 8141A | Date Collected: 03/15/2010 15:15

Extraction Method: 3520C | Date Extracted: 03/22/2010 14:09

Sample wt/vol: 1050(mL) | Date Analyzed: 03/30/2010 11:53

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164554 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U	2.4	1.2
126-75-0	Demeton-S	2.4	UJ BSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U	9.5	4.8
300-76-5	Naled	4.8	UJ CCL	4.8	2.4
56-38-2	Parathion	0.95	U	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
52-85-7	Famphur	1.9	U	1.9	0.95
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U	0.48	0.24
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48
297-97-2	Thionazin	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	80	26-134	

FORM I 8141A

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-1

SDG No.: CLJ56052-1

Client Sample ID: IR69-GW13DW-10A | Lab Sample ID: 680-56101-1

Matrix: Water | Lab File ID: oc29036.d

Analysis Method: 8141A | Date Collected: 03/18/2010 12:40

Extraction Method: 3520C | Date Extracted: 03/25/2010 14:01

Sample wt/vol: 500(mL) | Date Analyzed: 03/30/2010 06:32

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164554 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	1.0	U	1.0	0.50
35400-43-2	Bolstar	1.0	U	1.0	0.50
2921-88-2	Chlorpyrifos	1.0	U ~~J~~	1.0	0.50
56-72-4	Coumaphos	1.0	U	1.0	0.50
298-03-3	Demeton-O	2.5	U ~~Q~~ ~~J~~	2.5	1.3
126-75-0	Demeton-S	2.5	~~U~~ ~~Q~~ ~~J~~ UJ BSL	2.5	1.3
333-41-5	Diazinon	1.0	U	1.0	0.50
62-73-7	Dichlorvos	2.0	U ~~J~~	2.0	1.0
60-51-5	Dimethoate	2.0	U	2.0	1.0
298-04-4	Disulfoton	2.0	U	2.0	1.0
2104-64-5	EPN	1.0	U	1.0	0.50
13194-48-4	Ethoprop	0.50	U	0.50	0.25
115-90-2	Fensulfothion	5.0	U	5.0	2.5
55-38-9	Fenthion	1.0	U	1.0	0.50
121-75-5	Malathion	1.0	U	1.0	0.50
150-50-5	Merphos	1.5	U	1.5	0.75
298-00-0	Methyl parathion	0.50	U ~~J~~	0.50	0.25
7786-34-7	Mevinphos	2.0	U	2.0	1.0
6923-22-4	Monochrotophos	10	U	10	5.0
300-76-5	Naled	5.0	~~U Q~~ UJ BSL	5.0	2.5
56-38-2	Parathion	1.0	U	1.0	0.50
298-02-2	Phorate	1.0	U	1.0	0.50
52-85-7	Famphur	2.0	U	2.0	1.0
299-84-3	Ronnel	1.0	U	1.0	0.50
22248-79-9	Stirophos	1.0	U ~~J~~	1.0	0.50
3689-24-5	Sulfotepp	0.50	U	0.50	0.25
34643-46-4	Tokuthion	1.0	U ~~J~~	1.0	0.50
327-98-0	Trichloronate	1.0	U	1.0	0.50
297-97-2	Thionazin	1.0	U	1.0	0.50

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	93	26-134	

JAC 92710

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-1

SDG No.: CLJ56052-1

Client Sample ID: IR69-GW28IW-10A | Lab Sample ID: 680-56101-2

Matrix: Water | Lab File ID: oc29037.d

Analysis Method: 8141A | Date Collected: 03/18/2010 11:45

Extraction Method: 3520C | Date Extracted: 03/25/2010 14:01

Sample wt/vol: 500(mL) | Date Analyzed: 03/30/2010 06:56

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164554 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	1.0	U	1.0	0.50
35400-43-2	Bolstar	1.0	U	1.0	0.50
2921-88-2	Chlorpyrifos	1.0	U	1.0	0.50
56-72-4	Coumaphos	1.0	U	1.0	0.50
298-03-3	Demeton-O	2.5	U ~~Q~~	2.5	1.3
126-75-0	Demeton-S	2.5	U ~~Q~~ UJ BSL	2.5	1.3
333-41-5	Diazinon	1.0	U	1.0	0.50
62-73-7	Dichlorvos	2.0	U	2.0	1.0
60-51-5	Dimethoate	2.0	U	2.0	1.0
298-04-4	Disulfoton	2.0	U	2.0	1.0
2104-64-5	EPN	1.0	U	1.0	0.50
13194-48-4	Ethoprop	0.50	U	0.50	0.25
115-90-2	Fensulfothion	5.0	U	5.0	2.5
55-38-9	Fenthion	1.0	U	1.0	0.50
121-75-5	Malathion	1.0	U	1.0	0.50
150-50-5	Merphos	1.5	U	1.5	0.75
298-00-0	Methyl parathion	0.50	U	0.50	0.25
7786-34-7	Mevinphos	2.0	U	2.0	1.0
6923-22-4	Monochrotophos	10	U	10	5.0
300-76-5	Naled	5.0	~~U Q~~ UJ BSL	5.0	2.5
56-38-2	Parathion	1.0	U	1.0	0.50
298-02-2	Phorate	1.0	U	1.0	0.50
52-85-7	Famphur	2.0	U	2.0	1.0
299-84-3	Ronnel	1.0	U	1.0	0.50
22248-79-9	Stirophos	1.0	U	1.0	0.50
3689-24-5	Sulfotepp	0.50	U	0.50	0.25
34643-46-4	Tokuthion	1.0	U	1.0	0.50
327-98-0	Trichloronate	1.0	U	1.0	0.50
297-97-2	Thionazin	1.0	U	1.0	0.50

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	105	26-134	

SMC 12710

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-1

SDG No.: CLJ56052-1

Client Sample ID: IR69-GW28DW-10A | Lab Sample ID: 680-56101-3

Matrix: Water | Lab File ID: oc29038.d

Analysis Method: 8141A | Date Collected: 03/18/2010 11:20

Extraction Method: 3520C | Date Extracted: 03/25/2010 14:01

Sample wt/vol: 1050(mL) | Date Analyzed: 03/30/2010 07:21

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164554 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.2
126-75-0	Demeton-S	2.4	~~U Q~~ UJ BSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U	9.5	4.8
300-76-5	Naled	4.8	~~U Q~~ UJ BSL	4.8	2.4
56-38-2	Parathion	0.95	U	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
52-85-7	Famphur	1.9	U	1.9	0.95
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U	0.48	0.24
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48
297-97-2	Thionazin	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	100	26-134	

QC 72710

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-1

SDG No.: CLJ56052-1

Client Sample ID: IR69-EB01-031810-GW | Lab Sample ID: 680-56101-4

Matrix: Water | Lab File ID: oc29039.d

Analysis Method: 8141A | Date Collected: 03/18/2010 16:45

Extraction Method: 3520C | Date Extracted: 03/25/2010 14:01

Sample wt/vol: 1050(mL) | Date Analyzed: 03/30/2010 07:46

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164554 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.95	U	0.95	0.48
35400-43-2	Bolstar	0.95	U	0.95	0.48
2921-88-2	Chlorpyrifos	0.95	U	0.95	0.48
56-72-4	Coumaphos	0.95	U	0.95	0.48
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.2
126-75-0	Demeton-S	2.4	~~U Q~~ UJ BSL	2.4	1.2
333-41-5	Diazinon	0.95	U	0.95	0.48
62-73-7	Dichlorvos	1.9	U	1.9	0.95
60-51-5	Dimethoate	1.9	U	1.9	0.95
298-04-4	Disulfoton	1.9	U	1.9	0.95
2104-64-5	EPN	0.95	U	0.95	0.48
13194-48-4	Ethoprop	0.48	U	0.48	0.24
115-90-2	Fensulfothion	4.8	U	4.8	2.4
55-38-9	Fenthion	0.95	U	0.95	0.48
121-75-5	Malathion	0.95	U	0.95	0.48
150-50-5	Merphos	1.4	U	1.4	0.71
298-00-0	Methyl parathion	0.48	U	0.48	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.95
6923-22-4	Monochrotophos	9.5	U	9.5	4.8
300-76-5	Naled	4.8	~~U Q~~ UJ BSL	4.8	2.4
56-38-2	Parathion	0.95	U	0.95	0.48
298-02-2	Phorate	0.95	U	0.95	0.48
52-85-7	Famphur	1.9	U	1.9	0.95
299-84-3	Ronnel	0.95	U	0.95	0.48
22248-79-9	Stirophos	0.95	U	0.95	0.48
3689-24-5	Sulfotepp	0.48	U	0.48	0.24
34643-46-4	Tokuthion	0.95	U	0.95	0.48
327-98-0	Trichloronate	0.95	U	0.95	0.48
297-97-2	Thionazin	0.95	U	0.95	0.48

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	85	26-134	

JAC 5/27/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-1

SDG No.: CLJ56052-1

Client Sample ID: IR69-FB01-031910 | Lab Sample ID: 680-56101-5

Matrix: Water | Lab File ID: oc29040.d

Analysis Method: 8141A | Date Collected: 03/19/2010 09:00

Extraction Method: 3520C | Date Extracted: 03/25/2010 14:01

Sample wt/vol: 1030(mL) | Date Analyzed: 03/30/2010 08:10

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164554 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	0.97	U	0.97	0.49
35400-43-2	Bolstar	0.97	U	0.97	0.49
2921-88-2	Chlorpyrifos	0.97	U	0.97	0.49
56-72-4	Coumaphos	0.97	U	0.97	0.49
298-03-3	Demeton-O	2.4	U ~~Q~~	2.4	1.3
126-75-0	Demeton-S	2.4	~~U~~ ~~Q~~ UJ BSL	2.4	1.3
333-41-5	Diazinon	0.97	U	0.97	0.49
62-73-7	Dichlorvos	1.9	U	1.9	0.97
60-51-5	Dimethoate	1.9	U	1.9	0.97
298-04-4	Disulfoton	1.9	U	1.9	0.97
2104-64-5	EPN	0.97	U	0.97	0.49
13194-48-4	Ethoprop	0.49	U	0.49	0.24
115-90-2	Fensulfothion	4.9	U	4.9	2.4
55-38-9	Fenthion	0.97	U	0.97	0.49
121-75-5	Malathion	0.97	U	0.97	0.49
150-50-5	Merphos	1.5	U	1.5	0.73
298-00-0	Methyl parathion	0.49	U	0.49	0.24
7786-34-7	Mevinphos	1.9	U	1.9	0.97
6923-22-4	Monochrotophos	9.7	U	9.7	4.9
300-76-5	Naled	4.9	~~U~~ ~~Q~~ UJ BSL	4.9	2.4
56-38-2	Parathion	0.97	U	0.97	0.49
298-02-2	Phorate	0.97	U	0.97	0.49
52-85-7	Famphur	1.9	U	1.9	0.97
299-84-3	Ronnel	0.97	U	0.97	0.49
22248-79-9	Stirophos	0.97	U	0.97	0.49
3689-24-5	Sulfotepp	0.49	U	0.49	0.24
34643-46-4	Tokuthion	0.97	U	0.97	0.49
327-98-0	Trichloronate	0.97	U	0.97	0.49
297-97-2	Thionazin	0.97	U	0.97	0.49

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	95	26-134	

JAC 6/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-1

SDG No.: CLJ56052-1

Client Sample ID: IR69-SW02-10A MS | Lab Sample ID: 680-56052-6 MS

Matrix: Water | Lab File ID: oc23069.d

Analysis Method: 8141A | Date Collected: 03/15/2010 10:35

Extraction Method: 3520C | Date Extracted: 03/22/2010 14:09

Sample wt/vol: 500(mL) | Date Analyzed: 03/25/2010 05:37

Con. Extract Vol.: 5.0(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164210 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	5.04		1.0	0.50
35400-43-2	Bolstar	5.13		1.0	0.50
2921-88-2	Chlorpyrifos	4.69		1.0	0.50
56-72-4	Coumaphos	4.40		1.0	0.50
298-03-3	Demeton-O	9.70	~~J~~	2.5	1.3
126-75-0	Demeton-S	2.5	U ~~M~~ ~~J~~	2.5	1.3
333-41-5	Diazinon	4.18		1.0	0.50
62-73-7	Dichlorvos	4.57		2.0	1.0
298-04-4	Disulfoton	4.38		2.0	1.0
13194-48-4	Ethoprop	4.54		0.50	0.25
115-90-2	Fensulfothion	7.32		5.0	2.5
55-38-9	Fenthion	4.29		1.0	0.50
150-50-5	Merphos	2.55		1.5	0.75
298-00-0	Methyl parathion	3.83		0.50	0.25
7786-34-7	Mevinphos	3.95		2.0	1.0
300-76-5	Naled	4.66	J	5.0	2.5
298-02-2	Phorate	3.44		1.0	0.50
299-84-3	Ronnel	4.13		1.0	0.50
22248-79-9	Stirophos	5.09		1.0	0.50
34643-46-4	Tokuthion	5.24	J	1.0	0.50
327-98-0	Trichloronate	4.60		1.0	0.50

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	120	26-134	

JAC 4/27/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-1

SDG No.: CLJ56052-1

Client Sample ID: IR69-SW02-10A MS | Lab Sample ID: 680-56052-6 MS

Matrix: Water | Lab File ID: oc23071.d

Analysis Method: 8141A | Date Collected: 03/15/2010 10:35

Extraction Method: 3520C | Date Extracted: 03/22/2010 14:09

Sample wt/vol: 500(mL) | Date Analyzed: 03/25/2010 06:27

Con. Extract Vol.: 5.0(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164210 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
60-51-5	Dimethoate	3.59		2.0	1.0
2104-64-5	EPN	4.34		1.0	0.50
121-75-5	Malathion	4.13		1.0	0.50
6923-22-4	Monochrotophos	22.0		10	5.0
56-38-2	Parathion	4.40		1.0	0.50
52-85-7	Famphur	4.60		2.0	1.0
3689-24-5	Sulfotepp	4.19		0.50	0.25
297-97-2	Thionazin	3.96		1.0	0.50

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	116	26-134	

JC 12710

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-1

SDG No.: CLJ56052-1

Client Sample ID: IR69-SW02-10A MSD | Lab Sample ID: 680-56052-6 MSD

Matrix: Water | Lab File ID: oc23070.d

Analysis Method: 8141A | Date Collected: 03/15/2010 10:35

Extraction Method: 3520C | Date Extracted: 03/22/2010 14:09

Sample wt/vol: 500(mL) | Date Analyzed: 03/25/2010 06:02

Con. Extract Vol.: 5.0(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164210 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	4.69		1.0	0.50
35400-43-2	Bolstar	4.64		1.0	0.50
2921-88-2	Chlorpyrifos	4.19		1.0	0.50
56-72-4	Coumaphos	4.77		1.0	0.50
298-03-3	Demeton-O	7.65	J	2.5	1.3
126-75-0	Demeton-S	2.5	U ~~M~~ J	2.5	1.3
333-41-5	Diazinon	3.72		1.0	0.50
62-73-7	Dichlorvos	5.10		2.0	1.0
298-04-4	Disulfoton	4.04		2.0	1.0
13194-48-4	Ethoprop	3.89		0.50	0.25
115-90-2	Fensulfothion	6.68		5.0	2.5
55-38-9	Fenthion	4.06		1.0	0.50
150-50-5	Merphos	2.26		1.5	0.75
298-00-0	Methyl parathion	3.55		0.50	0.25
7786-34-7	Mevinphos	4.65		2.0	1.0
300-76-5	Naled	3.83	J	5.0	2.5
298-02-2	Phorate	3.02		1.0	0.50
299-84-3	Ronnel	4.02		1.0	0.50
22248-79-9	Stirophos	4.63		1.0	0.50
34643-46-4	Tokuthion	4.72		1.0	0.50
327-98-0	Trichloronate	3.81		1.0	0.50

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	104	26-134	

JC 72710

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-1

SDG No.: CLJ56052-1

Client Sample ID: IR69-SW02-10A MSD | Lab Sample ID: 680-56052-6 MSD

Matrix: Water | Lab File ID: oc23072.d

Analysis Method: 8141A | Date Collected: 03/15/2010 10:35

Extraction Method: 3520C | Date Extracted: 03/22/2010 14:09

Sample wt/vol: 500(mL) | Date Analyzed: 03/25/2010 06:52

Con. Extract Vol.: 5.0(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164210 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
60-51-5	Dimethoate	3.71		2.0	1.0
2104-64-5	EPN	3.92		1.0	0.50
121-75-5	Malathion	3.92		1.0	0.50
6923-22-4	Monochrotophos	29.9		10	5.0
56-38-2	Parathion	4.08		1.0	0.50
52-85-7	Famphur	4.23		2.0	1.0
3689-24-5	Sulfotepp	4.12		0.50	0.25
297-97-2	Thionazin	4.24		1.0	0.50

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	107	26-134	

JAC 72710

1126

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-1

SDG No.: CLJ56052-1

Client Sample ID: IR69-GW28IW-10A MS | Lab Sample ID: 680-56101-2 MS

Matrix: Water | Lab File ID: oc29043.d

Analysis Method: 8141A | Date Collected: 03/18/2010 11:45

Extraction Method: 3520C | Date Extracted: 03/25/2010 14:01

Sample wt/vol: 500(mL) | Date Analyzed: 03/30/2010 09:24

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164554 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
60-51-5	Dimethoate	3.41		2.0	1.0
2104-64-5	EPN	3.31		1.0	0.50
121-75-5	Malathion	3.95		1.0	0.50
6923-22-4	Monochrotophos	19.1		10	5.0
56-38-2	Parathion	4.31		1.0	0.50
52-85-7	Famphur	3.37		2.0	1.0
3689-24-5	Sulfotepp	4.20		0.50	0.25
297-97-2	Thionazin	4.02		1.0	0.50

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	95	26-134	

JAC 42710

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-1

SDG No.: CLJ56052-1

Client Sample ID: IR69-GW28IW-10A MSD | Lab Sample ID: 680-56101-2 MSD

Matrix: Water | Lab File ID: oc29044.d

Analysis Method: 8141A | Date Collected: 03/18/2010 11:45

Extraction Method: 3520C | Date Extracted: 03/25/2010 14:01

Sample wt/vol: 500(mL) | Date Analyzed: 03/30/2010 09:49

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164554 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
60-51-5	Dimethoate	3.69		2.0	1.0
2104-64-5	EPN	3.79		1.0	0.50
121-75-5	Malathion	3.96		1.0	0.50
6923-22-4	Monochrotophos	22.5		10	5.0
56-38-2	Parathion	4.43		1.0	0.50
52-85-7	Famphur	3.72		2.0	1.0
3689-24-5	Sulfotepp	4.21		0.50	0.25
297-97-2	Thionazin	3.95		1.0	0.50

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	104	26-134	

JAC 7/2/10

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION	PAGE	OF
CTO-081	374082.FI.FI.69	MCB Camp Lejeune	1	1

TESTAMERICA (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
Abbie Yont		

CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
Gwen Buckley	757-671-6292	704-544-4041

CLIENT NAME	CLIENT EMAIL
CH2M HILL	Gwen.Buckley@CH2M.com

CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226

COMPANY CONTRACTING THIS WORK (if applicable):

STANDARD REPORT DELIVERY ○
DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

REQUIRED ANALYSES: OP Pesticides - Method 8141A - GW: 2 1-L Ambers - Soil:1-8 or 4-oz. Jar

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
3/18/10	1240	IR69-GW13DW-10A	G	X				2	
3/18/10	1145	IR69-GW28IW-10A	G	X				2	
3/18/10	1120	IR69-GW28DW-10A	G	X				2	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3/22/10	1500						

RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/24/10	0927	YES ○ NO ○		680-56101	

FCU052:01.02.08:2

04/05/2010
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ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

PROJECT REFERENCE: CTO-081	PROJECT NO.: 374082.F1.F1.69	PROJECT LOCATION: MCB Camp Lejeune
TESTAMERICA (LAB) PROJECT MANAGER: Abbie Yont	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Gwen Buckley	CLIENT PHONE: 757-671-6292	CLIENT FAX: 704-544-4041
CLIENT NAME: CH2M HILL	CLIENT EMAIL: Gwen.Buckley@CH2M.com	
CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226		
COMPANY CONTRACTING THIS WORK (if applicable):		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ○ DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○ DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

REQUIRED ANALYSES: OP Pesticides - Method 8141A - GW: 2 1-L Ambers - Soil:1-8 or 4-oz. Jar

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
3/18/10	1645	IR69-EB-031810-GW	G	X				2	
3/19/10	0900	IR69-FB-031910	G	X				2	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3/22/10	1500						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
[signature]	3/23/10	0927	YES ○ NO ○		C80-56101	1.6/1.9

FCU052:01.02.08:2

030

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

PROJECT REFERENCE: CTO-081	PROJECT NO.: 374082.FI.FI.69	PROJECT LOCATION: MCB Camp Lejeune
TESTAMERICA (LAB) PROJECT MANAGER: Abbie Yont	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Gwen Buckley	CLIENT PHONE: 757-671-6292	CLIENT FAX: 704-544-4041
CLIENT NAME: CH2M HILL	CLIENT EMAIL: Gwen.Buckley@CH2M.com	
CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226		
COMPANY CONTRACTING THIS WORK (if applicable):		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ○ DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○ DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

MATRIX TYPE: COMPOSITE (C) OR GRAB (G) INDICATE; AQUEOUS (WATER); SOLID OR SEMISOLID; AIR; NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)

REQUIRED ANALYSES: OP Pesticides - Method 8141A - GW: 2 1-L Ambers - Soil:1-8 or 4-oz. Jar

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G)	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID	OP Pesticides - Method 8141A	REMARKS
3/15/10	1530	IR69-SD03-10A	C		X			1	
3/16/10	1130	IR69-GW19IW-10A	G	X	X			2	
3/16/10	1200	IR69-GW19UW-10A	G	X				2	
3/16/10	1630	IR69-EB-031610-SB	G	X				2	
3/15/10	1200	IR69-SD02-10A	G		X			1	
3/15/10	1200	IR69-SD02-10A-MS	G		X			1	
3/15/10	1200	IR69-SD02-10A-SD	G		X			1	
~~3/15/10~~	~~1515~~	~~IR69-MW15DW-10A~~	G	X				~~2~~	
~~3/15/10~~	~~1200~~	~~IR69-MW14IW-10A~~	G	X				~~2~~	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
			[signature]	3-19-10	0815			
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
Beth a Daughtry	3/22/10	0841	YES ○ NO ○		680-56052	Temp 6.0/3.4/3.2

FCU052:01.02.08:2

04/05/2010

031

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

PROJECT REFERENCE: CTO-081	PROJECT NO.: 374082.FI.FI.69	PROJECT LOCATION: MCB Camp Lejeune
TESTAMERICA (LAB) PROJECT MANAGER: Abbie Yont	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Gwen Buckley	CLIENT PHONE: 757-671-6292	CLIENT FAX: 704-544-4041
CLIENT NAME: CH2M HILL	CLIENT EMAIL: Gwen.Buckley@CH2M.com	
CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226		
COMPANY CONTRACTING THIS WORK (if applicable):		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ○ DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○ DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	OP Pesticides - Method 8141A - GW: 2 1-L Ambers - Soil: 1-8 or 4-oz. Jar										REMARKS
3-16-10	1330	IR69-EB-0316-10-GW	G	X				2										
3-16-10	1230	IR69-GW26DW-10A	G	X				2										
3-16-10	1400	IR69-GW26IW-10A	G	X				2										
3-15-10	1200	IR69-GW04IW-10A	G	X				2										
3-15-10	1515	IR69-GW15DW-10A	G	X				2										
3-16-10	1530	IR69-SB03-04-05-10A	G	X				2										

NUMBER OF CONTAINERS SUBMITTED

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
			[signature]	3-19-10	0930			
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
Beth A Daughtry	3/22/10	0841	YES ○ NO ○		680-56052	Temp 6.0/3.4/3.2

FCU052:01.02.08:2

04/05/2010

132

Holding Times

Sampling Date: 3/15-16/10, 3/18-19/10
Received Date: 3/22, 3/24 at TestAmerica Cooler temps were within acceptable range.
Extraction Date: 3/22, 3/25
Analysis Dates: 3/25, 3/30

All extraction and analysis holding times were met for the samples in this SDG. Sample receipt data is in order. Cooler temperature was within acceptable range. This analysis was sub-contracted to Test America Savannah by Compuchem.

Calibrations

Initial calibrations were performed according to the method with a eight-point curve for the organophosphorus pesticide target compounds. Calibration factors were calculated or LR curves were plotted. %RSDs or correlation coefficients were within QC limits. Continuing calibration standards were analyzed per the SW-846 methods requested. All %D criteria were not met. Please see the report for any necessary qualifications. Column resolution was acceptable. Retention time windows were provided, retention times were stable throughout the analytical sequence. All required instrument blanks were analyzed. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Any compound detected in the sample, and the associated blank, must be qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than five (5) times the blank concentration.
- Sample weight, volume or dilution factor must be taken into consideration when applying the 5X criteria.
- Apply the same data validation guidelines to any associated rinse and field blanks and all associated samples.
- Qualification/Action codes:
-

No Action -	The sample result is greater than the RL and greater than five times (5X) the blank value.
U at RL-	The sample result is less than the RL when the blank contamination level is less than the RL.

No contamination that resulted in qualification of the data was noted in the associated method or instrument blanks or the submitted field QC blanks.

SURROGATE RECOVERIES

Surrogate recoveries were acceptable.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

The associated MS/MSD pair of sample IR69-SW02-10A exhibited 0% in both the MS and the MSD for the compounds demeton-s. The compound demeton-s was rejected in the native sample of the spike pair (IR69-SW02-10A) with a caution that the reported results should be considered significantly biased low. No other qualifications were required due to spike results.

LABORATORY CONTROL SAMPLES

The submitted LCS's submitted exhibited acceptable recoveries with the exception of demeton-s, demeton-o and naled. All samples were flagged as estimated for demeton-s. Demeton-o did not required qualifications because there were no positive results. The compound naled was qualified as estimated in only associated samples.

FIELD DUPLICATE SAMPLE SUMMARY

Sample ID: **Duplicate ID:**

Compound	Sample Conc.	Duplicate Conc.	RPD
			#DIV/0!

Comments: There were 0 field duplicate pairs submitted –

SAMPLE RESULT VERIFICATION

Raw data was verified. Calculations were verified.

Reviewer JACleveland **Date:** 7/27/10

Test America Savannah
SDG 680-56052-1
OPP

Job Narrative
680-56052-1

Comments
No additional comments.

Receipt
The Chains-of-Custody (COCs) were not properly filled out. The equipment blanks were not listed on the COCs using the nomenclature defined by the client. The client submitted revised chains of custody to reflect the proper identification of the equipment blanks.

All samples were received in good condition within temperature requirements.

GC Semi VOA
Method(s) 8141A: The laboratory control sample (LCS) for batch 680-163615 exceeded control limits for the following analytes: Demeton-S. The vendor purchased standard for Demeton-O and Demeton-S is expressed as a the value of the total concentration of the two analytes and not as the concentration of the individual analytes. The ratio of the LCS standard differs from the rations present in the calibration standards. The % recovery of the total od Demeton-O and Demeton-S was within limits.

Method(s) 8141A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 680-163989 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method(s) 8141A: The laboratory control sample (LCS) for batch 680-163989 exceeded control limits for the following analyte(s): Naled. Naled has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method(s) 8141A: The laboratory control sample (LCS) for batch 680-163989 exceeded control limits for the following analytes: Demeton-S. The vendor purchased standard for Demeton-O and Demeton-S is expressed as a the value of the total concentration of the two analytes and not as the concentration of the individual analytes. The ratio of the LCS standard differs from the rations present in the calibration standards. The % recovery of the total od Demeton-O and Demeton-S was within limits.

Method(s) 8141A: The capping continuing calibration verification (CCV) analyzed on 03/30/2010 after sample analysis recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. These samples had been analyzed on multiple runs with the capping CCV failing high after each attempted analysis; therefore sample matrix is suspected to have contributed to these failures.

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 680-56052-1

SDG No.: CLJ56052-1

Lab Sample ID: CCV 680-164558/1 Calibration Date: 03/30/2010 13:07

Instrument ID: SGO Calib Start Date: 03/29/2010 20:40

GC Column: Rtx-OPP 2 ID: 0.32(mm) Calib End Date: 03/29/2010 23:32

Lab File ID: oc29050.d Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D	
Dichlorvos	Ave	10054101	12767640		100	0.500	27.0*	15.0	NQ
Mevinphos	QuaF	5422393	7009706		100	0.500	22.5		
Demeton-O	Ave	2323870	2675510		130	0.500	15.1*	15.0	NQ
Ethoprop	Ave	9165945	11029900		25.0	0.500	20.3*	15.0	↓
Naled	Ave	1313254	976428		250	0.500	-25.6*	15.0	J/UJ
Phorate	Ave	8932970	9654738		50.0	0.500	8.1	15.0	
Demeton-S	QuaF	4906970	5992870		130	0.500	10.3		
Diazinon	Ave	8380033	9634842		50.0	0.500	15.0	15.0	
Disulfoton	Ave	8866856	10073720		100	0.500	13.6	15.0	
Methyl parathion	QuaF	5801297	9013828		25.0	0.500	45.4		
Ronnel	Ave	8947450	9294728		50.0	0.500	3.9	15.0	
Chlorpyrifos	Ave	6699626	8223736		50.0	0.500	22.7*	15.0	NQ
Trichloronate	Ave	5691766	7876892		50.0	0.500	38.4*	15.0	↓
Fenthion	Ave	10535381	10935060		50.0	0.500	3.8	15.0	
Stirophos	Ave	5359702	6253026		50.0	0.500	16.7*	15.0	NQ
Tokuthion	Ave	5515938	6415296		50.0	0.500	16.3*	15.0	↓
Fensulfothion	QuaF	3896941	3739754		250	0.500	-4.3		
Bolstar	Ave	6976103	7033940		50.0	0.500	0.8	15.0	
Azinphos-methyl	Ave	4755999	4501036		50.0	0.500	-5.4	15.0	
Coumaphos	Ave	4748519	4409792		50.0	0.500	-7.1	15.0	
Merphos	Ave	6970810	7456058		75.0	0.500	7.0	15.0	

GW13DW
28IW
28DW
EB01-031810-GW
FB01-031910
EB01-031610-GW
GW26DW
GW26IN
GW04IW
GW15DW

FORM VII 8141A

Initial Calibration Date: 3/23/2010

RRF and %RSD Calculations:

Compound Name: disulfoton in level 5
Lab Value: 7471463.0000

Area of Compound	5603597
Conc. of Compound	0.75
Calculated RRF	7471462.6667

Compound Name: disulfoton
Lab Value: 7.0

RRF of STD 1	6117020.0000
RRF of STD 2	7233480.0000
RRF of STD 3	6613540.0000
RRF of STD 4	7057576.0000
RRF of STD 3	7471463.0000
RRF of STD 4	7513860.0000
RRF of STD 5	7331588.0000
RRF of STD 6	7477159.0000
Calculated % RSD	7.00

Continuing Calibration File ID:

RRF and %D Calculations:

Compound Name: coumaphos
Lab Value: 4366520.00000

Area of compound	2183260
Conc. Of compound	0.5
Calculated CF	4366520.00000

Compound Name: coumaphos
Lab Value: 17.1

Avg. CF from ICAL	3728703.00000
CF of CCV	4366520.00000
Calculated % D	-17.1

Initial Calibration Date: 3/30/2010

RRF and %RSD Calculations:

Compound Name: dichlorvos in level 1
Lab Value: 7581720.0000

Area of Compound	379086
Conc. of Compound	0.05
Calculated RRF	7581720.0000

Compound Name: dichlorvos
Lab Value: 12.4

RRF of STD 1	7581720.0000
RRF of STD 2	9060250.0000
RRF of STD 3	9481248.0000
RRF of STD 4	10714078.0000
RRF of STD 3	10819207.0000
RRF of STD 4	10932359.0000
RRF of STD 5	10626555.0000
RRF of STD 6	11217392.0000
Calculated % RSD	12.41

Continuing Calibration File ID: cc29050

RRF and %D Calculations:

Compound Name: diazinon
Lab Value: 9634842.00000

Area of compound	4817421
Conc. Of compound	0.5
Calculated CF	9634842.00000

Compound Name: diazinon
Lab Value:

Avg. CF from ICAL	8380033.00000
CF of CCV	9634842.00000
Calculated % D	-15.0

FORM IV
GC SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 680-56052-1

SDG No.: CLJ56052-1

Lab Sample ID: MB 680-163615/11-A

Matrix: Water Date Extracted: 03/22/2010 14:09

Lab File ID:(1) oc23061.d Lab File ID:(2)

Date Analyzed:(1) 03/25/2010 02:18 Date Analyzed:(2)

Instrument ID:(1) SGO Instrument ID:(2)

GC Column:(1) Rtx-OPP 2 ID: 0.32(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 680-163615/12-A		03/25/2010 02:43
	LCS 680-163615/15-A		03/25/2010 03:08
IR69-GW19IW-10A	680-56052-2		03/25/2010 03:32
IR69-GW19UW-10A	680-56052-3		03/25/2010 03:57
IR69-EB01-031610-SB	680-56052-4		03/25/2010 04:22
IR69-SW02-10A	680-56052-6		03/25/2010 04:47
IR69-SW03-10A	680-56052-7		03/25/2010 05:12
IR69-SW02-10A MS	680-56052-6 MS	03/25/2010 05:37	03/25/2010 06:27
IR69-SW02-10A MSD	680-56052-6 MSD	03/25/2010 06:02	03/25/2010 06:52
IR69-EB01-031610-GW	680-56052-8		03/30/2010 10:14
IR69-GW26DW-10A	680-56052-9		03/30/2010 10:38
IR69-GW26IN-10A	680-56052-10		03/30/2010 11:03
IR69-GW04IW-10A	680-56052-11		03/30/2010 11:28
IR69-GW15DW-10A	680-56052-12		03/30/2010 11:53

Client: Compuchem Environmental Corporation

Job Number: 680-56052-1
Sdg Number: CLJ56052-1

Lab Control Sample - Batch: 680-163615

Method: 8141A
Preparation: 3520C

Lab Sample ID: LCS 680-163615/12-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/25/2010 0243
Date Prepared: 03/22/2010 1409

Analysis Batch: 680-164210
Prep Batch: 680-163615
Units: ug/L

Instrument ID: SGO
Lab File ID: oc23062.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Azinphos-methyl	4.00	4.35	109	10 - 155	
Bolstar	4.00	4.63	116	62 - 130	
Chlorpyrifos	4.00	4.02	100	66 - 130	
Coumaphos	4.00	4.75	119	53 - 130	
Demeton-O	4.00	12.0	300	70 - 130	Q NQ
Demeton-S	4.00	1.3	18	70 - 130	U Q JTUJ
Diazinon	4.00	3.81	95	53 - 138	
Dichlorvos	4.00	4.62	115	52 - 130	
Disulfoton	4.00	3.87	97	57 - 130	
Ethoprop	4.00	4.10	103	57 - 130	
Fensulfothion	4.00	5.88	147	16 - 184	
Fenthion	4.00	3.87	97	10 - 181	
Merphos	4.00	2.17	54	10 - 135	
Methyl parathion	4.00	3.13	78	31 - 130	
Mevinphos	4.00	3.42	85	38 - 131	
Naled	4.00	2.5	61	54 - 130	U
Phorate	4.00	3.25	81	49 - 130	
Ronnel	4.00	3.90	97	46 - 142	
Stirophos	4.00	4.47	112	70 - 130	
Tokuthion	4.00	4.74	118	63 - 130	
Trichloronate	4.00	3.85	96	26 - 145	

Surrogate	% Rec	Acceptance Limits
Triphenylphosphate	111	26 - 134

Lab Control Sample - Batch: 680-163615

Method: 8141A
Preparation: 3520C

Lab Sample ID: LCS 680-163615/15-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/25/2010 0308
Date Prepared: 03/22/2010 1409

Analysis Batch: 680-164210
Prep Batch: 680-163615
Units: ug/L

Instrument ID: SGO
Lab File ID: oc23063.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Dimethoate	4.00	3.17	79	31 - 130	
EPN	4.00	3.21	80	53 - 130	
Malathion	4.00	3.55	89	56 - 130	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Compuchem Environmental Corporation

Job Number: 680-56052-1
Sdg Number: CLJ56052-1

Lab Control Sample - Batch: 680-163615

Method: 8141A
Preparation: 3520C

Lab Sample ID: LCS 680-163615/15-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/25/2010 0308
Date Prepared: 03/22/2010 1409

Analysis Batch: 680-164210
Prep Batch: 680-163615
Units: ug/L

Instrument ID: SGO
Lab File ID: oc23063.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Monochrotophos	40.0	19.1	48	10 - 130	
Parathion	4.00	3.43	86	45 - 132	
Famphur	4.00	3.88	97	54 - 130	
Sulfotepp	4.00	3.66	92	53 - 130	
Thionazin	4.00	3.55	89	37 - 134	

Surrogate	% Rec	Acceptance Limits
Triphenylphosphate	101	26 - 134

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IV
GC SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 680-56052-1

SDG No.: CLJ56052-1

Lab Sample ID: MB 680-163989/6-A

Matrix: Water Date Extracted: 03/25/2010 14:01

Lab File ID:(1) oc29033.d Lab File ID:(2)

Date Analyzed:(1) 03/30/2010 05:18 Date Analyzed:(2)

Instrument ID:(1) SGO Instrument ID:(2)

GC Column:(1) Rtx-OPP 2 ID: 0.32(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 680-163989/7-A		03/30/2010 05:42
	LCS 680-163989/10-A		03/30/2010 06:07
IR69-GW13DW-10A	680-56101-1		03/30/2010 06:32
IR69-GW28IW-10A	680-56101-2		03/30/2010 06:56
IR69-GW28DW-10A	680-56101-3		03/30/2010 07:21
IR69-EB01-031810-GW	680-56101-4		03/30/2010 07:46
IR69-FB01-031910	680-56101-5		03/30/2010 08:10
IR69-GW28IW-10A MS	680-56101-2 MS		03/30/2010 09:24
IR69-GW28IW-10A MSD	680-56101-2 MSD		03/30/2010 09:49

Client: Compuchem Environmental Corporation

Job Number: 680-56052-1
Sdg Number: CLJ56052-1

Lab Control Sample - Batch: 680-163989

Method: 8141A
Preparation: 3520C

Lab Sample ID: LCS 680-163989/7-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/30/2010 0542
Date Prepared: 03/25/2010 1401

Analysis Batch: 680-164554
Prep Batch: 680-163989
Units: ug/L

Instrument ID: SGO
Lab File ID: oc29034.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Azinphos-methyl	4.00	3.19	80	10 - 155	
Bolstar	4.00	4.17	104	62 - 130	
Chlorpyrifos	4.00	4.34	109	66 - 130	
Coumaphos	4.00	3.20	80	53 - 130	
Demeton-O	4.00	9.96	249	70 - 130	Q NQ
Demeton-S	4.00	1.3	18	70 - 130	U Q J/UJ
Diazinon	4.00	4.04	101	53 - 138	
Dichlorvos	4.00	5.15	129	52 - 130	
Disulfoton	4.00	4.22	105	57 - 130	
Ethoprop	4.00	4.36	109	57 - 130	
Fensulfothion	4.00	4.73	118	16 - 184	J
Fenthion	4.00	4.21	105	10 - 181	
Merphos	4.00	2.13	53	10 - 135	
Methyl parathion	4.00	4.54	113	31 - 130	
Mevinphos	4.00	3.53	88	38 - 131	
Naled	4.00	2.5	40	54 - 130	U Q J/UJ
Phorate	4.00	3.27	82	49 - 130	
Ronnel	4.00	4.39	110	46 - 142	
Stirophos	4.00	3.78	95	70 - 130	
Tokuthion	4.00	4.23	106	63 - 130	
Trichloronate	4.00	3.96	99	26 - 145	

Surrogate	% Rec	Acceptance Limits
Triphenylphosphate	91	26 - 134

Flag in samples - see Form IV

Lab Control Sample - Batch: 680-163989

Method: 8141A
Preparation: 3520C

Lab Sample ID: LCS 680-163989/10-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/30/2010 0607
Date Prepared: 03/25/2010 1401

Analysis Batch: 680-164554
Prep Batch: 680-163989
Units: ug/L

Instrument ID: SGO
Lab File ID: oc29035.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Dimethoate	4.00	3.20	80	31 - 130	
EPN	4.00	2.75	69	53 - 130	
Malathion	4.00	3.56	89	56 - 130	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Compuchem Environmental Corporation

Job Number: 680-56052-1
Sdg Number: CLJ56052-1

Lab Control Sample - Batch: 680-163989

Method: 8141A
Preparation: 3520C

Lab Sample ID: LCS 680-163989/10-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/30/2010 0607
Date Prepared: 03/25/2010 1401

Analysis Batch: 680-164554
Prep Batch: 680-163989
Units: ug/L

Instrument ID: SGO
Lab File ID: oc29035.d
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Monochrotophos	40.0	15.3	38	10 - 130	
Parathion	4.00	3.75	94	45 - 132	
Famphur	4.00	2.95	74	54 - 130	
Sulfotepp	4.00	3.77	94	53 - 130	
Thionazin	4.00	3.76	94	37 - 134	

Surrogate	% Rec	Acceptance Limits
Triphenylphosphate	82	26 - 134

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM III
GC SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-56052-1

SDG No.: CLJ56052-1

Matrix: Water Level: Low Lab File ID: oc23069.d

Lab ID: 680-56052-6 MS Client ID: IR69-SW02-10A MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#	
Azinphos-methyl	4.00	0.50 U	5.04	126	10-155		
Bolstar	4.00	0.50 U	5.13	128	62-130		
Chlorpyrifos	4.00	0.50 U	4.69	117	66-130		
Coumaphos	4.00	0.50 U	4.40	110	53-130		
Demeton-O	4.00	1.3 U	9.70	242	70-130	J	NQ
Demeton-S	4.00	1.3 U	1.3 U	0	70-130	M J	J/R
Diazinon	4.00	0.50 U	4.18	104	53-138		
Dichlorvos	4.00	1.0 U	4.57	114	52-130		
Disulfoton	4.00	1.0 U	4.38	110	57-130		
Ethoprop	4.00	0.25 U	4.54	114	57-130		
Fensulfothion	4.00	2.5 U	7.32	183	16-184		
Fenthion	4.00	0.50 U	4.29	107	10-181		
Merphos	4.00	0.75 U	2.55	64	10-135		
Methyl parathion	4.00	0.25 U	3.83	96	31-130		
Mevinphos	4.00	1.0 U	3.95	99	38-131		
Naled	4.00	2.5 U	4.66 J	117	54-130		
Phorate	4.00	0.50 U	3.44	86	49-130		
Ronnel	4.00	0.50 U	4.13	103	46-142		
Stirophos	4.00	0.50 U	5.09	127	70-130		
Tokuthion	4.00	0.50 U	5.24	131	63-130	J	NQ
Trichloronate	4.00	0.50 U	4.60	115	26-145		

Flag in native only

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-56052-1

SDG No.: CLJ56052-1

Matrix: Water Level: Low Lab File ID: oc23071.d

Lab ID: 680-56052-6 MS Client ID: IR69-SW02-10A MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Dimethoate	4.00	1.0 U	3.59	90	31-130	
EPN	4.00	0.50 U	4.34	109	53-130	
Malathion	4.00	0.50 U	4.13	103	56-130	
Monochrotophos	40.0	5.0 U	22.0	55	10-130	
Parathion	4.00	0.50 U	4.40	110	45-132	
Famphur	4.00	1.0 U	4.60	115	54-130	
Sulfotepp	4.00	0.25 U	4.19	105	53-130	
Thionazin	4.00	0.50 U	3.96	99	37-134	

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-56052-1

SDG No.: CLJ56052-1

Matrix: Water Level: Low Lab File ID: oc23070.d

Lab ID: 680-56052-6 MSD Client ID: IR69-SW02-10A MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Azinphos-methyl	4.00	4.69	117	NC	40	10-155	
Bolstar	4.00	4.64	116	NC	40	62-130	
Chlorpyrifos	4.00	4.19	105	NC	40	66-130	
Coumaphos	4.00	4.77	119	NC	40	53-130	
Demeton-O	4.00	7.65	191	NC	40	70-130	J
Demeton-S	4.00	1.3 U	0	NC	40	70-130	M J
Diazinon	4.00	3.72	93	NC	40	53-138	
Dichlorvos	4.00	5.10	127	NC	40	52-130	
Disulfoton	4.00	4.04	101	NC	40	57-130	
Ethoprop	4.00	3.89	97	NC	40	57-130	
Fensulfothion	4.00	6.68	167	NC	40	16-184	
Fenthion	4.00	4.06	102	NC	40	10-181	
Merphos	4.00	2.26	56	NC	40	10-135	
Methyl parathion	4.00	3.55	89	NC	40	31-130	
Mevinphos	4.00	4.65	116	NC	40	38-131	
Naled	4.00	3.83 J	96	NC	40	54-130	
Phorate	4.00	3.02	76	NC	40	49-130	
Ronnel	4.00	4.02	101	NC	40	46-142	
Stirophos	4.00	4.63	116	NC	40	70-130	
Tokuthion	4.00	4.72	118	NC	40	63-130	
Trichloronate	4.00	3.81	95	NC	40	26-145	

NQ J/R

Flag in native only

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-56052-1

SDG No.: CLJ56052-1

Matrix: Water Level: Low Lab File ID: oc23072.d

Lab ID: 680-56052-6 MSD Client ID: IR69-SW02-10A MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Dimethoate	4.00	3.71	93	3	40	31-130	
EPN	4.00	3.92	98	10	40	53-130	
Malathion	4.00	3.92	98	5	40	56-130	
Monochrotophos	40.0	29.9	75	30	40	10-130	
Parathion	4.00	4.08	102	7	40	45-132	
Famphur	4.00	4.23	106	8	40	54-130	
Sulfotepp	4.00	4.12	103	2	40	53-130	
Thionazin	4.00	4.24	106	7	40	37-134	

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-56052-1

SDG No.: CLJ56052-1

Matrix: Water Level: Low Lab File ID: oc29043.d

Lab ID: 680-56101-2 MS Client ID: IR69-GW28IW-10A MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Dimethoate	4.00	1.0 U	3.41	85	31-130	
EPN	4.00	0.50 U	3.31	83	53-130	
Malathion	4.00	0.50 U	3.95	99	56-130	
Monochrotophos	40.0	5.0 U	19.1	48	10-130	
Parathion	4.00	0.50 U	4.31	108	45-132	
Famphur	4.00	1.0 U	3.37	84	54-130	
Sulfotepp	4.00	0.25 U	4.20	105	53-130	
Thionazin	4.00	0.50 U	4.02	100	37-134	

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

FORM III
GC SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 680-56052-1

SDG No.: CLJ56052-1

Matrix: Water Level: Low Lab File ID: oc29044.d

Lab ID: 680-56101-2 MSD Client ID: IR69-GW28IW-10A MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Dimethoate	4.00	3.69	92	8	40	31-130	
EPN	4.00	3.79	95	14	40	53-130	
Malathion	4.00	3.96	99	0	40	56-130	
Monochrotophos	40.0	22.5	56	16	40	10-130	
Parathion	4.00	4.43	111	3	40	45-132	
Famphur	4.00	3.72	93	10	40	54-130	
Sulfotepp	4.00	4.21	105	0	40	53-130	
Thionazin	4.00	3.95	99	2	40	37-134	

Calculations are performed before rounding

Column to be used to flag recovery and RPD values

FORM III 8141A

SAMPLE CALCULATION

Sample ID: IR69-SW02-10A MSD
Standard ID: ICAL curve3/23/10
Compound: PARATHION
Concnetration: 4.08 ug/L

	Water (ug/L)	Soil (ug/Kg)
Area of Compound	2934123	
Calibration Factor of Compound	7188347	
Dilution Factor	1	
Weight/Volume of Sample	500	
Final Volume extract	5000	
% Moisture	NA	
conversion factor	1	1
Concentration	4.08178	#DIV/0!

DataQual
Environmental Services, LLC

CH2M HILL
5700 Cleveland Street
Suite 101
Virginia Beach, VA 23462

July 27, 2010
TestAmerica-Savannah, SDG# CLJ56052-2
MCB Camp Lejeune, CTO-81

Dear Ms. Buckley,

The following Data Validation report is provided as requested for the parameters noted in the table below for SDG # CLJ56052-2. The data validation was performed in accordance with the SW846 Method 8141A for organophosphorous pesticides (OPP) and good professional judgment. Also used in the validation of these samples were The National Functional Guidelines for Organic Data Review (June, 2008), as applicable. All areas of concern are discussed in the body of the report and a summary of data qualifications is provided.

Sample ID	Lab ID	Matrix	OPP
IR69-SD03-10A	680-56052-1	soil	X
IR69-SD02-10A	680-56052-5	soil	X
IR69-SB03-04-05-10A	680-56052-13	soil	X
IR69-SD02-10AMS	680-56052-5MS	soil	X
IR69-SD02-10AMSD	680-56052-5MSD	soil	X

There were no quality control samples provided with this SDG.

The samples were evaluated based on the following criteria:

- Data Completeness *
- Technical Holding Times *
- GC Performance *
- Initial/Continuing Calibrations
- Blanks *
- Surrogates *
- Laboratory Control Samples
- Matrix Spike Recoveries
- Field Duplicates *
- Identification/Quantitation *
- Reporting Limits *

* - indicates that no qualifications were required based on this criteria

5830 Amberway Drive • St. Louis, MO 63128 • 314-330-1327 • Fax 314-849-6264

Overall Evaluation of Data/Potential Usability Issues

A summary of qualifications applied to the sample results are noted below for the fractions validated. Specific details regarding qualification of the data are addressed in the Specific Evaluation section of this narrative. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte the validator has chosen the qualifier that best indicates possible bias in the results and flagged the data accordingly. However, information regarding all quality control issues is provided in the body of the report and on the qualification summary page. Please note that when a compound or analyte is flagged due to blank contamination the BL qualifier code takes precedence over all other qualifier codes except a code that explains rejected data.

Organophosphorous Pesticides (OPP)

One continuing calibration standard exhibited one compound which was non-compliant due to a decrease in analytical response. Qualifications were required in the associated samples.

The laboratory control samples associated with samples exhibited non-compliant recoveries for one compound that resulted in the qualification of results.

The MS/MSD pair of sample IR69-SD02-10A exhibited non-compliant %Rs that resulted in the qualification of some sample results.

Specific Evaluation of Data

Data Completeness

This SDG was received complete and intact. Resubmissions were not required.

Technical Holding Times

According to chain of custody records, sampling was performed on 3/15-16/10 and samples were received at the laboratory on 3/22/10. All sample preparation and analysis was performed within method holding time requirements.

Initial/Continuing Calibrations

OPP

One calibration standard exhibited a high %Ds that was due to a decrease in sensitivity. A summary of this non-compliance and affected samples are noted in the following table. Sample results were qualified as indicated.

Standard ID	Compound(s)	%D	Samples	Q Flag	Q Code
oc30041.d	naled	-59.2	all samples	J/UJ	CCL

Laboratory Control Samples

OPP

The laboratory control samples associated with the samples in this SDG exhibited low recoveries for the compound demeton-s (24%). The compound was qualified as estimated J/UJ in all field and QC blank samples with a qualifier code of BSL.

Matrix Spike Recoveries

OPP

The MS/MSD of sample IR69-SD02-10A exhibited 0% recoveries for the compounds demeton-s, dimethoate, monochrotophos and naled. These compounds were rejected R in the native sample only with a qualifier code of MSL. The compound mevinphos exhibited non-compliant recoveries (0/25) and was qualified as estimated J/UJ in the native sample only with a qualifier code of MSL.

A summary of qualifications required is provided on the following page. Please do not hesitate to contact DataQual ES with any questions regarding this validation report.

Sincerely,

Jacqueline Cleveland

Jacqueline Cleveland
Vice-President

Summary of Data Qualifications

Organophosphorous Pesticides

Sample ID	Compound	Results	Q-Flag	Q Code
all samples	naled*	+/-	J/UJ	CCL
all samples	demeton-s*	+/-	J/UJ	BSL
IR69-SD02-10A	demeton-s naled dimethoate monochrotophos	+/-	J/R	MSL
IR69-SD02-10A	mevinphos	+/-	J/UJ	MSL

*final qualifier code for sample IR69-SD02-10A was MSL

Glossary of Qualification Flags and Abbreviations

Qualification Flags (Q-Flags)

U	not detected above the reported sample quantitation limit
J	estimated value
UJ	reported quantitation limit is qualified as estimated
R	result is rejected; the presence or absence of the analyte cannot be verified
D	result value is based on dilution analysis result
NJ	analyte has been tentatively identified, estimated value
L	analyte present, biased low
UL	not detected, quantitation limit is probably higher
K	analyte present, biased high

Inorganic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 10X the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL and the result is raised to the RL and flagged U.
R or J+	The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator. (see NFG, Rev. date 10/04, p. 17 for extracted blanks (PB))

Organic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 5X (10X for common laboratory contaminants) the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is raised to the RL and flagged U.
U	The sample result for the blank contaminant is greater than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is flagged U at the reported value.

General Abbreviations

RL / MDL	reporting limit/method detection limit
CRQL	contract required quantitation limit
Q Code	qualifier code
+	positive result
-	non-detect result

QUALIFIER CODE REFERENCE

Qualifier	Description
TN	Tune
BSL	Blank Spike/LCS - High Recovery
BSH	Blank Spike/LCS - Low Recovery
BD	Blank Spike/Blank Spike Duplicate (LCS/LCSD) Precision
BRL	Below Reporting Limit
ISL	Internal Standard - Low Recovery
ISH	Internal Standard - High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate - Low Recovery
MSH	Matrix Spike and/or Matrix Spike Duplicate - High Recovery
MI	Matrix interference obscuring the raw data
MDP	Matrix Spike/Matrix Spike Duplicate Precision
2S	Second Source - Bad reproducibility between tandem detectors
SSL	Spiked Surrogate - Low Recovery
SSH	Spiked Surrogate - High Recovery
SD	Serial Dilution Reproducibility
ICL	Initial Calibration - Low Relative Response Factors (RRF)
ICH	Initial Calibration - High Relative Response Factors (RRF)
ICB	Initial Calibration - Bad Linearity or Curve Function
CCL	Continuing Calibration - Low Recovery or %Difference
CCH	Continuing Calibration - High Recovery or %Difference
LD	Lab Duplicate Reproducibility
HT	Holding Time
PD	Pesticide Degradation
2C	Second Column - Poor Dual Column Reproducibility
LR	Concentration Exceeds Linear Range
BL	Blank Contamination (MBL, EBL, FBL, TBL)
RE	Redundant Result - due to Re-analysis or Re-extraction
DL	Redundant Result - due to Dilution
FD	Field Duplicate
OT	Other - explained in data validation report
%SOL	High moisture content

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-2

SDG No.: CLJ56052-2

Client Sample ID: IR69-SD03-10A | Lab Sample ID: 680-56052-1

Matrix: Solid | Lab File ID: oc30028.d

Analysis Method: 8141A | Date Collected: 03/15/2010 15:30

Extraction Method: 3550B | Date Extracted: 03/23/2010 12:32

Sample wt/vol: 30.21(g) | Date Analyzed: 03/31/2010 02:21

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 28.6 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164569 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	46	U	46	24
35400-43-2	Bolstar	46	U	46	24
2921-88-2	Chlorpyrifos	46	U	46	24
56-72-4	Coumaphos	46	U	46	24
298-03-3	Demeton-O	120	U ~~Q~~	120	58
126-75-0	Demeton-S	120	~~U~~ ~~Q~~ UJ BSL	120	58
333-41-5	Diazinon	46	U	46	24
62-73-7	Dichlorvos	93	U	93	47
60-51-5	Dimethoate	93	U	93	47
298-04-4	Disulfoton	93	U	93	47
2104-64-5	EPN	46	U	46	24
13194-48-4	Ethoprop	24	U	24	12
56-38-2	Ethyl Parathion	46	U	46	24
115-90-2	Fensulfothion	240	U	240	120
55-38-9	Fenthion	46	U	46	24
121-75-5	Malathion	46	U	46	24
150-50-5	Merphos	70	U	70	35
298-00-0	Methyl parathion	24	U	24	12
7786-34-7	Mevinphos	93	U	93	47
6923-22-4	Monochrotophos	420	J	460	240
300-76-5	Naled	240	~~U~~ UJ CCL	240	120
298-02-2	Phorate	46	U	46	24
52-85-7	Famphur	93	U	93	47
299-84-3	Ronnel	46	U	46	24
22248-79-9	Stirophos	46	U	46	24
3689-24-5	Sulfotepp	24	U	24	12
34643-46-4	Tokuthion	46	U	46	24
327-98-0	Trichloronate	46	U	46	24
297-97-2	Thionazin	46	U	46	24

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	102	42-128	

BAC 72710

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-2

SDG No.: CLJ56052-2

Client Sample ID: IR69-SD02-10A | Lab Sample ID: 680-56052-5

Matrix: Solid | Lab File ID: oc30029.d

Analysis Method: 8141A | Date Collected: 03/15/2010 12:00

Extraction Method: 3550B | Date Extracted: 03/23/2010 12:32

Sample wt/vol: 30.23(g) | Date Analyzed: 03/31/2010 02:46

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 79.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164569 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	160	U	160	81
35400-43-2	Bolstar	160	U	160	81
2921-88-2	Chlorpyrifos	160	U	160	81
56-72-4	Coumaphos	160	U	160	81
298-03-3	Demeton-O	400	U ~~Q~~ J	400	200
126-75-0	Demeton-S	400	~~U Q J~~ R MSL	400	200
333-41-5	Diazinon	160	U	160	81
62-73-7	Dichlorvos	320	U	320	160
60-51-5	Dimethoate	320	~~U J~~ R MSL	320	160
298-04-4	Disulfoton	320	U	320	160
2104-64-5	EPN	160	U	160	81
13194-48-4	Ethoprop	81	U	81	40
56-38-2	Ethyl Parathion	160	U	160	81
115-90-2	Fensulfothion	810	U	810	400
55-38-9	Fenthion	160	U	160	81
121-75-5	Malathion	160	U	160	81
150-50-5	Merphos	240	U	240	120
298-00-0	Methyl parathion	81	U	81	40
7786-34-7	Mevinphos	320	~~U J~~ UJ MSL	320	160
6923-22-4	Monochrotophos	1600	~~U J~~ R MSL	1600	810
300-76-5	Naled	810	~~U J~~ R MSL	810	400
298-02-2	Phorate	160	U	160	81
52-85-7	Famphur	320	U	320	160
299-84-3	Ronnel	160	U	160	81
22248-79-9	Stirophos	160	U	160	81
3689-24-5	Sulfotepp	81	U	81	40
34643-46-4	Tokuthion	160	U	160	81
327-98-0	Trichloronate	160	U	160	81
297-97-2	Thionazin	160	U	160	81

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	105	42-128	

FORM I 8141A

06/15/2010

008

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-2

SDG No.: CLJ56052-2

Client Sample ID: IR69-SB03-04-05-10A | Lab Sample ID: 680-56052-13

Matrix: Solid | Lab File ID: oc30030.d

Analysis Method: 8141A | Date Collected: 03/16/2010 15:30

Extraction Method: 3550B | Date Extracted: 03/23/2010 12:32

Sample wt/vol: 30.49(g) | Date Analyzed: 03/31/2010 03:11

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 22.7 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164569 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	42	U	42	22
35400-43-2	Bolstar	42	U	42	22
2921-88-2	Chlorpyrifos	42	U	42	22
56-72-4	Coumaphos	42	U	42	22
298-03-3	Demeton-O	110	U ~~Q~~	110	53
126-75-0	Demeton-S	110	U ~~Q~~ UJ BSL	110	53
333-41-5	Diazinon	42	U	42	22
62-73-7	Dichlorvos	85	U	85	43
60-51-5	Dimethoate	85	U	85	43
298-04-4	Disulfoton	85	U	85	43
2104-64-5	EPN	42	U	42	22
13194-48-4	Ethoprop	22	U	22	11
56-38-2	Ethyl Parathion	42	U	42	22
115-90-2	Fensulfothion	220	U	220	110
55-38-9	Fenthion	42	U	42	22
121-75-5	Malathion	42	U	42	22
150-50-5	Merphos	64	U	64	32
298-00-0	Methyl parathion	22	U	22	11
7786-34-7	Mevinphos	85	U	85	43
6923-22-4	Monochrotophos	420	U	420	220
300-76-5	Naled	220	~~U~~ UJ CCL	220	110
298-02-2	Phorate	42	U	42	22
52-85-7	Famphur	85	U	85	43
299-84-3	Ronnel	42	U	42	22
22248-79-9	Stirophos	42	U	42	22
3689-24-5	Sulfotepp	22	U	22	11
34643-46-4	Tokuthion	42	U	42	22
327-98-0	Trichloronate	42	U	42	22
297-97-2	Thionazin	42	U	42	22

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	106	42-128	

SMC 12/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-2

SDG No.: CLJ56052-2

Client Sample ID: IR69-SD02-10A MS | Lab Sample ID: 680-56052-5 MS

Matrix: Solid | Lab File ID: oc30037.d

Analysis Method: 8141A | Date Collected: 03/15/2010 12:00

Extraction Method: 3550B | Date Extracted: 03/23/2010 12:32

Sample wt/vol: 30.37(g) | Date Analyzed: 03/31/2010 06:05

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 79.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164569 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	672		160	81
35400-43-2	Bolstar	651		160	81
2921-88-2	Chlorpyrifos	586		160	81
56-72-4	Coumaphos	684		160	81
298-03-3	Demeton-O	1590	J	390	200
126-75-0	Demeton-S	390	U M J	390	200
333-41-5	Diazinon	493		160	81
62-73-7	Dichlorvos	400		320	160
298-04-4	Disulfoton	475		320	160
13194-48-4	Ethoprop	484		81	40
115-90-2	Fensulfothion	456	J	810	400
55-38-9	Fenthion	499		160	81
150-50-5	Merphos	307		240	120
298-00-0	Methyl parathion	660		81	40
7786-34-7	Mevinphos	320	U J	320	160
300-76-5	Naled	810	U J	810	400
298-02-2	Phorate	378		160	81
299-84-3	Ronnel	502		160	81
22248-79-9	Stirophos	621		160	81
34643-46-4	Tokuthion	653		160	81
327-98-0	Trichloronate	604		160	81

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	105	42-128	

JBC 7/2/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-2

SDG No.: CLJ56052-2

Client Sample ID: IR69-SD02-10A MS | Lab Sample ID: 680-56052-5 MS

Matrix: Solid | Lab File ID: oc30039.d

Analysis Method: 8141A | Date Collected: 03/15/2010 12:00

Extraction Method: 3550B | Date Extracted: 03/23/2010 12:32

Sample wt/vol: 30.08(g) | Date Analyzed: 03/31/2010 06:54

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 79.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164569 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
60-51-5	Dimethoate	320	U J	320	160
2104-64-5	EPN	675		160	81
56-38-2	Ethyl Parathion	587		160	81
121-75-5	Malathion	535		160	81
6923-22-4	Monochrotophos	1600	U J	1600	810
52-85-7	Famphur	569		320	160
3689-24-5	Sulfotepp	357		81	41
297-97-2	Thionazin	339		160	81

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	105	42-128	

JAC 7/2/10

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FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-2

SDG No.: CLJ56052-2

Client Sample ID: IR69-SD02-10A MSD | Lab Sample ID: 680-56052-5 MSD

Matrix: Solid | Lab File ID: oc30038.d

Analysis Method: 8141A | Date Collected: 03/15/2010 12:00

Extraction Method: 3550B | Date Extracted: 03/23/2010 12:32

Sample wt/vol: 30.01(g) | Date Analyzed: 03/31/2010 06:30

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 79.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164569 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
86-50-0	Azinphos-methyl	652		160	82
35400-43-2	Bolstar	546		160	82
2921-88-2	Chlorpyrifos	480		160	82
56-72-4	Coumaphos	596		160	82
298-03-3	Demeton-O	1050	J	400	200
126-75-0	Demeton-S	400	U J	400	200
333-41-5	Diazinon	354		160	82
62-73-7	Dichlorvos	341		320	160
298-04-4	Disulfoton	321		320	160
13194-48-4	Ethoprop	344		82	41
115-90-2	Fensulfothion	566	J	820	410
55-38-9	Fenthion	449		160	82
150-50-5	Merphos	260		240	120
298-00-0	Methyl parathion	535		82	41
7786-34-7	Mevinphos	162	J	320	160
300-76-5	Naled	820	U J	820	410
298-02-2	Phorate	248		160	82
299-84-3	Ronnel	378		160	82
22248-79-9	Stirophos	554		160	82
34643-46-4	Tokuthion	553		160	82
327-98-0	Trichloronate	429		160	82

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	94	42-128	

JLC 12/10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 680-56052-2

SDG No.: CLJ56052-2

Client Sample ID: IR69-SD02-10A MSD | Lab Sample ID: 680-56052-5 MSD

Matrix: Solid | Lab File ID: oc30040.d

Analysis Method: 8141A | Date Collected: 03/15/2010 12:00

Extraction Method: 3550B | Date Extracted: 03/23/2010 12:32

Sample wt/vol: 30.18(g) | Date Analyzed: 03/31/2010 07:19

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | GC Column: Rtx-OPP 2 ID: 0.32(mm)

% Moisture: 79.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 164569 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
60-51-5	Dimethoate	320	U J	320	160
2104-64-5	EPN	635		160	81
56-38-2	Ethyl Parathion	581		160	81
121-75-5	Malathion	537		160	81
6923-22-4	Monochrotophos	1600	U J	1600	810
52-85-7	Famphur	545		320	160
3689-24-5	Sulfotepp	337		81	41
297-97-2	Thionazin	322		160	81

CAS NO.	SURROGATE	%REC	LIMITS	Q
115-86-6	Triphenylphosphate	103	42-128	

JAC 4/27/10

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION
CTO-081	374082.FI.FI.69	MCB Camp Lejeune

TESTAMERICA (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
Abbie Yont		

CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
Gwen Buckley	757-671-6292	704-544-4041

CLIENT NAME	CLIENT EMAIL
CH2M HILL	Gwen.Buckley@CH2M.com

CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226

COMPANY CONTRACTING THIS WORK (if applicable):

PAGE 1 OF 1

STANDARD REPORT DELIVERY ○ DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○ DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

REQUIRED ANALYSES: OP Pesticides - Method 8141A - GW: 2 1-L Ambers - Soil:1-8 oz 4-oz. Jar

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
3/15/10	1530	IR69-SD03-10A	C		X			1	
3/16/10	1130	IR69-GW19IW-10A	G	X	X			2	
3/16/10	1200	IR69-GW19UW-10A	G	X				2	
3/16/10	1630	IR69-EB-031610-SB	G	X				2	
3/15/10	1200	IR69-SD02-10A	G		X			1	
3/15/10	1200	IR69-SD02-10A-MS	G		X			1	
3/15/10	1200	IR69-SD02-10A-SD	G		X			1	
~~3/15/10~~	~~1515~~	~~IR69-MW15DW-10A~~	G	X				~~2~~	
~~3/15/10~~	~~1200~~	~~IR69-MW04IW-10A~~	G	X				~~2~~	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
			[signature]	3-19-10	0815			

RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
Ruth A Daughtry	3/22/10	0841	YES ○ NO		680-56052	Temp 6-0/3.4/3-2

FCU052:01.02.08:2

04/05/2010

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION	PAGE	OF
CTO-081	374082.FI.FI.69	MCB Camp Lejeune	1	1

TESTAMERICA (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
Abbie Yont		
CLIENT (SITE) PM	**CLIENT PHONE**	**CLIENT FAX**
Gwen Buckley	757-671-6292	704-544-4041
CLIENT NAME	**CLIENT EMAIL**	
CH2M HILL	Gwen.Buckley@CH2M.com	

CLIENT ADDRESS: 11301 Carmel Commons Blvd. Ste 304, Charlotte, NC 28226

COMPANY CONTRACTING THIS WORK (if applicable):

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NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

REQUIRED ANALYSES: OP Pesticides - Method 8141A - GW: 2 1-L Ambers - Soil:1-8 or 4-oz. Jar

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ETC)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
3-16-10	1330	IR69-EB-0316-10-GW	G	X				2	
3-16-10	1230	IR69-GW26DW-10A	G	X				2	
3-16-10	1400	IR69-GW26IW-10A	G	X				2	
3-15-10	1200	IR69-GW04IW-10A	G	X				2	
3-15-10	15:15	IR69-GW15DW-10A	G	X				2	
3-16-10	15:30	IR69-SB03-04-05-10A	G	X				2	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
			[signature]	3-19-10	0930			
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS:
Beth A Daughtry	3/22/10	0841	YES ○ NO ○		680-56052	Temp 6.0/3.4/3.2

FCU052:01.02.08:2

Holding Times

Sampling Date: 3/15-16/10
Received Date: 3/22 at TestAmerica Cooler temps were within acceptable range.
Extraction Date: 3/23
Analysis Dates: 3/31

All extraction and analysis holding times were met for the samples in this SDG. Sample receipt data is in order. Cooler temperature was within acceptable range. This analysis was sub-contracted to Test America Savannah by Compuchem.

Calibrations

Initial calibrations were performed according to the method with a eight-point curve for the organophosphorus pesticide target compounds. Calibration factors were calculated or LR curves were plotted. %RSDs or correlation coefficients were within QC limits. Continuing calibration standards were analyzed per the SW-846 methods requested. All %D criteria were not met. Please see the report for any necessary qualifications. Column resolution was acceptable. Retention time windows were provided, retention times were stable throughout the analytical sequence. All required instrument blanks were analyzed. Raw data was verified.

BLANK SUMMARY

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Any compound detected in the sample, and the associated blank, must be qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than five (5) times the blank concentration.
- Sample weight, volume or dilution factor must be taken into consideration when applying the 5X criteria.
- Apply the same data validation guidelines to any associated rinse and field blanks and all associated samples.
- Qualification/Action codes:
-

No Action -	The sample result is greater than the RL and greater than five times (5X) the blank value.
U at RL-	The sample result is less than the RL when the blank contamination level is less than the RL.

No contamination that resulted in qualification of the data was noted in the associated method or instrument blanks or the submitted field QC blanks.

SURROGATE RECOVERIES

Surrogate recoveries were acceptable.

MATRIX SPIKE/MATRIX SPIKE DUPLICATES

The associated MS/MSD pair of sample IR69-SD02-10A exhibited 0% in both the MS and the MSD for the compounds demeton-s, naled, dimethoate and monochrotophos. These compounds were rejected in the native sample of the spike pair (IR69-SD02-10A) with a caution that the reported results should be considered significantly biased low. The compound mevinphos exhibited recoveries of 0/25 and was qualified as estimated J/UJ in the native sample. No other qualifications were required due to spike results.

LABORATORY CONTROL SAMPLES

The submitted LCS's submitted exhibited acceptable recoveries with the exception of demeton-s and demeton-o. All samples were flagged as estimated for demeton-s. Demeton-o did not required qualifications because there were no positive results.

FIELD DUPLICATE SAMPLE SUMMARY

Sample ID: **Duplicate ID:**

Compound	Sample Conc.	Duplicate Conc.	RPD
			#DIV/0!

Comments: There were 0 field duplicate pairs submitted –

SAMPLE RESULT VERIFICATION

Raw data was verified. Calculations were verified.

Reviewer JACleveland **Date:** 7/27/10

Test America Savannah
SDG 680-56052-2
OPP

Job Narrative
680-56052-2

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC Semi VOA
Method(s) 8141A: The laboratory control sample (LCS) for batch 680-163722 exceeded control limits for the following analytes: Demeton-S. The vendor purchased standard for Demeton-O and Demeton-S is expressed as a the value of the total concentration of the two analytes and not as the concentration of the individual analytes. The ratio of the LCS standard differs from the rations present in the calibration standards. The % recovery of the total od Demeton-O and Demeton-S was within limits.

Method(s) 8141A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 680-163722 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method(s) 8141A: The capping continuing calibration verification (CCV) analyzed on 03/31/2010 after sample analysis did not meet control limits for dichlorvos and Naled. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. These samples had been analyzed on multiple runs in which the capping CCV failedin the same manner after each attempted analysis; therefore sample matrix is suspected to have contributed to these failures.

No other analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 680-56052-2

SDG No.: CLJ56052-2

Lab Sample ID: CCV 680-164578/1 Calibration Date: 03/31/2010 07:44

Instrument ID: SGO Calib Start Date: 03/30/2010 16:25

GC Column: Rtx-OPP 2 ID: 0.32(mm) Calib End Date: 03/30/2010 19:19

Lab File ID: oc30041.d Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D	
Dichlorvos	Ave	12254704	15788360		100	0.500	28.8*	15.0	NQ
Mevinphos	QuaF	6159674	6753058		100	0.500	0.6		
Demeton-O	Ave	2761671	3211932		130	0.500	16.3*	15.0	NQ
Ethoprop	Ave	10622082	12060150		26.0	0.500	13.5	15.0	
Naled	QuaF	1512157	704412		260	0.500	-59.2		UJ/UJ
Phorate	Ave	9421280	11171850		51.0	0.500	18.6*	15.0	NQ
Demeton-S	QuaF	5716453	6461026		130	0.500	3.9		
Diazinon	Ave	8956538	10491140		51.0	0.500	17.1*	15.0	NQ
Disulfoton	Ave	9123995	10935560		100	0.500	19.9*	15.0	↓
Methyl parathion	QuaF	7130674	9081804		26.0	0.500	18.9		
Ronnel	Ave	9828792	11199680		51.0	0.500	13.9	15.0	
Chlorpyrifos	Ave	7547324	8819906		51.0	0.500	16.9*	15.0	NQ
Trichloronate	Ave	6479840	7090098		51.0	0.500	9.4	15.0	
Fenthion	Ave	11091424	12790380		51.0	0.500	15.3*	15.0	NQ
Stirophos	Ave	6413213	7581704		51.0	0.500	18.2*	15.0	↓
Tokuthion	Ave	6740896	7673378		51.0	0.500	13.8	15.0	
Fensulfothion	QuaF	4250882	4145958		260	0.500	-5.0		
Bolstar	Ave	7351198	8515140		51.0	0.500	15.8*	15.0	NQ
Azinphos-methyl	Ave	4892985	5414426		51.0	0.500	10.7	15.0	
Coumaphos	Ave	5097580	5343044		51.0	0.500	4.8	15.0	
Merphos	Ave	7210787	8544268		75.0	0.500	18.5*	15.0	NQ

all samples

Initial Calibration Date: 3/30/2010

RRF and %RSD Calculations:

Compound Name: dichlorvos in level 1
Lab Value: 11824380.0000

Area of Compound	
Conc. of Compound	0.05
Calculated RRF	0.0000

Compound Name: dichlorvos
Lab Value: 2.6

RRF of STD 1	11824380.0000
RRF of STD 2	12357880.0000
RRF of STD 3	11992304.0000
RRF of STD 4	11996362.0000
RRF of STD 3	12149720.0000
RRF of STD 4	12404053.0000
RRF of STD 5	12679139.0000
RRF of STD 6	12633798.0000
Calculated % RSD	2.56

Continuing Calibration File ID: oc30041.d

RRF and %D Calculations:

Compound Name: fenthion
Lab Value: 12790380.00000

Area of compound	6395192
Conc. Of compound	0.5
Calculated CF	12790384.00000

Compound Name: fenthion
Lab Value: 15.3

Avg. CF from ICAL	11091424.00000
CF of CCV	12790380.00000
Calculated % D	-15.3

1R69-SD02-10A

Quality Control Results

Client: Compuchem Environmental Corporation

Job Number: 680-56052-2
Sdg Number: CLJ56052-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-163722

Method: 8141A
Preparation: 3550B

MS Lab Sample ID:	680-56052-5	Analysis Batch: 680-164569	Instrument ID: SGO
Client Matrix:	Solid	Prep Batch: 680-163722	Lab File ID: oc30037.d
Dilution:	1.0		Initial Weight/Volume: 30.37 g
Date Analyzed:	03/31/2010 0605		Final Weight/Volume: 10 mL
Date Prepared:	03/23/2010 1232		Injection Volume: 2 uL
			Column ID: PRIMARY

MSD Lab Sample ID:	680-56052-5	Analysis Batch: 680-164569	Instrument ID: SGO
Client Matrix:	Solid	Prep Batch: 680-163722	Lab File ID: oc30038.d
Dilution:	1.0		Initial Weight/Volume: 30.01 g
Date Analyzed:	03/31/2010 0630		Final Weight/Volume: 10 mL
Date Prepared:	03/23/2010 1232		Injection Volume: 2 uL
			Column ID: PRIMARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Azinphos-methyl	106	102	30 - 130	3	50		
Bolstar	103	85	30 - 130	17	50		
Chlorpyrifos	93	75	30 - 130	20	50		
Coumaphos	108	93	30 - 130	14	50		
Demeton-O	252	165	30 - 130	41	50	J	J NQ
Demeton-S	0	0	30 - 130	NC	50	U M J	U J J/R
Diazinon	78	55	30 - 146	33	50		
Dichlorvos	63	53	30 - 130	16	50		
Disulfoton	75	50	30 - 130	39	50		J
Ethoprop	76	54	30 - 130	34	50		
Fensulfothion	72	88	30 - 130	22	50	J	J
Fenthion	79	70	30 - 130	10	50		
Merphos	48	41	30 - 130	17	50		
Methyl parathion	104	84	18 - 124	21	50		
Mevinphos	0	25	30 - 130	NC	50	U J	U J ~~NQ~~ J/UJ
Naled	0	0	30 - 130	NC	50	U J	U J J/R
Phorate	60	39	30 - 130	41	50		
Ronnel	79	59	28 - 141	28	50		
Stirophos	98	87	30 - 130	11	50		
Tokuthion	103	86	30 - 130	17	50		
Trichloronate	95	67	30 - 130	34	50		

XLCOFF
JAC
12/10

Flag in native sample only —

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Compuchem Environmental Corporation

Job Number: 680-56052-2
Sdg Number: CLJ56052-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 680-163722

Method: 8141A
Preparation: 3550B

MS Lab Sample ID:	680-56052-5	Analysis Batch: 680-164569	Instrument ID: SGO
Client Matrix:	Solid	Prep Batch: 680-163722	Lab File ID: oc30039.d
Dilution:	1.0		Initial Weight/Volume: 30.08 g
Date Analyzed:	03/31/2010 0654		Final Weight/Volume: 10 mL
Date Prepared:	03/23/2010 1232		Injection Volume: 2 uL
			Column ID: PRIMARY

MSD Lab Sample ID:	680-56052-5	Analysis Batch: 680-164569	Instrument ID: SGO
Client Matrix:	Solid	Prep Batch: 680-163722	Lab File ID: oc30040.d
Dilution:	1.0		Initial Weight/Volume: 30.18 g
Date Analyzed:	03/31/2010 0719		Final Weight/Volume: 10 mL
Date Prepared:	03/23/2010 1232		Injection Volume: 2 uL
			Column ID: PRIMARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual	
Dimethoate	0	0	30 - 130	NC	50	U J	U J	J/R
EPN	106	100	30 - 130	6	50			
Ethyl Parathion	92	91	35 - 134	1	50			
Malathion	84	84	30 - 130	0	50			
Monochrotophos	0	0	30 - 130	NC	50	U J	U J	J/R
Famphur	89	86	30 - 130	4	50			
Sulfotepp	56	53	30 - 130	6	50			
Thionazin	53	51	31 - 118	5	50			

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Compuchem Environmental Corporation

Job Number: 680-56052-2
Sdg Number: CLJ56052-2

Lab Control Sample - Batch: 680-163722

Method: 8141A
Preparation: 3550B

Lab Sample ID: LCS 680-163722/15-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/31/2010 0131
Date Prepared: 03/23/2010 1232

Analysis Batch: 680-164569
Prep Batch: 680-163722
Units: ug/Kg

Instrument ID: SGO
Lab File ID: oc30026.d
Initial Weight/Volume: 30.00 g
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Dimethoate	133	102	76	30 - 130	
EPN	133	130	98	30 - 130	
Ethyl Parathion	133	124	93	35 - 134	
Malathion	133	118	88	30 - 130	
Monochrotophos	1330	693	52	30 - 130	
Famphur	133	124	93	30 - 130	
Sulfotepp	133	115	86	30 - 130	
Thionazin	133	106	80	31 - 118	

Lab Control Sample - Batch: 680-163722

Method: 8141A
Preparation: 3550B

Lab Sample ID: LCS 680-163722/12-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/31/2010 0156
Date Prepared: 03/23/2010 1232

Analysis Batch: 680-164569
Prep Batch: 680-163722
Units: ug/Kg

Instrument ID: SGO
Lab File ID: oc30027.d
Initial Weight/Volume: 30.00 g
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Azinphos-methyl	133	134	100	30 - 130	
Bolstar	133	131	98	30 - 130	
Chlorpyrifos	133	129	96	30 - 130	
Coumaphos	133	127	95	30 - 130	
Demeton-O	133	375	281	30 - 130	Q NQ
Demeton-S	133	42	24	30 - 130	U Q JTMJ
Diazinon	133	119	90	30 - 146	M
Dichlorvos	133	123	92	30 - 130	
Disulfoton	133	117	88	30 - 130	
Ethoprop	133	122	92	30 - 130	
Fensulfothion	133	165	124	30 - 130	J
Fenthion	133	118	88	30 - 130	
Merphos	133	62.0	47	30 - 130	
Methyl parathion	133	132	99	18 - 124	
Mevinphos	133	109	82	30 - 130	
Naled	133	152	114	30 - 130	J
Phorate	133	94.8	71	30 - 130	
Ronnel	133	122	92	28 - 141	
Stirophos	133	125	94	30 - 130	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Flag in all samples

123

Client: Compuchem Environmental Corporation

Job Number: 680-56052-2
Sdg Number: CLJ56052-2

Lab Control Sample - Batch: 680-163722

Method: 8141A
Preparation: 3550B

Lab Sample ID: LCS 680-163722/12-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/31/2010 0156
Date Prepared: 03/23/2010 1232

Analysis Batch: 680-164569
Prep Batch: 680-163722
Units: ug/Kg

Instrument ID: SGO
Lab File ID: oc30027.d
Initial Weight/Volume: 30.00 g
Final Weight/Volume: 10 mL
Injection Volume: 2 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Tokuthion	133	126	94	30 - 130	M
Trichloronate	133	120	90	30 - 130	

Calculations are performed before rounding to avoid round-off errors in calculated results.

SAMPLE CALCULATION

Sample ID: IR69-SD03-10A
Standard ID: ICAL curve 3/30/10
Compound: triphenylphosphate
Concnetration: 190 ug/Kg

	Water (ug/L)	Soil (ug/Kg)
Area of Compound		2244530
Calibration Factor of Compound		5480229
Dilution Factor		1
Weight/Volume of Sample		30.21
Final Volume extract		10000
% Moisture	NA	0.714
conversion factor	1	1
Concentration	#DIV/0!	189.88

DataQual

Environmental Services, LLC

CH2M HILL
5700 Cleveland Street
Suite 101
Virginia Beach, VA 23462

April 27, 2011
Katahdin Analytical Services
SDG# CTO081-1
MCB Camp Lejeune, CTO-81 Site 69

Dear Ms. Buckley,

The following Data Validation report is provided as requested for the parameters noted in the table below for SDG #s CTO081-1. The data validation was performed in accordance with the SW846 Methods 8260B for volatiles and good professional judgment. Also used in the validation of these samples were the National Functional Guidelines for Organic Data Review (June, 2008), as applicable. All areas of concern are discussed in the body of the report and a summary of data qualifications is provided.

Sample ID	Lab ID	Matrix	VOA
IR69-GW30IW-11A	SE1246-1	water	X
IR69-GW31IW-11A	SE1246-2	water	X
IR69-GW31IWD-11A	SE1246-3	water	X
IR69-GW29IW-11A	SE1246-4	water	X
IR69-GW04DD-11A	SE1246-5	water	X
IR69-FB031511	SE1246-6	water	X
IR69-EB031511-GW	SE1246-7	water	X
IR69-GW11DD-11A	SE1246-8	water	X
IR69-TB031511	SE1246-9	water	X
IR69-GW30IW-11A MS	SE1246-1MS	water	X
IR69-GW30IW-11A MSD	SE1246-1MSD	water	X

The following quality control samples were provided with this SDG: sample IR69-TB031511- trip blank; sample IR69-EB031511-GW- equipment blank; sample IR69-FB031511- field blank; sample IR69-GW31IWD-11A- field duplicate of sample IR69-GW31IW-11A.

The samples were evaluated based on the following criteria:

- Data Completeness *
- Technical Holding Times *
- GC/MS Tunes *
- Initial/Continuing Calibrations *
- Blanks
- Internal Standards *

- Surrogates *
- Laboratory Control Samples *
- Matrix Spike Recoveries *
- Matrix Duplicate RPDs *
- Field Duplicates *
- Identification/Quantitation *
- Reporting Limits *
- Tentatively Identified Compounds NA

* - indicates that no qualifications were required based on this criteria

Overall Evaluation of Data/Potential Usability Issues

A summary of qualifications applied to the sample results are noted below for the fractions validated. Specific details regarding qualification of the data are addressed in the Specific Evaluation section of this narrative. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte the validator has chosen the qualifier that best indicates possible bias in the results and flagged the data accordingly. However, information regarding all quality control issues is provided in the body of the report and on the qualification summary page. Please note that when a compound or analyte is flagged due to blank contamination the BL qualifier code takes precedence over all other qualifier codes except a code that explains rejected data.

VOA

Blank contamination was exhibited in the method and/or QC blanks that resulted in qualifications to the data.

Specific Evaluation of Data

Data Completeness

The SDG was received complete and intact. Resubmissions were not required.

Technical Holding Times

According to chain of custody records, sampling was performed on 3/15/11 and samples were received at the laboratory 3/16/11. All sample preparation and analysis was performed within method holding time requirements.

Blanks

VOA

The associated method and/or QC blanks exhibited contamination as noted in the following table. Compounds for which there was no action required, are not included in the following table.

Blank ID	Compound	Concentration	Reporting Limit
IR69-EB031511-GW	acetone	35 ug/L	2.5 ug/L

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Qual Code
IR69-GW31IW-11A, IR69-GW31IWD-11A, IR69-GW29IW-11A	acetone	U at value	EBL

A summary of qualifications required is provided on the following page. Please do not hesitate to contact DataQual ES with any questions regarding this validation report.

Sincerely,

Laura Maschhoff
President

Summary of Data Qualifications

VOA

Sample ID	Compound	Results	Q-Flag	Q Code
IR69-GW31IW-11A, IR69-GW31IWD-11A, IR69-GW29IW-11A	acetone	+	U at value	EBL

Glossary of Qualification Flags and Abbreviations

Qualification Flags (Q-Flags)

U	not detected above the reported sample quantitation limit
J	estimated value
UJ	reported quantitation limit is qualified as estimated
R	result is rejected; the presence or absence of the analyte cannot be verified
D	result value is based on dilution analysis result
NJ	analyte has been tentatively identified, estimated value
L	analyte present, biased low
UL	not detected, quantitation limit is probably higher
K	analyte present, biased high

Inorganic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 10X the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL and the result is raised to the RL and flagged U.
R or J_+	The blank contaminant concentration was greater than the RL and the sample result is greater than the RL but less than 10X the blank contaminant concentration. The reported results are flagged either as rejected R or biased high J+ based on the professional judgment of the validator. (see NFG, Rev. date 10/04, p. 17 for extracted blanks (PB))

Organic Field/Lab Blank Qualification Flags (Q-Flags)

NA	The sample result for the blank contaminant is greater than the sample RL and is greater than 5X (10X for common laboratory contaminants) the blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.
RL-U	The sample result for the blank contaminant is less than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is raised to the RL and flagged U.
U	The sample result for the blank contaminant is greater than the sample RL but is less than 5X (10X for common laboratory contaminants) the blank value, so the result is flagged U at the reported value.

General Abbreviations

RL / MDL	reporting limit/method detection limit
CRQL	contract required quantitation limit
Q Code	qualifier code
+	positive result
-	non-detect result

QUALIFIER CODE REFERENCE

Qualifier	Description
TN	Tune
BSL	Blank Spike/LCS - High Recovery
BSH	Blank Spike/LCS - Low Recovery
BD	Blank Spike/Blank Spike Duplicate (LCS/LCSD) Precision
BRL	Below Reporting Limit
ISL	Internal Standard - Low Recovery
ISH	Internal Standard - High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate - Low Recovery
MSH	Matrix Spike and/or Matrix Spike Duplicate - High Recovery
MI	Matrix interference obscuring the raw data
MDP	Matrix Spike/Matrix Spike Duplicate Precision
2S	Second Source - Bad reproducibility between tandem detectors
SSL	Spiked Surrogate - Low Recovery
SSH	Spiked Surrogate - High Recovery
SD	Serial Dilution Reproducibility
ICL	Initial Calibration - Low Relative Response Factors (RRF)
ICH	Initial Calibration - High Relative Response Factors (RRF)
ICB	Initial Calibration - Bad Linearity or Curve Function
CCL	Continuing Calibration - Low Recovery or %Difference
CCH	Continuing Calibration - High Recovery or %Difference
LD	Lab Duplicate Reproducibility
HT	Holding Time
PD	Pesticide Degradation
2C	Second Column - Poor Dual Column Reproducibility
LR	Concentration Exceeds Linear Range
BL	Blank Contamination (MBL, EBL, FBL, TBL)
RE	Redundant Result - due to Re-analysis or Re-extraction
DL	Redundant Result - due to Dilution
FD	Field Duplicate
OT	Other - explained in data validation report
%SOL	High moisture content

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE1246-1
Client ID: IR69-GW30IW-11A
Project: CTO 081 Site 69 383690.FI.M
SDG: CTO081-1

Sample Date: 15-MAR-11
Received Date: 16-MAR-11
Extract Date: 21-MAR-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG89234

Analysis Date: 21-MAR-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 23-MAR-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	0.50	ug/L	1	1	1.0	0.24	0.50
Chloromethane	U	0.50	ug/L	1	1	1.0	0.36	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromomethane	U	0.75	ug/L	1	1	1.0	0.49	0.75
Chloroethane	U	0.75	ug/L	1	1	1.0	0.55	0.75
Trichlorofluoromethane	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone		55.	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform		3.3	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	J	0.29	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE1246-1
Client ID: IR69-GW30IW-11A
Project: CTO 081 Site 69 383690.FI.M
SDG: CTO081-1

Sample Date: 15-MAR-11
Received Date: 16-MAR-11
Extract Date: 21-MAR-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG89234

Analysis Date: 21-MAR-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 23-MAR-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		85.2	%					
Toluene-d8		108.	%					
1,2-Dichloroethane-d4		100.	%					
Dibromofluoromethane		102.	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE1246-2
Client ID: IR69-GW31IW-11A
Project: CTO 081 Site 69 383690.FI.M
SDG: CTO081-1

Sample Date: 15-MAR-11
Received Date: 16-MAR-11
Extract Date: 18-MAR-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG89178

Analysis Date: 18-MAR-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-MAR-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	0.50	ug/L	1	1	1.0	0.24	0.50
Chloromethane	U	0.50	ug/L	1	1	1.0	0.36	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromomethane	U	0.75	ug/L	1	1	1.0	0.49	0.75
Chloroethane	U	0.75	ug/L	1	1	1.0	0.55	0.75
Trichlorofluoromethane	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U, EBL	17.	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	J	0.41	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	J	0.59	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	J	0.38	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE1246-2
Client ID: IR69-GW31IW-11A
Project: CTO 081 Site 69 383690.FI.M
SDG: CTO081-1

Sample Date: 15-MAR-11
Received Date: 16-MAR-11
Extract Date: 18-MAR-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG89178

Analysis Date: 18-MAR-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-MAR-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		81.8	%					
Toluene-d8		107.	%					
1,2-Dichloroethane-d4		98.7	%					
Dibromofluoromethane		104.	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE1246-3
Client ID: IR69-GW31IWD-11A
Project: CTO 081 Site 69 383690.FI.M
SDG: CTO081-1

Sample Date: 15-MAR-11
Received Date: 16-MAR-11
Extract Date: 18-MAR-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG89178

Analysis Date: 18-MAR-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-MAR-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	0.50	ug/L	1	1	1.0	0.24	0.50
Chloromethane	U	0.50	ug/L	1	1	1.0	0.36	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromomethane	U	0.75	ug/L	1	1	1.0	0.49	0.75
Chloroethane	U	0.75	ug/L	1	1	1.0	0.55	0.75
Trichlorofluoromethane	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U, EBL	26.	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	J	0.44	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	J	0.57	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	J	0.37	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE1246-3
Client ID: IR69-GW311WD-11A
Project: CTO 081 Site 69 383690.FI.M
SDG: CTO081-1

Sample Date: 15-MAR-11
Received Date: 16-MAR-11
Extract Date: 18-MAR-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG89178

Analysis Date: 18-MAR-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-MAR-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		82.8	%					
Toluene-d8		107.	%					
1,2-Dichloroethane-d4		106.	%					
Dibromofluoromethane		103.	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE1246-4
Client ID: JR69-GW29IW-11A
Project: CTO 081 Site 69 383690.FI.M
SDG: CTO081-1

Sample Date: 15-MAR-11
Received Date: 16-MAR-11
Extract Date: 18-MAR-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG89178

Analysis Date: 18-MAR-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-MAR-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	0.50	ug/L	1	1	1.0	0.24	0.50
Chloromethane	U	0.50	ug/L	1	1	1.0	0.36	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromomethane	U	0.75	ug/L	1	1	1.0	0.49	0.75
Chloroethane	U	0.75	ug/L	1	1	1.0	0.55	0.75
Trichlorofluoromethane	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	J	1.3	ug/L	1	5	5.0	1.1	2.5
Acetone	U, EBL	29.	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	J	0.72	ug/L	1	1	1.0	0.21	0.50
Chloroform		8.8	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE1246-4
Client ID: IR69-GW29IW-11A
Project: CTO 081 Site 69 383690.FI.M
SDG: CTO081-1

Sample Date: 15-MAR-11
Received Date: 16-MAR-11
Extract Date: 18-MAR-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG89178

Analysis Date: 18-MAR-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-MAR-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		81.2	%					
Toluene-d8		107.	%					
1,2-Dichloroethane-d4		107.	%					
Dibromofluoromethane		107.	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE1246-5
Client ID: IR69-GW04DD-11A
Project: CTO 081 Site 69 383690.FI.M
SDG: CTO081-1

Sample Date: 15-MAR-11
Received Date: 16-MAR-11
Extract Date: 18-MAR-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG89178

Analysis Date: 18-MAR-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-MAR-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	0.50	ug/L	1	1	1.0	0.24	0.50
Chloromethane	U	0.50	ug/L	1	1	1.0	0.36	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromomethane	U	0.75	ug/L	1	1	1.0	0.49	0.75
Chloroethane	U	0.75	ug/L	1	1	1.0	0.55	0.75
Trichlorofluoromethane	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	J	3.4	ug/L	1	5	5.0	1.1	2.5
Acetone		48.	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform		2.6	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	J	0.55	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	J	0.56	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE1246-5
Client ID: IR69-GW04DD-11A
Project: CTO 081 Site 69 383690.FI.N
SDG: CTO081-1

Sample Date: 15-MAR-11
Received Date: 16-MAR-11
Extract Date: 18-MAR-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG89178

Analysis Date: 18-MAR-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-MAR-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene		1.0	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		83.0	%					
Toluene-d8		109.	%					
1,2-Dichloroethane-d4		107.	%					
Dibromofluoromethane		107.	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE1246-6
Client ID: IR69-FB031511
Project: CTO 081 Site 69 383690.FI.M
SDG: CTO081-1

Sample Date: 15-MAR-11
Received Date: 16-MAR-11
Extract Date: 18-MAR-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG89178

Analysis Date: 18-MAR-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-MAR-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	0.50	ug/L	1	1	1.0	0.24	0.50
Chloromethane	U	0.50	ug/L	1	1	1.0	0.36	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromomethane	U	0.75	ug/L	1	1	1.0	0.49	0.75
Chloroethane	U	0.75	ug/L	1	1	1.0	0.55	0.75
Trichlorofluoromethane	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE1246-6
Client ID: IR69-FB031511
Project: CTO 081 Site 69 383690.FI.M
SDG: CTO081-1

Sample Date: 15-MAR-11
Received Date: 16-MAR-11
Extract Date: 18-MAR-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG89178

Analysis Date: 18-MAR-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-MAR-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		80.4	%					
Toluene-d8		107.	%					
1,2-Dichloroethane-d4		110.	%					
Dibromofluoromethane		109.	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE1246-7
Client ID: IR69-EB031511-GW
Project: CTO 081 Site 69 383690.FI.M
SDG: CTO081-1

Sample Date: 15-MAR-11
Received Date: 16-MAR-11
Extract Date: 18-MAR-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG89178

Analysis Date: 18-MAR-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-MAR-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	0.50	ug/L	1	1	1.0	0.24	0.50
Chloromethane	U	0.50	ug/L	1	1	1.0	0.36	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromomethane	U	0.75	ug/L	1	1	1.0	0.49	0.75
Chloroethane	U	0.75	ug/L	1	1	1.0	0.55	0.75
Trichlorofluoromethane	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone		35.	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE1246-7
Client ID: IR69-EB031511-GW
Project: CTO 081 Site 69 383690.FI.N
SDG: CTO081-1

Sample Date: 15-MAR-11
Received Date: 16-MAR-11
Extract Date: 18-MAR-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG89178

Analysis Date: 18-MAR-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-MAR-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		79.6	%					
Toluene-d8		107.	%					
1,2-Dichloroethane-d4		113.	%					
Dibromofluoromethane		111.	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE1246-8
Client ID: IR69-GW11DD-11A
Project: CTO 081 Site 69 383690.FI.M
SDG: CTO081-1

Sample Date: 15-MAR-11
Received Date: 16-MAR-11
Extract Date: 18-MAR-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG89178

Analysis Date: 18-MAR-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-MAR-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	0.50	ug/L	1	1	1.0	0.24	0.50
Chloromethane	U	0.50	ug/L	1	1	1.0	0.36	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromomethane	U	0.75	ug/L	1	1	1.0	0.49	0.75
Chloroethane	U	0.75	ug/L	1	1	1.0	0.55	0.75
Trichlorofluoromethane	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone		38.	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	J	0.44	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE1246-8
Client ID: IR69-GW11DD-11A
Project: CTO 081 Site 69 383690.FI.M
SDG: CTO081-1

Sample Date: 15-MAR-11
Received Date: 16-MAR-11
Extract Date: 18-MAR-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG89178

Analysis Date: 18-MAR-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-MAR-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		79.7	%					
Toluene-d8		109.	%					
1,2-Dichloroethane-d4		112.	%					
Dibromofluoromethane		113.	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE1246-9
Client ID: IR69-TB031511
Project: CTO 081 Site 69 383690.FI.N
SDG: CTO081-1

Sample Date: 15-MAR-11
Received Date: 16-MAR-11
Extract Date: 18-MAR-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG89178

Analysis Date: 18-MAR-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-MAR-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	0.50	ug/L	1	1	1.0	0.24	0.50
Chloromethane	U	0.50	ug/L	1	1	1.0	0.36	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromomethane	U	0.75	ug/L	1	1	1.0	0.49	0.75
Chloroethane	U	0.75	ug/L	1	1	1.0	0.55	0.75
Trichlorofluoromethane	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE1246-9
Client ID: IR69-TB031511
Project: CTO 081 Site 69 383690.FI.M
SDG: CTO081-1

Sample Date: 15-MAR-11
Received Date: 16-MAR-11
Extract Date: 18-MAR-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG89178

Analysis Date: 18-MAR-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-MAR-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		83.2	%					
Toluene-d8		107.	%					
1,2-Dichloroethane-d4		103.	%					
Dibromofluoromethane		105.	%					

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MM 04/27/11

Data Completeness

The data package was received complete and intact. Resubmissions were not required. (SW846 Method 8260B)

Laboratory: Katahdin Analytical

Holding Times

Sampling Date: 3/15/11
Received Date: 3/16/11
Analysis Dates: 3/18-21/11
Cooler Temp: 1.7°C

All prep and analysis holding time requirements were met.

Calibrations

Mass assignments were verified by the injection of BFB.

No qualifications were required for the initial and continuing calibrations.

Internal Standards

All criteria met.

Blank Summary

Blank qualification guidelines:

- No action is taken if a compound is found in the blank but not in the sample.
- Sample weight, volume or dilution factor must be taken into consideration when applying criteria.
- Qualification/Action codes where applied as stated in table below:

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Storage, Field, Trip, Instrument	Detects	Not detected	No qualifications
	< CRQL*	< CRQL*	Report CRQL value with a U
		≥ CRQL*	Use professional judgment
	> CRQL*	< CRQL*	Report CRQL value with a U
		≥ CRQL* and < blank concentration	Report the concentration for the sample with a U, or qualify the data as unusable R
		≥ CRQL* and ≥ blank concentration	Use professional judgment
	= CRQL*	< CRQL*	Report CRQL value with a U
		≥ CRQL*	Use professional judgment
	Gross contamination	Detects	Qualify results as unusable R

*2x the CRQL for methylene chloride, 2-butanone and acetone

Method blank contamination was not exhibited- no qualifications were required. The associated field QC for this data package was: IR69-TB031511 (no positive results) - trip blank; IR69-EB031511-GW-equipment blank and IR69-FB031511 (no positive results) - field blank.

Blank Contamination and Qualification Summaries

Blank ID	Compound	Concentration	Reporting Limit
IR69-EB031511-GW	acetone	35 ug/L	2.5 ug/L

Associated samples and required qualifications are noted in the following table.

Sample ID	Compound	Q Flag	Qual Code
IR69-GW31IW-11A, IR69-GW31IWD-11A	acetone	U at value	EBL

Surrogates

All criteria were met.

Laboratory Control Sample

All criteria were met.

Matrix Spike/Spike Duplicate Samples

An MS/MSD was submitted for sample IR69-GW30IW-11A—all criteria were met.

Field Duplicate Sample

A field duplicate was submitted for samples IR69-GW31IW-11A, no positive results above the RL, no qualifications were required.

Specific Comments:

All sample results were reported within the calibration range of the instruments.

Detection limits were acceptable. Raw data and calculations were verified.

We have limited the supporting documentation, found with these worksheets, to those forms that indicate qualifications were required.

Validator Signature: Laura Mascellotti **Date:** 4/27/11

Initial Calibration Date: 3/18/2011

RRF and %RSD Calculations:

Compound Name: acetone
Lab Value: 0.121

Area of Compound	1575473
Area of Internal STD	650564
Conc. of Internal STD	50
Conc. of Compound	1000
Calculated RRF	0.121

Compound Name: toluene
Lab Value: 5.16

RRF of STD 1	0.913
RRF of STD 2	0.834
RRF of STD 3	0.811
RRF of STD 4	0.824
RRF of STD 5	0.840
RRF of STD 6	0.907
Calculated % RSD	5.13

Continuing Calibration File ID: 3/21/2011

RRF and %D Calculations:

Compound Name: styrene
Lab Value: 0.950

Area of Compound	772631
Area of Internal STD	813046
Conc. of Internal STD	50
Conc. of Compound	50
Calculated RRF	0.950

Compound Name: methyl acetate
Lab Value: 1.1

Average RRF	0.305
Calibration Check RRF	0.302
Calculated % D	1.1

SAMPLE CALCULATION

Sample ID: IR69-GW30IW-11A
Standard ID: 3/21/2011
Compound: acetone
Concnetration: 55 ug/L

	Water (ug/L)	Soil (ug/Kg)	Soil ug/Kg)
Area of Compound	62583		
Area of Internal STD	454621		
Conc. of Internal (ng)	250		
RRF of Compound	0.124		
Dilution Factor	1		
Weight of Sample	NA	25	
Volume of Sample	5	NA	
% Moisture	NA	0.79	
Aliquot of sample	NA	NA	
Concentration	55.51	#DIV/0!	#DIV/0!

	RT of Internal STD	RT of Compound	RRT
Sample	8.222	4.962	0.604
Standard	8.223	4.956	0.603

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
CH2MHILL
CTO 081 SITE 69 383690.FI.MW
SDG: CTO081-1
SE1246

Sample Receipt

The following samples were received on March 16, 2011 and were logged in under Katahdin Analytical Services work order number SE1246 for a hardcopy due date of April 7, 2011.

KATAHDIN Sample No.	CH2MHILL Sample Identification
SE1246-1	IR69-GW30IW-11A
SE1246-2	IR69-GW31IW-11A
SE1246-3	IR69-GW31IWD-11A
SE1246-4	IR69-GW29IW-11A
SE1246-5	IR69-GW04DD-11A
SE1246-6	IR69-FB031511
SE1246-7	IR69-EB031511-GW
SE1246-8	IR69-GW11DD-11A
SE1246-9	IR69-TB031511

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Ms. Kelly Perkins**. This narrative is an integral part of the Report of Analysis.

Organics Analysis

The samples of SDG CTO081-1 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846, 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA, and/or for the specific methods listed below or on the Report of Analysis.

Sample SE1246-1 was used for the matrix spike (MS) and matrix spike duplicate (MSD) samples, as per client request.

8260B Analysis

Surrogate recoveries for all samples and QC were evaluated using DoD QSM Version 4.1 acceptance limits.

Samples SE1246-2, 3, 4, 5 and 8 were manually integrated for the target analytes acetone and/or benzene. The specific reasons for the manual integrations are indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are based on the DoD QSM for the full list of spiked compounds and laboratory established acceptance limits for all other analytes. The recoveries of the spiked analytes in the LCS, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these acceptance limits. Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than the DoD QSM allowable number of exceedances. If the associated MS/MSD has greater than the allowable number of exceedances, no corrective action is taken, as long as the LCS is acceptable.

The initial calibration analyzed on the D instrument on 3/18/11 had %RSD values for several target analytes that exceeded the method acceptance limit of 15%. For these analytes, either a linear or quadratic model was used for quantitation instead of an average response factor. The surrogate toluene-d8 failed for both the linear and quadratic models in the initial calibration curve due to the correlation coefficient and the coefficient of determination being less than the method acceptance criteria of 0.995 and 0.990, respectively. The surrogate was calibrated using the average model. The corresponding independent check standard (file D0266A) had low concentrations for the target analytes dichlorodifluoromethane, 1,2-dibromo-3-chloropropane, 2-hexanone, and a high concentration for the analyte isopropylbenzene, which exceeded the DoD QSM acceptance limit of ±20% of the expected value from the ICAL. The independent check standard is the same source as the LCS. Samples SE1246-2 through 9 were analyzed in the same analytical batch as the initial calibration. In this batch, the independent check standard is the same file as the LCS WG89178-1. The LCS had acceptable recoveries for the analytes dichlorodifluoromethane, 1,2-dibromo-3-chloropropane, 2-hexanone but a high recovery for the analyte isopropylbenzene. Sample SE1246-1 and the MS/MSD WG89234-3 and 4 were analyzed in another analytical batch. The associated LCS WG89234-1 had acceptable recoveries for all four analytes and had acceptable expected values from the ICAL except for the analyte dichlorodifluoromethane, which had a slightly low concentration. Since these analytes were not detected above the MDL in the samples, the samples were not reanalyzed.

The calibration verification standard (CV) (file D0283) had a low response for the analyte 1,2-dibromo-3-chloropropane, which resulted in a %D that was greater than the DoD QSM version 4.1 acceptance limit of 20%. Since the associated LCS (WG89234-1) had a recovery for the target analyte that was within the DoD QSM version 4.1 acceptance limits, the associated samples were not reanalyzed.

There were no other protocol deviations or observations noted by the organics laboratory staff.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
040711

Leslie Dimond
Quality Assurance Officer

Katahdin ANALYTICAL SERVICES
600 Technology Way
Scarborough, ME 04074
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client: CH2M HILL
Contact: Gwen Buckley
Phone #: (757) 671-6292
Fax #: (757) 497-6885
Address: 5700 Cleveland st Suite 101
City: Virginia Beach
State: VA
Zip Code: 23462
Purchase Order #:
Proj. Name / No.: 386390.F1.MW Site 69
Katahdin Quote #:
Bill (if different than above):
Address:
Sampler (Print / Sign): Verd Anna Cunningham / Verd Anna Cunningham
Copies To:

LAB USE ONLY
WORK ORDER #: SE1246
KATAHDIN PROJECT NUMBER:

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT
AIRBILL NO:
TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

ANALYSIS AND CONTAINER TYPE PRESERVATIVES

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	TCL VOC, 25mL purge	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N	Filt. ☐Y ☐N
	IR69-GW30IW-11A	3/15/11 / 1345	GW	3	X										
	IR69-GW30IW-11A-MS	3/15/11 / 1345	GW	2	X										
	IR69-GW30IW-11A-SD	3/15/11 / 1345	GW	2	X										
	IR69-GW31IW-11A	3/15/11 / 1045	GW	3	X										
	IR69-GW31IWD-11A	3/15/11 / 1050	GW	3	X										
	IR69-GW29IW-11A	3/15/11 / 1205	GW	3	X										
	IR69-GW04DD-11A	3/15/11 / 1310	GW	3	X										
	IR69-FB031511	3/15/11 / 1440	GW	3	X										
	IR69-EB031511-GW	3/15/11 / 1450	GW	3	X										
	IR69-GW11DD-11A	3/15/11 / 1140	GW	3	X										
	IR69-TB031511	— / —	GW	3	X										
		/													
		/													
		/													
		/													
		/													

COMMENTS
TCL VOC, 25mL purge
Airbill: 8741 8908 5206

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Verd A Cunningham	3/15/11 2000	3-16-11 10:00			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
					0000007

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

ORIGINAL

Client: CH2MHill	KAS PM: KAP	Sampled By: Client
Project:	KIMS Entry By: GN	Delivered By: Fed-Ex
KAS Work Order#: SE1246	KIMS Review By:	Received By: GN
SDG #:	Cooler: 1 of 1	Date/Time Rec.: 3-16-11 / 10:00

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?	✓				
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 1.7
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) may not meet certain regulatory requirements and may invalidate certain data.
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals analysis.
6. Volatiles free of headspace: **Aqueous:** No bubble larger than a pea	✓				
Soil/Sediment: Received in airtight container?	✓				
Received in methanol?				✓	
Methanol covering soil?				✓	
7. Trip Blank present in cooler?	✓				
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments

Appendix F
BIOCHLOR Modeling

BIOCHLOR Natural Attenuation Decision Support System

Version 2.2
Excel 2000

Site 69
MCB CamLej
Run Name

Data Input Instructions:

115 → 1. Enter value directly....or
↑ *or* 2. Calculate by filling in gray
0.02 cells. Press Enter, then C
(To restore formulas, hit "Restore Formulas" button)
Variable* → Data used directly in model.

Test if Biotransformation is Occurring → Natural Attenuation Screening Protocol

TYPE OF CHLORINATED SOLVENT: Ethenes ◉ Ethanes ○

1. ADVECTION

Seepage Velocity*	Vs	28.4	(ft/yr)
or			
Hydraulic Conductivity	K	2.0E-03	(cm/sec)
Hydraulic Gradient	i	0.0048	(ft/ft)
Effective Porosity	n	0.35	(-)

2. DISPERSION

Alpha x*	15	(ft)
(Alpha y) / (Alpha x)*	0.05	(-)
(Alpha z) / (Alpha x)*	1.E-99	(-)

Calc. Alpha x

3. ADSORPTION

Retardation Factor* → R

or

Soil Bulk Density, rho	1.7	(kg/L)		
FractionOrganicCarbon, foc	1.6E-3	(-)		
Partition Coefficient	Koc			
PCE	426	(L/kg)	4.31	(-)
TCE	130	(L/kg)	2.01	(-)
DCE	125	(L/kg)	1.97	(-)
VC	30	(L/kg)	1.23	(-)
ETH	302	(L/kg)	3.35	(-)
Common R (used in model)* =			**2.01**	

4. BIOTRANSFORMATION **-1st Order Decay Coefficient***

Zone 1	λ (1/yr)	half-life (yrs)	Yield
PCE → TCE	0.000		0.79
TCE → DCE	0.173	4.00	0.74
DCE → VC	1.155	0.60	0.64
VC → ETH	6.930	0.10	0.45

Zone 2	λ (1/yr)	half-life (yrs)
PCE → TCE	0.000	
TCE → DCE	0.154	4.50
DCE → VC	0.099	7.00
VC → ETH	3.465	0.20

λ HELP

5. GENERAL

Simulation Time*	59	(yr)
Modeled Area Width*	140	(ft)
Modeled Area Length*	1300	(ft)
Zone 1 Length*	150	(ft)
Zone 2 Length*	1150	(ft)

L, W

Zone 2= L - Zone 1

6. SOURCE DATA TYPE: Continuous, Single Planar

Source Options

Source Thickness in Sat. Zone* 30 (ft)

Vertical Plane Source: Determine Source Well Location and Input Solvent Concentrations

	Y1	
Width* (ft)	140	
Conc. (mg/L)*	C1	k_s* (1/yr)
PCE		0
TCE	.1	0
DCE	50.0	0
VC	.75	0
ETH		0

View of Plume Looking Down

Observed Centerline Conc. at Monitoring Wells

7. FIELD DATA FOR COMPARISON

PCE Conc. (mg/L)											
TCE Conc. (mg/L)	.1	.052	.006	.001	.001	.001					
DCE Conc. (mg/L)	51.0	.57	.51	.001	.21	.067					
VC Conc. (mg/L)	5.5	.019	.013	.001	.012	.001					
ETH Conc. (mg/L)											
Distance from Source (ft)	0	175	430	950	408	808					
Date Data Collected	2010										

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN CENTERLINE | RUN ARRAY | Help | Restore Formulas | RESET | SEE OUTPUT | Paste Example

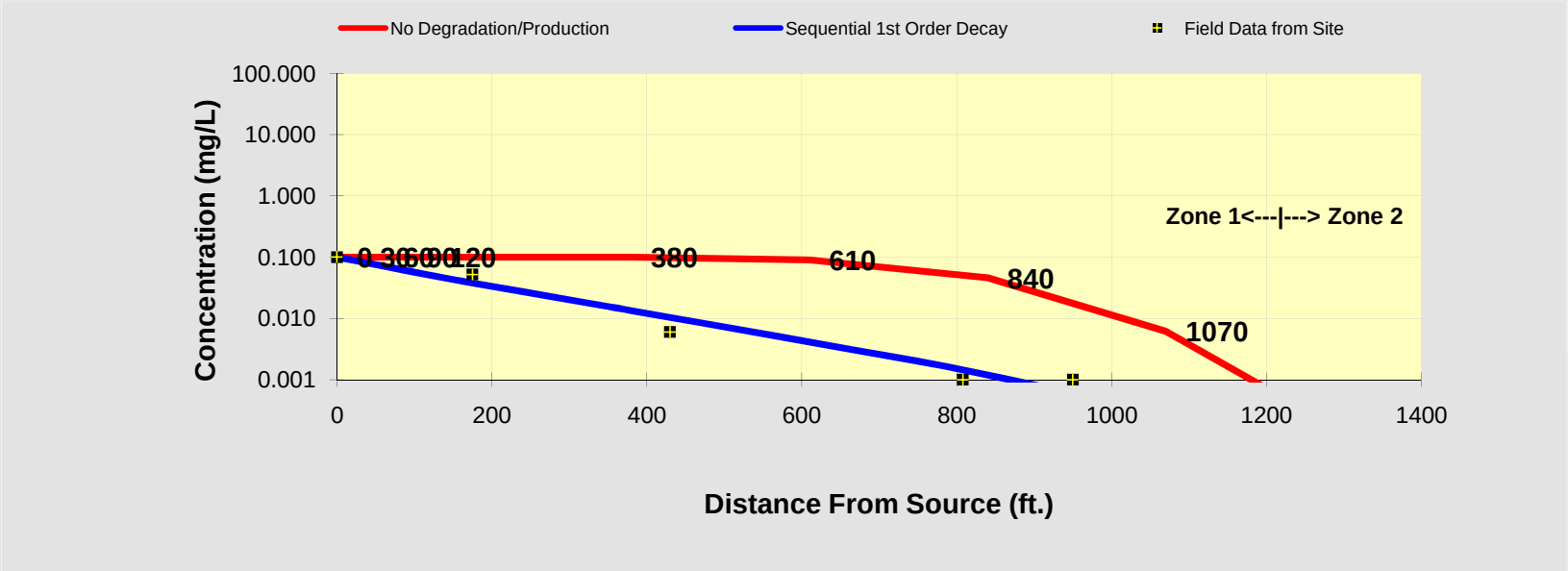
DISSOLVED CHLORINATED SOLVENT CONCENTRATIONS ALONG PLUME CENTERLINE (mg/L) at Z=0

Distance from Source (ft)

TCE	0	30	60	90	120	150	380	610	840	1070	1300
No Degradation	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.090	0.046	0.006	0.000
Biotransformation	0.1000	0.084	0.071	0.060	0.051	0.043	0.013	0.004	0.001	0.000	0.000

Monitoring Well Locations (ft)

	0	175	408	430	808	950					
Field Data from Site	0.100	0.052	0.001	0.006	0.001	0.001					



See PCE

See TCE

See DCE

See VC

See ETH

Time:

59.0 Years

Log ⟺ Linear

Return to Input

To All

To Array

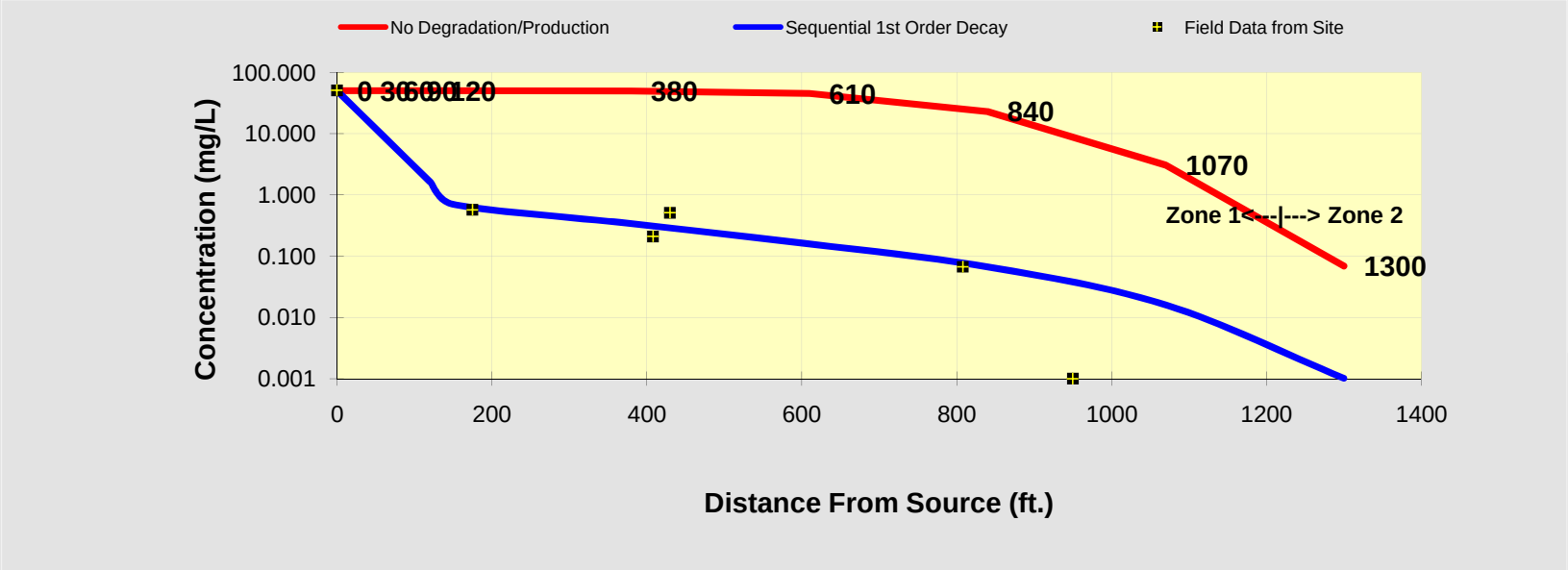
DISSOLVED CHLORINATED SOLVENT CONCENTRATIONS ALONG PLUME CENTERLINE (mg/L) at Z=0

Distance from Source (ft)

DCE	0	30	60	90	120	150	380	610	840	1070	1300
No Degradation	50.000	50.000	50.000	50.000	50.000	50.000	49.770	45.086	22.932	3.071	0.069
Biotransformation	50.0000	21.264	9.046	3.850	1.640	0.700	0.338	0.158	0.067	0.016	0.001

Monitoring Well Locations (ft)

	0	175	408	430	808	950					
Field Data from Site	51.000	0.570	0.210	0.510	0.067	0.001					



See PCE

See TCE

See DCE

See VC

See ETH

Time:

59.0 Years

Log ⟺ Linear

Return to Input

To All

To Array

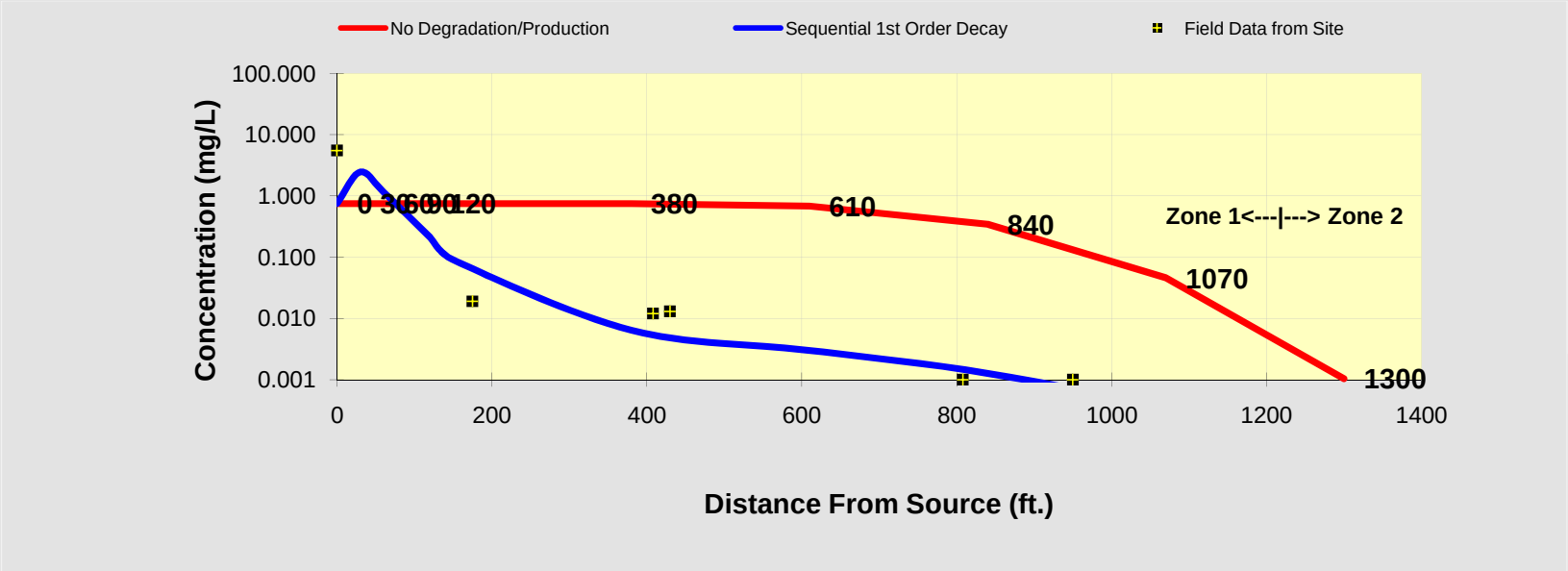
DISSOLVED CHLORINATED SOLVENT CONCENTRATIONS ALONG PLUME CENTERLINE (mg/L) at Z=0

Distance from Source (ft)

VC	0	30	60	90	120	150	380	610	840	1070	1300
No Degradation	0.750	0.750	0.750	0.750	0.750	0.750	0.747	0.676	0.344	0.046	0.001
Biotransformation	0.7500	2.446	1.151	0.496	0.211	0.090	0.006	0.003	0.001	0.000	0.000

Monitoring Well Locations (ft)

	0	175	408	430	808	950					
Field Data from Site	5.500	0.019	0.012	0.013	0.001	0.001					



See PCE

See TCE

See DCE

See VC

See ETH

Time:

59.0 Years

Log ⟺ Linear

Return to Input

To All

To Array

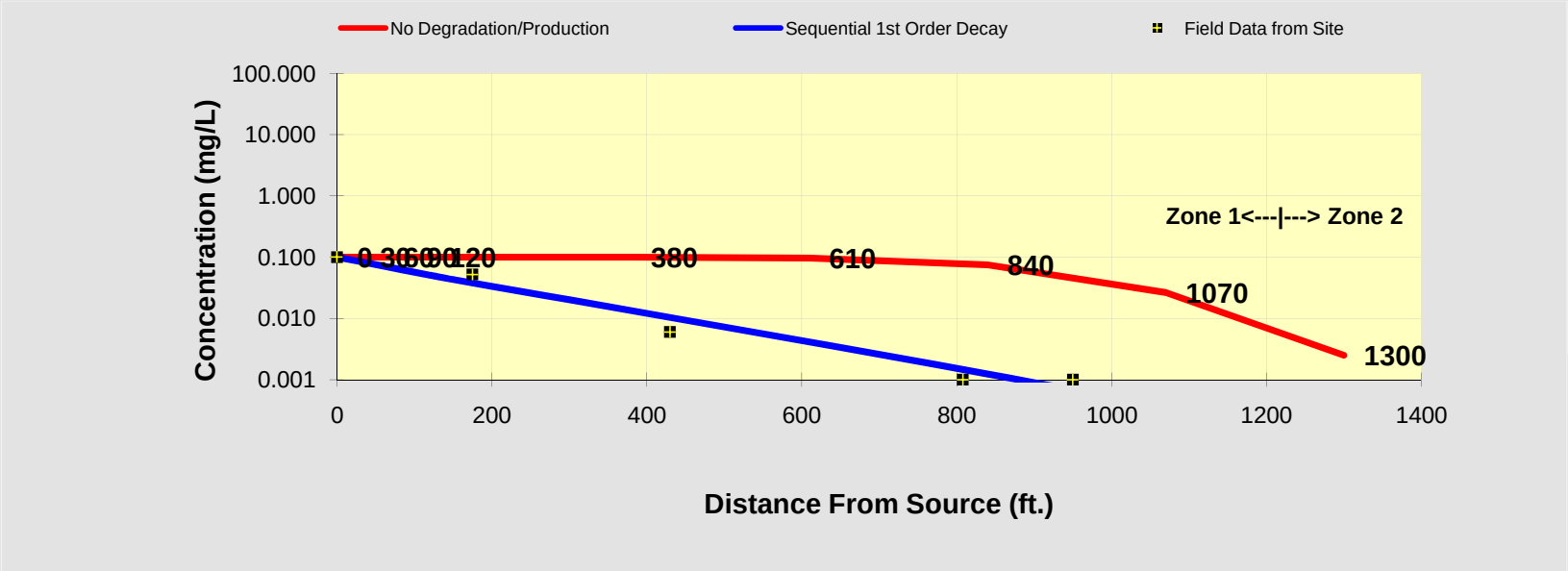
DISSOLVED CHLORINATED SOLVENT CONCENTRATIONS ALONG PLUME CENTERLINE (mg/L) at Z=0

Distance from Source (ft)

TCE	0	30	60	90	120	150	380	610	840	1070	1300
No Degradation	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.096	0.075	0.026	0.003
Biotransformation	0.1000	0.084	0.071	0.060	0.051	0.043	0.013	0.004	0.001	0.000	0.000

Monitoring Well Locations (ft)

	0	175	408	430	808	950					
Field Data from Site	0.100	0.052	0.001	0.006	0.001	0.001					



See PCE

See TCE

See DCE

See VC

See ETH

Time:

69.0 Years

Log ⟺ Linear

Return to Input

To All

To Array

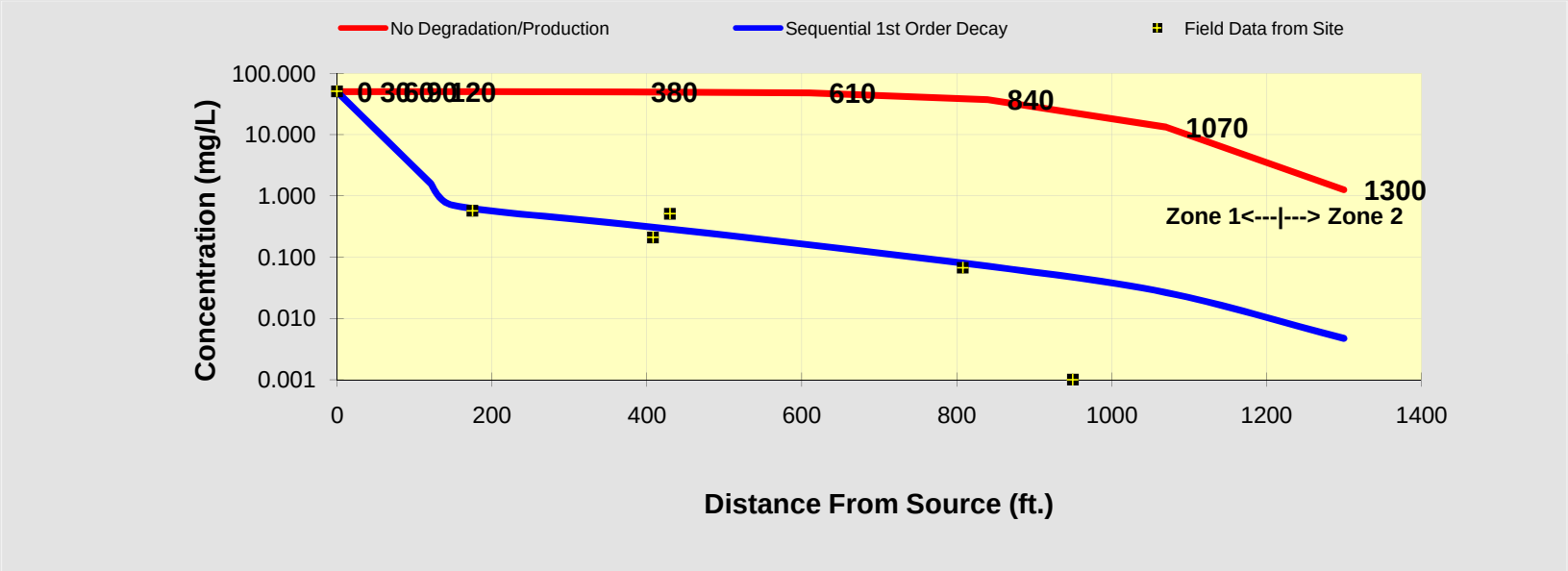
DISSOLVED CHLORINATED SOLVENT CONCENTRATIONS ALONG PLUME CENTERLINE (mg/L) at Z=0

Distance from Source (ft)

DCE	0	30	60	90	120	150	380	610	840	1070	1300
No Degradation	50.000	50.000	50.000	50.000	50.000	50.000	49.825	48.154	37.273	13.208	1.254
Biotransformation	50.0000	21.264	9.046	3.850	1.640	0.700	0.338	0.158	0.071	0.027	0.005

Monitoring Well Locations (ft)

	0	175	408	430	808	950					
Field Data from Site	51.000	0.570	0.210	0.510	0.067	0.001					



See PCE

See TCE

See DCE

See VC

See ETH

Time:

69.0 Years

Log ⟺ Linear

Return to Input

To All

To Array

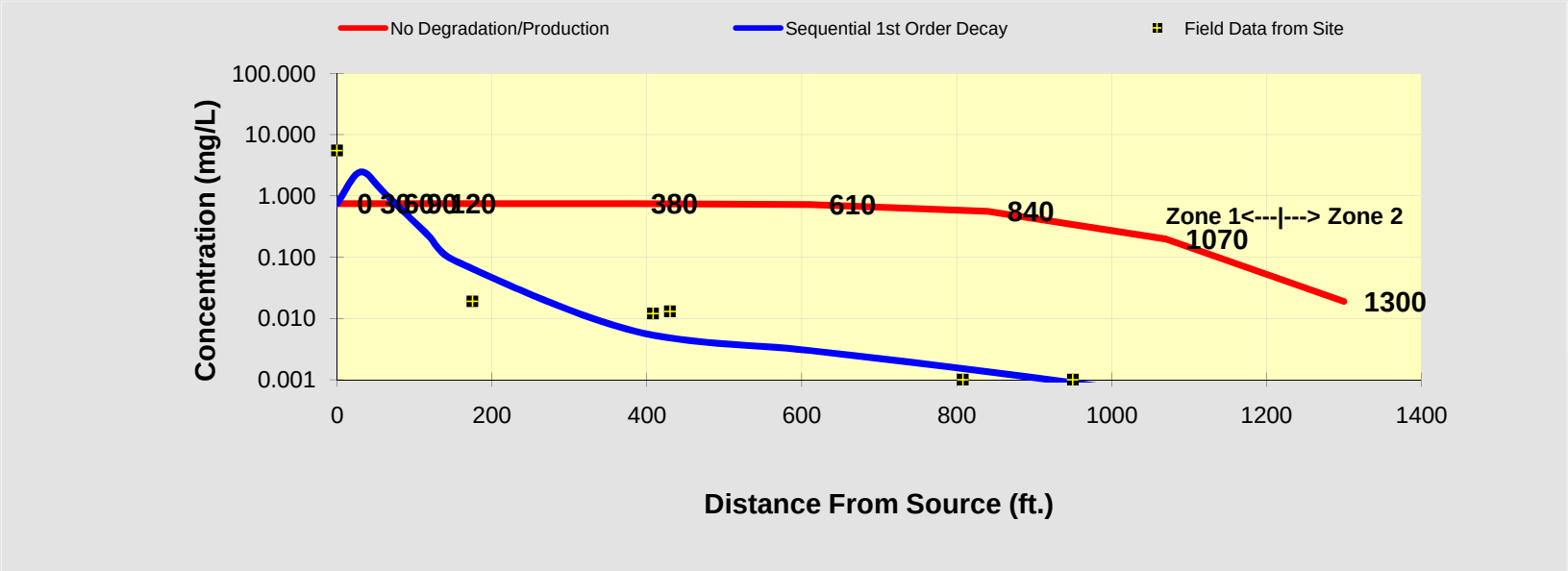
DISSOLVED CHLORINATED SOLVENT CONCENTRATIONS ALONG PLUME CENTERLINE (mg/L) at Z=0

Distance from Source (ft)

VC	0	30	60	90	120	150	380	610	840	1070	1300
No Degradation	0.750	0.750	0.750	0.750	0.750	0.750	0.747	0.722	0.559	0.198	0.019
Biotransformation	0.7500	2.446	1.151	0.496	0.211	0.090	0.006	0.003	0.001	0.001	0.000

Monitoring Well Locations (ft)

	0	175	408	430	808	950					
Field Data from Site	5.500	0.019	0.012	0.013	0.001	0.001					



See PCE

See TCE

See DCE

See VC

See ETH

Time:

69.0 Years

Log ⟺ Linear

Return to Input

To All

To Array

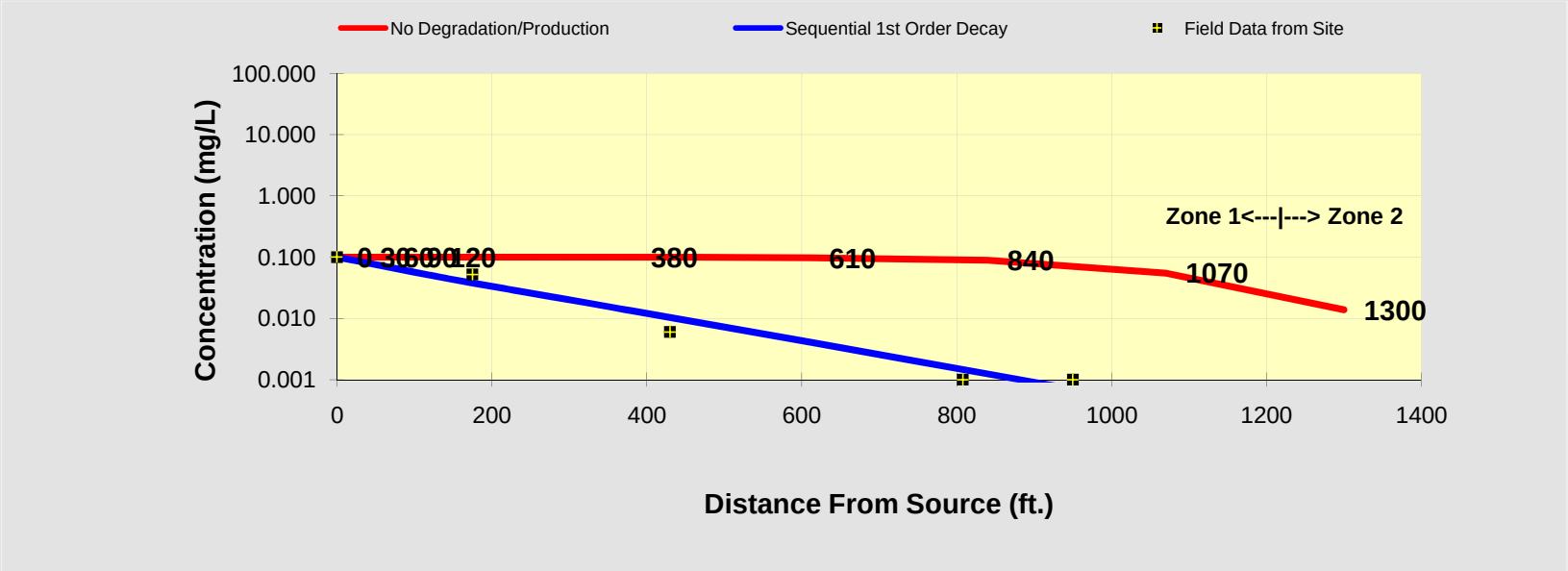
DISSOLVED CHLORINATED SOLVENT CONCENTRATIONS ALONG PLUME CENTERLINE (mg/L) at Z=0

Distance from Source (ft)

TCE	0	30	60	90	120	150	380	610	840	1070	1300
No Degradation	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.098	0.089	0.055	0.014
Biotransformation	0.1000	0.084	0.071	0.060	0.051	0.043	0.013	0.004	0.001	0.000	0.000

Monitoring Well Locations (ft)

	0	175	408	430	808	950					
Field Data from Site	0.100	0.052	0.001	0.006	0.001	0.001					



See PCE

See TCE

See DCE

See VC

See ETH

Time:

79.0 Years

Log ⟺ Linear

Return to Input

To All

To Array

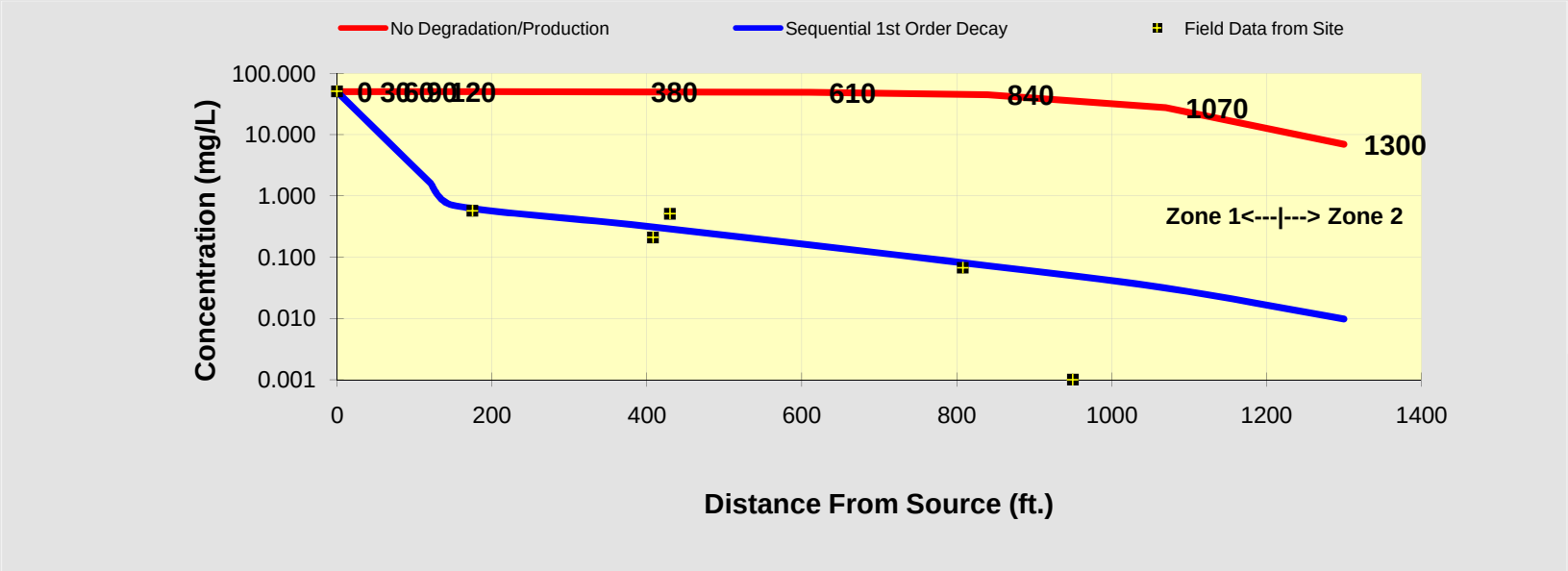
DISSOLVED CHLORINATED SOLVENT CONCENTRATIONS ALONG PLUME CENTERLINE (mg/L) at Z=0

Distance from Source (ft)

DCE	0	30	60	90	120	150	380	610	840	1070	1300
No Degradation	50.000	50.000	50.000	50.000	50.000	50.000	49.831	48.826	44.421	27.474	6.928
Biotransformation	50.0000	21.264	9.046	3.850	1.640	0.700	0.338	0.158	0.072	0.031	0.010

Monitoring Well Locations (ft)

	0	175	408	430	808	950					
Field Data from Site	51.000	0.570	0.210	0.510	0.067	0.001					



See PCE

See TCE

See DCE

See VC

See ETH

Time:

79.0 Years

Log ⟺ Linear

Return to Input

To All

To Array

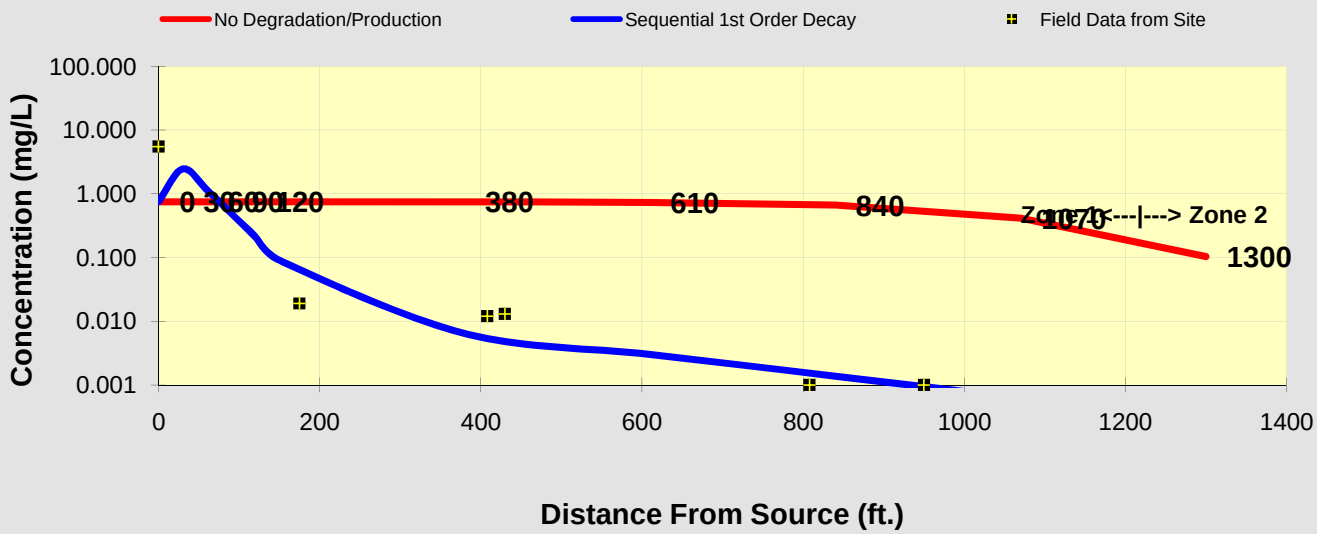
DISSOLVED CHLORINATED SOLVENT CONCENTRATIONS ALONG PLUME CENTERLINE (mg/L) at Z=0

Distance from Source (ft)

VC	0	30	60	90	120	150	380	610	840	1070	1300
No Degradation	0.750	0.750	0.750	0.750	0.750	0.750	0.747	0.732	0.666	0.412	0.104
Biotransformation	0.7500	2.446	1.151	0.496	0.211	0.090	0.006	0.003	0.001	0.001	0.000

Monitoring Well Locations (ft)

	0	175	408	430	808	950					
Field Data from Site	5.500	0.019	0.012	0.013	0.001	0.001					



See PCE

See TCE

See DCE

See VC

See ETH

Time:

79.0 Years

Log ⟺ Linear

Return to Input

To All

To Array

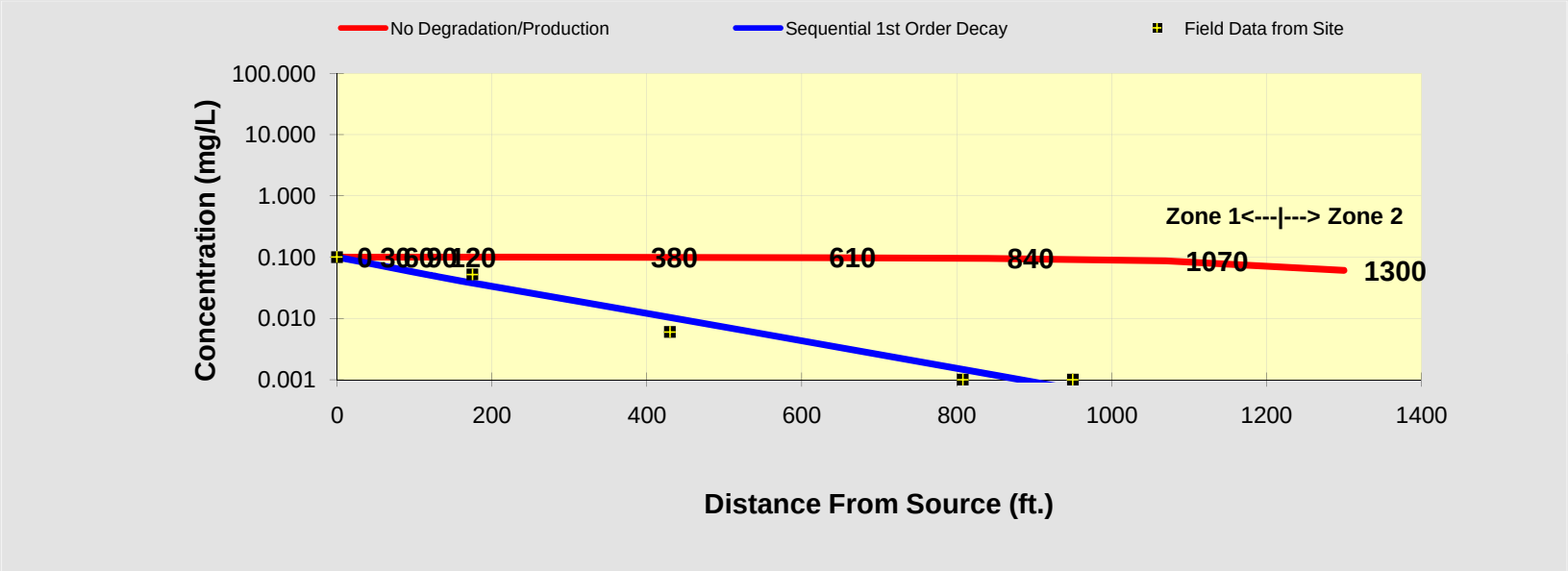
DISSOLVED CHLORINATED SOLVENT CONCENTRATIONS ALONG PLUME CENTERLINE (mg/L) at Z=0

Distance from Source (ft)

TCE	0	30	60	90	120	150	380	610	840	1070	1300
No Degradation	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.098	0.095	0.087	0.061
Biotransformation	0.1000	0.084	0.071	0.060	0.051	0.043	0.013	0.004	0.001	0.000	0.000

Monitoring Well Locations (ft)

	0	175	408	430	808	950					
Field Data from Site	0.100	0.052	0.001	0.006	0.001	0.001					



See PCE

See TCE

See DCE

See VC

See ETH

Time:

99.0 Years

Log ⟺ Linear

Return to Input

To All

To Array

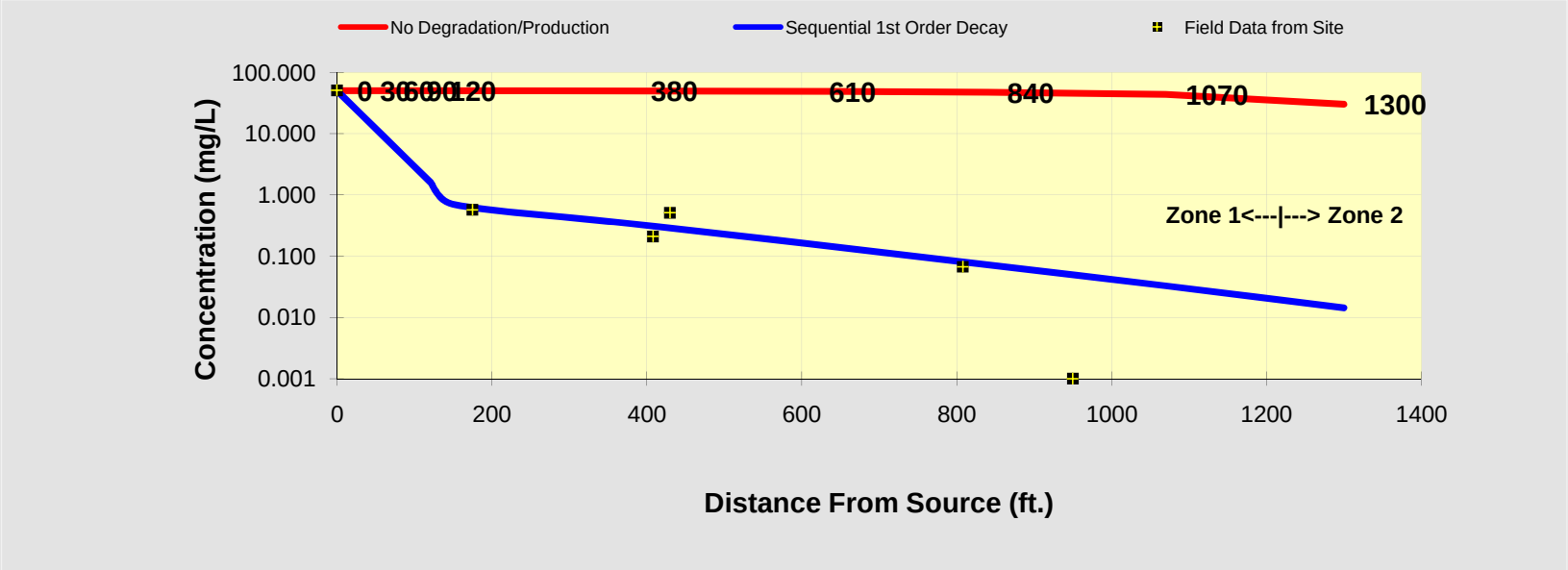
DISSOLVED CHLORINATED SOLVENT CONCENTRATIONS ALONG PLUME CENTERLINE (mg/L) at Z=0

Distance from Source (ft)

DCE	0	30	60	90	120	150	380	610	840	1070	1300
No Degradation	50.000	50.000	50.000	50.000	50.000	50.000	49.832	48.964	47.416	43.450	30.300
Biotransformation	50.0000	21.264	9.046	3.850	1.640	0.700	0.338	0.158	0.072	0.033	0.014

Monitoring Well Locations (ft)

	0	175	408	430	808	950					
Field Data from Site	51.000	0.570	0.210	0.510	0.067	0.001					



See PCE

See TCE

See DCE

See VC

See ETH

Time:

99.0 Years

Log ⟺ Linear

Return to Input

To All

To Array

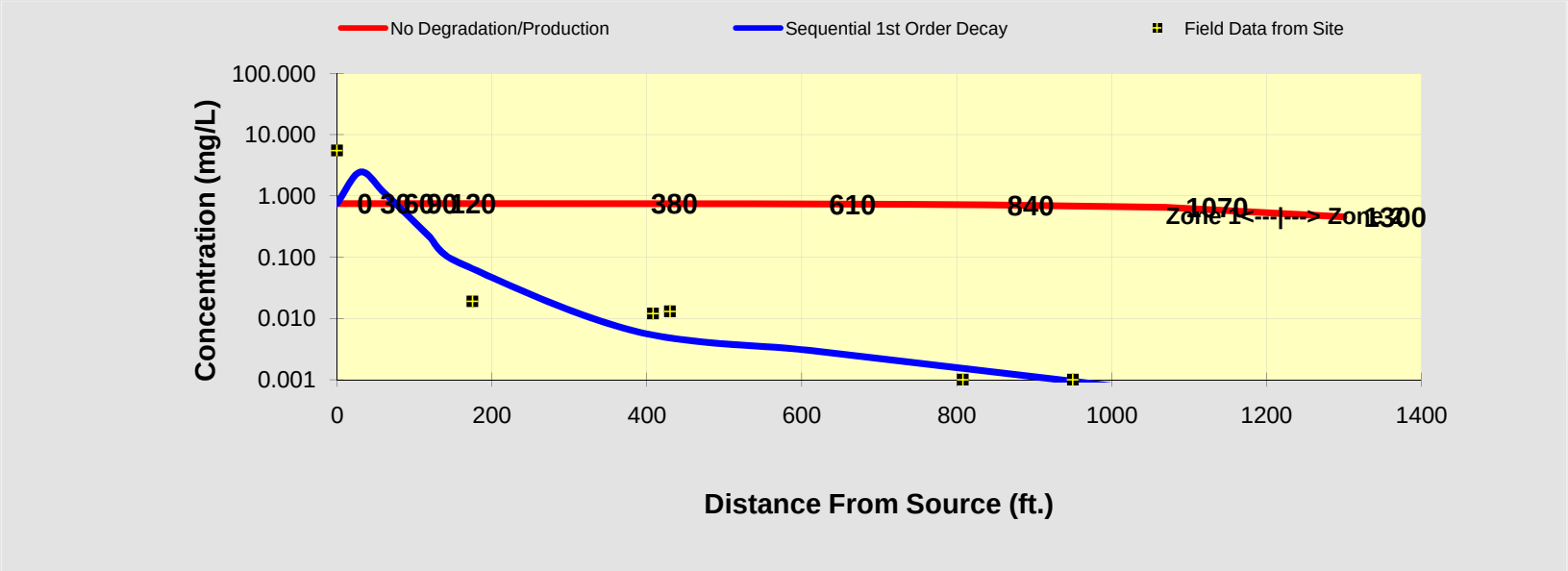
DISSOLVED CHLORINATED SOLVENT CONCENTRATIONS ALONG PLUME CENTERLINE (mg/L) at Z=0

Distance from Source (ft)

VC	0	30	60	90	120	150	380	610	840	1070	1300
No Degradation	0.750	0.750	0.750	0.750	0.750	0.750	0.747	0.734	0.711	0.652	0.454
Biotransformation	0.7500	2.446	1.151	0.496	0.211	0.090	0.006	0.003	0.001	0.001	0.000

Monitoring Well Locations (ft)

	0	175	408	430	808	950					
Field Data from Site	5.500	0.019	0.012	0.013	0.001	0.001					



See PCE

See TCE

See DCE

See VC

See ETH

Time:

99.0 Years

Log ⟺ Linear

Return to Input

To All

To Array

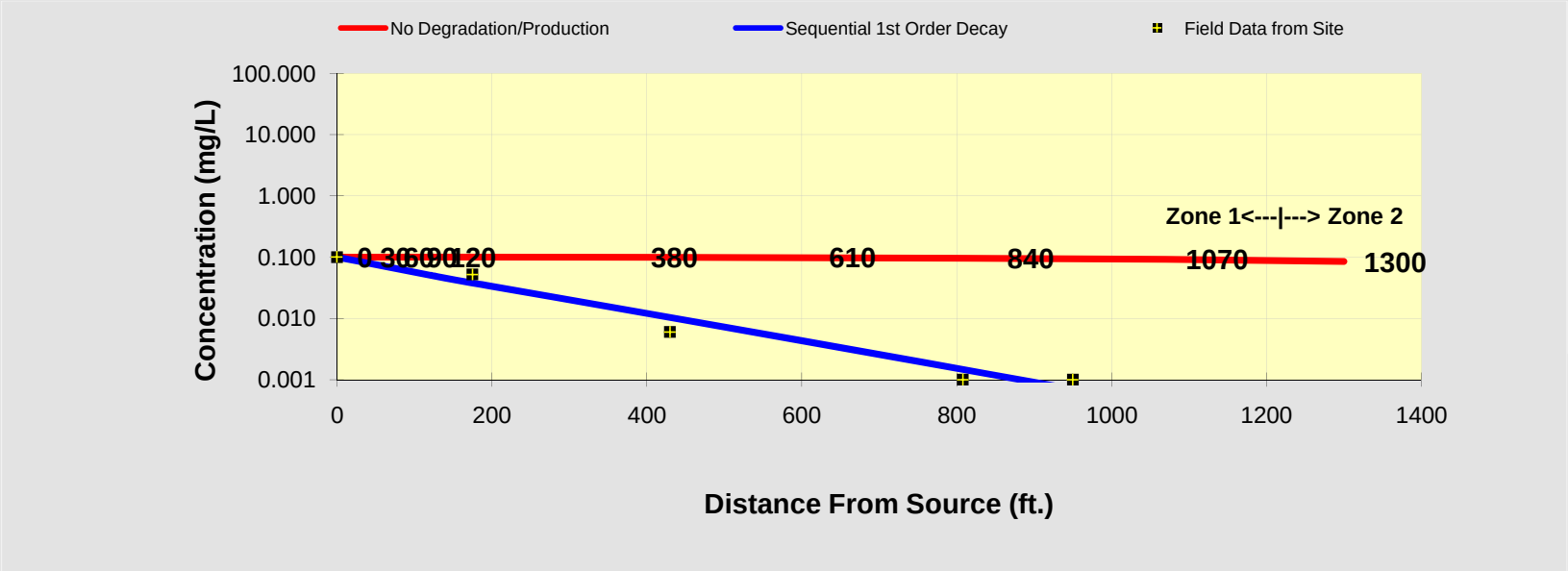
DISSOLVED CHLORINATED SOLVENT CONCENTRATIONS ALONG PLUME CENTERLINE (mg/L) at Z=0

Distance from Source (ft)

TCE	0	30	60	90	120	150	380	610	840	1070	1300
No Degradation	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.098	0.095	0.092	0.085
Biotransformation	0.1000	0.084	0.071	0.060	0.051	0.043	0.013	0.004	0.001	0.000	0.000

Monitoring Well Locations (ft)

	0	175	408	430	808	950					
Field Data from Site	0.100	0.052	0.001	0.006	0.001	0.001					



See PCE

See TCE

See DCE

See VC

See ETH

Time:

119.0 Years

Log ⟺ Linear

Return to Input

To All

To Array

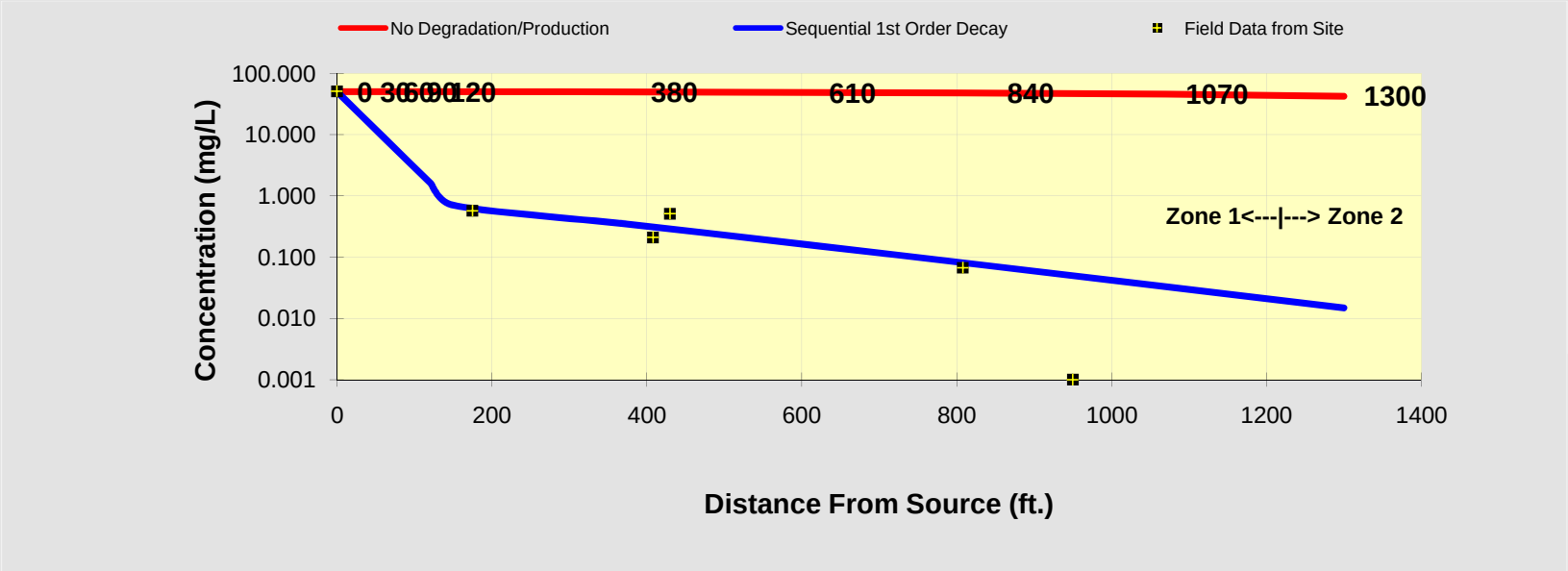
DISSOLVED CHLORINATED SOLVENT CONCENTRATIONS ALONG PLUME CENTERLINE (mg/L) at Z=0

Distance from Source (ft)

DCE	0	30	60	90	120	150	380	610	840	1070	1300
No Degradation	50.000	50.000	50.000	50.000	50.000	50.000	49.832	48.967	47.565	45.819	42.345
Biotransformation	50.0000	21.264	9.046	3.850	1.640	0.700	0.338	0.158	0.072	0.033	0.015

Monitoring Well Locations (ft)

	0	175	408	430	808	950					
Field Data from Site	51.000	0.570	0.210	0.510	0.067	0.001					



See PCE

See TCE

See DCE

See VC

See ETH

Time:

119.0 Years

Log ⟺ Linear

Return to Input

To All

To Array

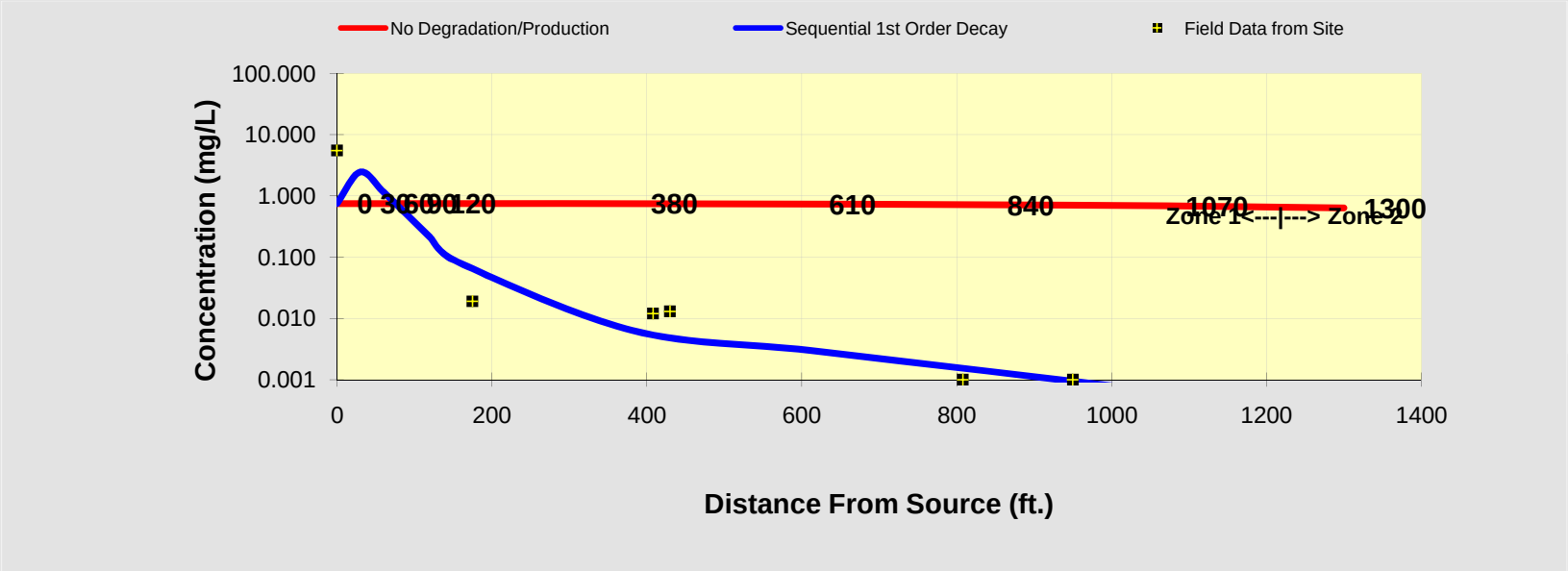
DISSOLVED CHLORINATED SOLVENT CONCENTRATIONS ALONG PLUME CENTERLINE (mg/L) at Z=0

Distance from Source (ft)

VC	0	30	60	90	120	150	380	610	840	1070	1300
No Degradation	0.750	0.750	0.750	0.750	0.750	0.750	0.747	0.735	0.713	0.687	0.635
Biotransformation	0.7500	2.446	1.151	0.496	0.211	0.090	0.006	0.003	0.001	0.001	0.000

Monitoring Well Locations (ft)

	0	175	408	430	808	950					
Field Data from Site	5.500	0.019	0.012	0.013	0.001	0.001					



See PCE

See TCE

See DCE

See VC

See ETH

Time:

119.0 Years

Log ⟺ Linear

Return to Input

To All

To Array

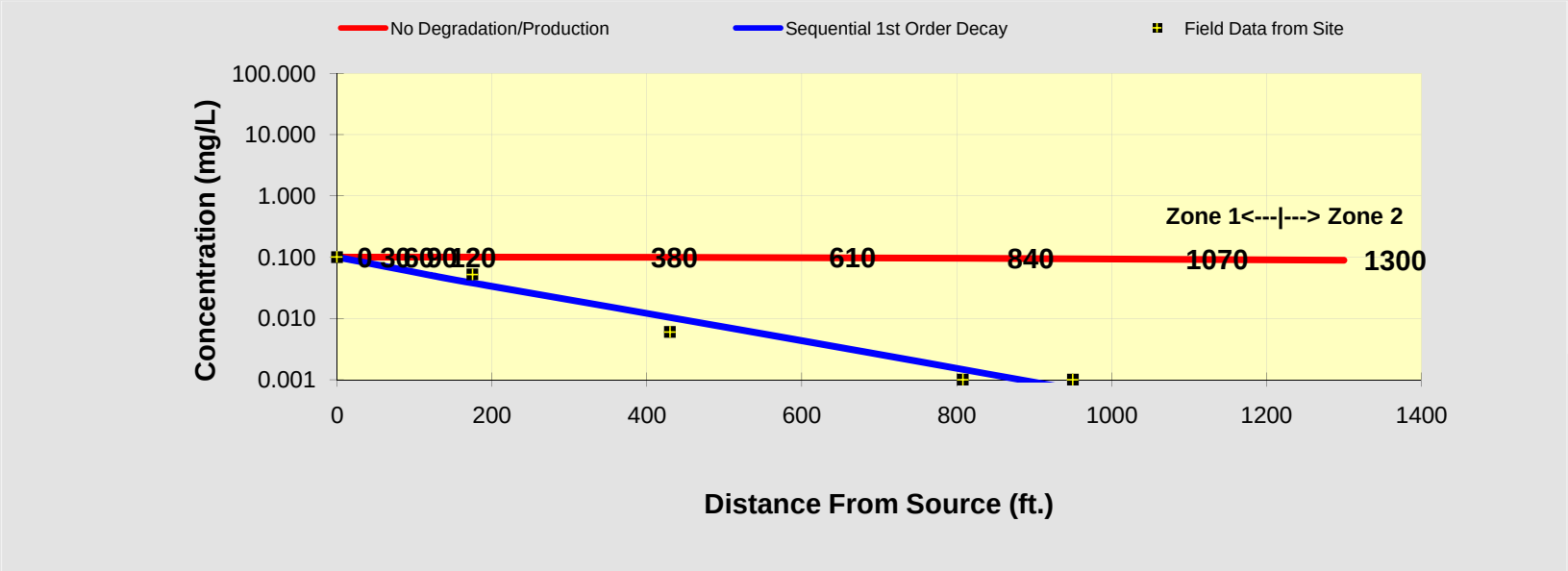
DISSOLVED CHLORINATED SOLVENT CONCENTRATIONS ALONG PLUME CENTERLINE (mg/L) at Z=0

Distance from Source (ft)

TCE	0	30	60	90	120	150	380	610	840	1070	1300
No Degradation	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.098	0.095	0.092	0.089
Biotransformation	0.1000	0.084	0.071	0.060	0.051	0.043	0.013	0.004	0.001	0.000	0.000

Monitoring Well Locations (ft)

	0	175	408	430	808	950					
Field Data from Site	0.100	0.052	0.001	0.006	0.001	0.001					



See PCE

See TCE

See DCE

See VC

See ETH

Time:

159.0 Years

Log ⟺ Linear

Return to Input

To All

To Array

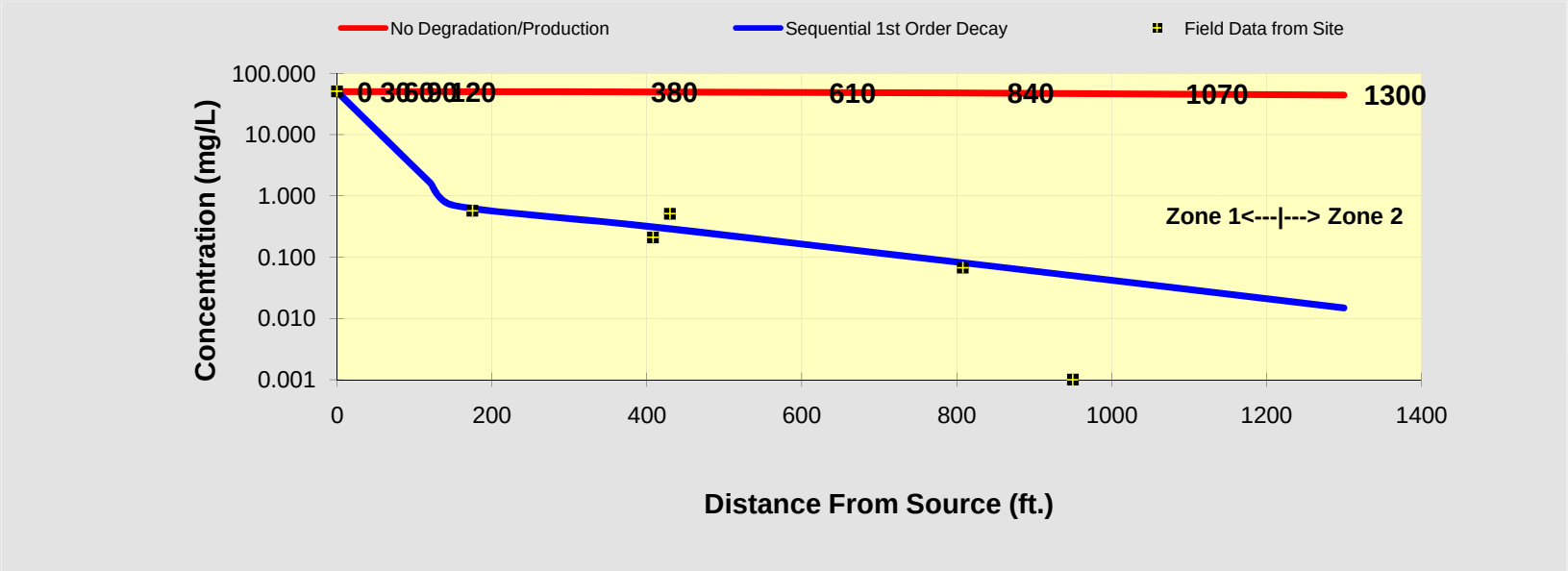
DISSOLVED CHLORINATED SOLVENT CONCENTRATIONS ALONG PLUME CENTERLINE (mg/L) at Z=0

Distance from Source (ft)

DCE	0	30	60	90	120	150	380	610	840	1070	1300
No Degradation	50.000	50.000	50.000	50.000	50.000	50.000	49.832	48.967	47.570	45.970	44.348
Biotransformation	50.0000	21.264	9.046	3.850	1.640	0.700	0.338	0.158	0.072	0.033	0.015

Monitoring Well Locations (ft)

	0	175	408	430	808	950					
Field Data from Site	51.000	0.570	0.210	0.510	0.067	0.001					



See PCE

See TCE

See DCE

See VC

See ETH

Time:

159.0 Years

Log ⟺ Linear

Return to Input

To All

To Array

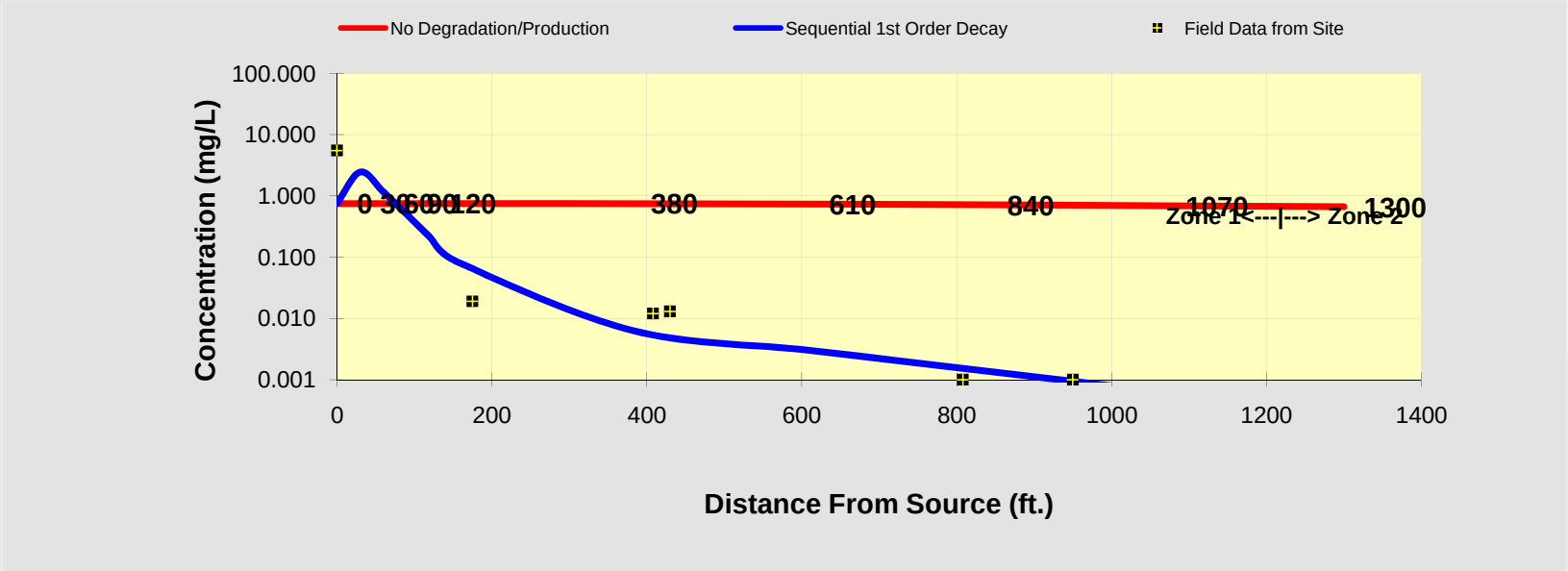
DISSOLVED CHLORINATED SOLVENT CONCENTRATIONS ALONG PLUME CENTERLINE (mg/L) at Z=0

Distance from Source (ft)

VC	0	30	60	90	120	150	380	610	840	1070	1300
No Degradation	0.750	0.750	0.750	0.750	0.750	0.750	0.747	0.735	0.714	0.690	0.665
Biotransformation	0.7500	2.446	1.151	0.496	0.211	0.090	0.006	0.003	0.001	0.001	0.000

Monitoring Well Locations (ft)

	0	175	408	430	808	950					
Field Data from Site	5.500	0.019	0.012	0.013	0.001	0.001					



See PCE

See TCE

See DCE

See VC

See ETH

Time:

159.0 Years

Log ⟺ Linear

Return to Input

To All

To Array

Appendix G
Human Health Risk Assessment Tables

TABLE G 1

SELECTION OF EXPOSURE PATHWAYS

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	On-Site/ Off-Site	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current/Future	Surface Soil	Surface Soil	Surface Soil	Military Personnel	Adult	Ingestion	On-site	Quant	Military personnel could contact surface soil while working/training at the site.
						Dermal Absorption	On-site	Quant	Military personnel could contact surface soil while working/training at the site.
				Trespasser/Visitor	Adult	Ingestion	On-site	Quant	Although access to area is restricted, trespasser may access site and contact site surface soil.
						Dermal Absorption	On-site	Quant	Although access to area is restricted, trespasser may access site and contact site surface soil.
					Youth	Ingestion	On-site	Quant	Although access to area is restricted, trespasser may access site and contact site surface soil.
						Dermal Absorption	On-site	Quant	Although access to area is restricted, trespasser may access site and contact site surface soil.
		Air	Emissions from Surface Soil	Military Personnel	Adult	Inhalation	On-site	Quant	Personnel may access site for work related activities and inhale vapors and dust from site.
				Trespasser/Visitor	Adult	Inhalation	On-site	Quant	Althought access to site is restricted, trespasser/visitor could inhale vapors and dust from areas of site disturbed during activities at the site.
					Youth	Inhalation	On-site	Quant	Although access to site is restricted, trespasser/visitor could inhale vapors and dust from areas of site disturbed during activities at the site.
	Surface Water	Surface Water	Drainage Ditches/Marshy Area	Military Personnel	Adult	Ingestion	On-site	Quant	Personnel may access site for training activities, and while at site may contact surface water.
						Dermal Absorption	On-site	Quant	Personnel may access site for training activities, and while at site may contact surface water.
				Trespasser/Visitor	Adult	Ingestion	On-site	Quant	People trespassing on site may incidentally have exposed skin surfaces come into contact with surface water.
						Dermal Absorption	On-site	Quant	People trespassing on site may incidentally ingest surface water.
					Youth	Ingestion	On-site	Quant	People trespassing on site may incidentally have exposed skin surfaces come into contact with surface water.
						Dermal Absorption	On-site	Quant	People trespassing on site may incidentally ingest surface water.
	Sediment	Sediment	Drainage Ditches/Marshy Area	Military Personnel	Adult	Ingestion	On-site	Quant	Personnel may access site for work related activities, and while at site may contact sediment in drainage ditches and marshy areas.
						Dermal Absorption	On-site	Quant	Personnel may access site for work related activities, and while at site may contact sediment in drainage ditches and marshy areas.
				Trespasser/Visitor	Adult	Ingestion	On-site	Quant	People trespassing on site may incidentally have exposed skin surfaces come into contact with sediment.
						Dermal Absorption	On-site	Quant	People trespassing on site may incidentally ingest sediment.
					Youth	Ingestion	On-site	Quant	People trespassing on site may incidentally have exposed skin surfaces come into contact with sediment.
						Dermal Absorption	On-site	Quant	People trespassing on site may incidentally ingest sediment.
	Surface Water/ Sediment	Fish	Drainage Ditches/Marshy Area	Trespasser/Visitor	Adult	Ingestion	On-site	None	People are not expected to fish in the surface water since it is a low lying marsh area and not great habitat for fish.
					Child	Ingestion	On-site	None	People are not expected to fish in the surface water since it is a low lying marsh area and not great habitat for fish.

TABLE G 1

SELECTION OF EXPOSURE PATHWAYS

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	On-Site/ Off-Site	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Future	Surface Water	Surface Water	Drainage Ditches/Marshy Area	Construction Worker	Adult	Ingestion	On-site	Quant	Construction workers could contact site surface water during construction/maintenance activities.
						Dermal Absorption	On-site	Quant	Construction workers could contact site surface water during construction/maintenance activities.
				Resident	Adult	Ingestion	On-site	None	During site re-development for residential use, the drainage ditches and ponds would most likely be reworked and removed.
						Dermal Absorption	On-site	None	During site re-development for residential use, the drainage ditches and ponds would most likely be reworked and removed.
					Child	Ingestion	On-site	None	During site re-development for residential use, the drainage ditches and ponds would most likely be reworked and removed.
						Dermal Absorption	On-site	None	During site re-development for residential use, the drainage ditches and ponds would most likely be reworked and removed.
	Sediment	Sediment	Drainage Ditches/Marshy Area	Construction Worker	Adult	Ingestion	On-site	Quant	Construction workers could contact site sediment during construction/maintenance activities.
						Dermal Absorption	On-site	Quant	Construction workers could contact site sediment during construction/maintenance activities.
				Resident	Adult	Ingestion	On-site	None	During site re-development for residential use, the drainage ditches and ponds would most likely be reworked and removed.
						Dermal Absorption	On-site	None	During site re-development for residential use, the drainage ditches and ponds would most likely be reworked and removed.
					Child	Ingestion	On-site	None	During site re-development for residential use, the drainage ditches and ponds would most likely be reworked and removed.
						Dermal Absorption	On-site	None	During site re-development for residential use, the drainage ditches and ponds would most likely be reworked and removed.
	Soil*	Soil*	Soil*	Resident	Adult	Ingestion	On-site	Quant	Although unlikely, if site used for future residential development, residents could contact soil.
						Dermal Absorption	On-site	Quant	Although unlikely, if site used for future residential development, residents could contact soil.
					Child	Ingestion	On-site	Quant	Although unlikely, if site used for future residential development, residents could contact soil.
						Dermal Absorption	On-site	Quant	Although unlikely, if site used for future residential development, residents could contact soil.
					Child/Adult	Ingestion	On-site	Quant	Although unlikely, if site used for future residential development, residents could contact soil.
						Dermal Absorption	On-site	Quant	Although unlikely, if site used for future residential development, residents could contact soil.
				Construction Worker	Adult	Ingestion	On-site	Quant	Future construction workers could contact soil while performing activities at the site.
						Dermal Absorption	On-site	Quant	Future construction workers could contact soil while performing activities at the site.
				Industrial Worker	Adult	Ingestion	On-site	Quant	If site developed for future industrial use, industrial worker could contact soil while working at the site.
						Dermal Absorption	On-site	Quant	If site developed for future industrial use, industrial worker could contact soil while working at the site.
				Military Personnel	Adult	Ingestion	On-site	Qual	Exposure to future military personnel is expected to be less than industrial worker exposure. Therefore, this receptor not evaluated quantitatively, but evaluated qualitatively based on industrial worker exposure.
						Dermal Absorption	On-site	Qual	Exposure to future military personnel is expected to be less than industrial worker exposure. Therefore, this receptor not evaluated quantitatively, but evaluated qualitatively based on industrial worker exposure.

TABLE G 1

SELECTION OF EXPOSURE PATHWAYS

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	On-Site/ Off-Site	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Future (con'd)	Soil*	Soil*	Soil*	Maintenance Worker	Adult	Ingestion	On-site	Qual	Exposure to future maintenance worker is expected to be less than industrial worker exposure. Therefore, this receptor not evaluated quantitatively, but evaluated qualitatively based on industrial worker exposure.
						Dermal Absorption	On-site	Qual	Exposure to future maintenance worker is expected to be less than industrial worker exposure. Therefore, this receptor not evaluated quantitatively, but evaluated qualitatively based on industrial worker exposure.
				Trespasser/Visitor	Adult	Ingestion	On-site	Quant	Trespassers/visitors may contact soil while on the site.
						Dermal Absorption	On-site	Quant	Trespassers/visitors may contact soil while on the site.
					Youth	Ingestion	On-site	Quant	Trespassers/visitors may contact soil while on the site.
						Dermal Absorption	On-site	Quant	Trespassers/visitors may contact soil while on the site.
		Air	Emissions from Soil*	Resident	Adult	Inhalation	On-site	Quant	If site used for future residential development, residents could inhale vapors and dust from soil
					Child	Inhalation	On-site	Quant	If site used for future residential development, residents could inhale vapors and dust from soil
					Child/Adult	Inhalation	On-site	Quant	If site used for future residential development, residents could inhale vapors and dust from soil
				Construction Worker	Adult	Inhalation	On-site	Quant	Construction worker could inhale vapors and dust while working at the site.
				Industrial Worker	Adult	Inhalation	On-site	Quant	Future Industrial Worker may inhale vapors and dust from areas of site disturbed during activities at the site.
				Military Personnel	Adult	Inhalation	On-site	Quant	Future Military Personnel may inhale vapors and dust from areas of site disturbed during activities at the site.
				Maintenance Worker	Adult	Inhalation	On-site	Qual	Exposure to future maintenance worker is expected to be less than industrial worker exposure. Therefore, this receptor not evaluated quantitatively, but evaluated qualitatively based on industrial worker exposure.
				Trespasser/Visitor	Adult	Inhalation	On-site	Quant	Trespasser/visitor may inhale dust emanating from soil.
					Youth	Inhalation	On-site	Quant	Trespasser/visitor may inhale dust emanating from soil.
	Groundwater	Groundwater	Surficial and Castle-Hayne Aquifers - Tap Water	Resident	Adult	Ingestion	On-site	Quant	Although unlikely, groundwater will be evaluated for use as a future potable water supply.
						Dermal Absorption	On-site	Quant	Although unlikely, groundwater will be evaluated for use as a future potable water supply.
					Child	Ingestion	On-site	Quant	Although unlikely, groundwater will be evaluated for use as a future potable water supply.
						Dermal Absorption	On-site	Quant	Although unlikely, groundwater will be evaluated for use as a future potable water supply.
					Child/Adult	Ingestion	On-site	Quant	Although unlikely, groundwater will be evaluated for use as a future potable water supply. Child/Adult evaluated for cancer risk only.
						Dermal Absorption	On-site	Quant	Although unlikely, groundwater will be evaluated for use as a future potable water supply. Child/Adult evaluated for cancer risk only.
				Industrial Worker	Adult	Ingestion	On-site	Quant	Future industrial workers may use groundwater as a potable source.
						Dermal	On-site	None	Assumed industrial workers would not shower regularly at site even if groundwater used as a potable water supply.

TABLE G 1

SELECTION OF EXPOSURE PATHWAYS

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	On-Site/ Off-Site	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Future (con'd)	Groundwater	Groundwater	Surficial Aquifer - Water in Excavation Pit	Construction Worker	Adult	Ingestion	On-site	None	Ingestion of groundwater during construction activities expected to be minimal.
						Dermal Absorption	On-site	Quant	Construction worker may contact groundwater in an excavation during construction/excavation activities.
		Air	Surficial and Castle Hayne Aquifers - Water Vapors at Showerhead	Resident	Adult	Inhalation	On-site	Quant	Although unlikely, groundwater will be evaluated for use as future potable water supply.
					Child	Inhalation	On-site	Quant	Although unlikely, groundwater will be evaluated for use as future potable water supply.
					Child/Adult	Inhalation	On-site	Quant	Although unlikely, groundwater will be evaluated for use as a future potable water supply. Child/Adult evaluated for cancer risk only.
				Industrial Worker	Adult	Inhalation	On-site	None	Assumed industrial workers would not shower regularly at site even if groundwater used as a potable water supply.
			Surficial Aquifer - Water Vapors in Excavation Pit	Construction Worker	Adult	Inhalation	On-site	Quant	Construction worker may inhale vapors from groundwater in an open excavation during construction/excavation activities.
			Surficial Aquifer - Vapor Intrusion to Indoor Air	Resident	Adult	Inhalation	On-site	Quant	Future resident could inhale vapors migrating from groundwater in indoor air if future resident constructed on site.
					Child	Inhalation	On-site	Quant	Future resident could inhale vapors migrating from groundwater into indoor air if future resident constructed on site.
					Child/Adult	Inhalation	On-site	Quant	Future resident could inhale vapors migrating from groundwater into indoor air if future resident constructed on site. Child/Adult evaluated for cancer risk only.
				Industrial Worker	Adult	Inhalation	On-site	Quant	Future industrial workers could inhale vapors migrating from groundwater into indoor air if future industrial building constructed on site.

Notes:

*Soil = combined surface and subsurface soil.

Quant: will be quantitatively evaluated.

Qual: will be qualitatively evaluated.

None: Not considered to be a complete pathway, therefore, not evaluated.

Generated by: M. White/ATL

Checked by:D. Stannard/WDC

TABLE G 2.1

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening [2]	Background Value [3]	Screening Toxicity Value [4]		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection [5]
Surface Soil	71-55-6	1,1,1-Trichloroethane	ND		ND		mg/kg		0/10	0.0037 - 0.34	3.4E-01	N/A	6.4E+02	NS	1.2E+00	Csoil	NO	DLBSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		mg/kg		0/11	0.0037 - 0.34	3.4E-01	N/A	5.6E-01	C	1.2E-03	Csoil	NO	DLBSL
	76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	ND		ND		mg/kg		0/10	0.0037 - 0.34	3.4E-01	N/A	9.1E+02	NS	9.2E+03	Csoil	NO	DLBSL
	79-00-5	1,1,2-Trichloroethane	ND		ND		mg/kg		0/11	0.0037 - 0.34	3.4E-01	N/A	1.6E-01	C**	N/A	N/A	YES	DLASL
	75-34-3	1,1-Dichloroethane	ND		ND		mg/kg		0/10	0.0037 - 0.34	3.4E-01	N/A	3.3E+00	C	3.0E-02	Csoil	NO	DLBSL
	75-35-4	1,1-Dichloroethene	ND		ND		mg/kg		0/10	0.0037 - 0.34	3.4E-01	N/A	2.4E+01	N	4.6E-02	Csoil	NO	DLBSL
	120-82-1	1,2,4-Trichlorobenzene	1.1E-03	J	1.1E-03	J	mg/kg	MR02-IR69-SS06-10A	1/11	0.0037 - 0.34	1.1E-03	N/A	6.2E+00	C**	2.2E+00	Csoil	NO	BSL
	96-12-8	1,2-Dibromo-3-chloropropane	ND		ND		mg/kg		0/11	0.0037 - 0.34	3.4E-01	N/A	5.4E-03	C	2.5E-04	Csoil	YES	DLASL
	106-93-4	1,2-Dibromoethane	ND		ND		mg/kg		0/11	0.0037 - 0.34	3.4E-01	N/A	3.4E-02	C	9.7E-05	Csoil	YES	DLASL
	95-50-1	1,2-Dichlorobenzene	ND		ND		mg/kg		0/11	0.0037 - 0.34	3.4E-01	N/A	1.9E+02	N	2.4E-01	Csoil	NO	DLBSL
	107-06-2	1,2-Dichloroethane	ND		ND		mg/kg		0/10	0.0037 - 0.34	3.4E-01	N/A	4.3E-01	C*	2.0E-03	Csoil	NO	DLBSL
	78-87-5	1,2-Dichloropropane	ND		ND		mg/kg		0/10	0.0037 - 0.34	3.4E-01	N/A	9.4E-01	C*	3.3E-03	Csoil	NO	DLBSL
	541-73-1	1,3-Dichlorobenzene	ND		ND		mg/kg		0/11	0.0037 - 0.34	3.4E-01	N/A	2.4E+00	C	7.6E+00	Csoil	NO	DLBSL
	106-46-7	1,4-Dichlorobenzene	ND		ND		mg/kg		0/11	0.0037 - 0.34	3.4E-01	N/A	2.4E+00	C	7.0E-02	Csoil	NO	DLBSL
	78-93-3	2-Butanone	2.5E-02	J	1.1E-01	J	mg/kg	IR69-SS04-10A	3/10	0.0092 - 0.85	1.1E-01	N/A	2.8E+03	N	1.6E+01	Csoil	NO	BSL
	591-78-6	2-Hexanone	ND		ND		mg/kg		0/11	0.0092 - 0.85	8.5E-01	N/A	2.1E+01	N	1.2E+00	Csoil	NO	DLBSL
	108-10-1	4-Methyl-2-pentanone	ND		ND		mg/kg		0/11	0.0092 - 0.85	8.5E-01	N/A	5.3E+02	N	N/A	N/A	NO	DLBSL
	67-64-1	Acetone	9.3E-02		8.4E-01		mg/kg	IR69-SS05-10A	10/11	0.0092 - 0.85	8.4E-01	N/A	6.1E+03	N	2.4E+01	Csoil	NO	BSL
	71-43-2	Benzene	ND		ND		mg/kg		0/10	0.0037 - 0.34	3.4E-01	N/A	1.1E+00	C*	7.3E-03	Csoil	NO	DLBSL
	75-27-4	Bromodichloromethane	ND		ND		mg/kg		0/10	0.0037 - 0.34	3.4E-01	N/A	2.7E-01	C	2.9E-03	Csoil	YES	DLASL
	75-25-2	Bromoform	ND		ND		mg/kg		0/11	0.0037 - 0.34	3.4E-01	N/A	6.2E+01	C*	1.9E-02	Csoil	NO	DLBSL
	74-83-9	Bromomethane	ND		ND		mg/kg		0/10	0.0037 - 0.34	3.4E-01	N/A	7.3E-01	N	N/A	N/A	NO	DLBSL
	75-15-0	Carbon disulfide	ND		ND		mg/kg		0/10	0.0037 - 0.34	3.4E-01	N/A	8.2E+01	N	3.8E+00	Csoil	NO	DLBSL
	56-23-5	Carbon tetrachloride	ND		ND		mg/kg		0/10	0.0037 - 0.34	3.4E-01	N/A	6.1E-01	C	2.0E-03	Csoil	NO	DLBSL
	108-90-7	Chlorobenzene	ND		ND		mg/kg		0/11	0.0037 - 0.34	3.4E-01	N/A	2.9E+01	N	4.5E-01	Csoil	NO	DLBSL
	75-00-3	Chloroethane	ND		ND		mg/kg		0/10	0.0037 - 0.34	3.4E-01	N/A	1.5E+03	N	1.6E+01	Csoil	NO	DLBSL
	67-66-3	Chloroform	ND		ND		mg/kg		0/10	0.0037 - 0.34	3.4E-01	N/A	2.9E-01	C	3.4E-01	Csoil	YES	DLASL
	74-87-3	Chloromethane	ND		ND		mg/kg		0/10	0.0037 - 0.34	3.4E-01	N/A	1.2E+01	N	1.5E-02	Csoil	NO	DLBSL
	156-59-2	cis-1,2-Dichloroethene	ND		ND		mg/kg		0/10	0.0037 - 0.34	3.4E-01	N/A	1.6E+01	N	3.6E-01	Csoil	NO	DLBSL
	10061-01-5	cis-1,3-Dichloropropene	ND		ND		mg/kg		0/10	0.0037 - 0.34	3.4E-01	N/A	1.7E+00	C*	2.3E-03	Csoil	NO	DLBSL
	110-82-7	Cyclohexane	4.4E-04	J	4.4E-04	J	mg/kg	MR02-IR69-SS04-10A : MR02-IR69-SS05-10A	2/11	0.0037 - 0.34	4.4E-04	N/A	1.2E+02	NS	N/A	N/A	NO	BSL
	124-48-1	Dibromochloromethane	ND		ND		mg/kg		0/11	0.0037 - 0.34	3.4E-01	N/A	6.8E-01	C	1.9E-03	Csoil	NO	DLBSL
	75-71-8	Dichlorodifluoromethane (Freon-12)	ND		ND		mg/kg		0/10	0.0037 - 0.34	3.4E-01	N/A	9.4E+00	N	2.9E+01	Csoil	NO	DLBSL
	100-41-4	Ethylbenzene	3.3E-03	J	3.3E-03	J	mg/kg	IR69-SS04-10A	1/11	0.0037 - 0.34	3.3E-03	N/A	5.4E+00	C	8.1E+00	Csoil	NO	BSL
	98-82-8	Isopropylbenzene	ND		ND		mg/kg		0/11	0.0037 - 0.34	3.4E-01	N/A	2.1E+02	N	1.3E+00	Csoil	NO	DLBSL
	1330-20-7	m- and p-Xylene	1.1E-02	J	1.1E-02	J	mg/kg	IR69-SS04-10A	1/11	0.0073 - 0.68	1.1E-02	N/A	6.3E+01	N	6.0E+00	Csoil	NO	BSL
	79-20-9	Methyl acetate	4.7E-03	J	7.1E-01		mg/kg	MR02-IR69-SS02-10A	11/11	0.0037 - 0.34	7.1E-01	N/A	7.8E+03	N	N/A	N/A	NO	BSL
	108-87-2	Methylcyclohexane	ND		ND		mg/kg		0/11	0.0037 - 0.34	3.4E-01	N/A	5.7E+01	N	N/A	N/A	NO	DLBSL
	75-09-2	Methylene chloride	ND		ND		mg/kg		0/10	0.0037 - 0.34	3.4E-01	N/A	1.1E+01	C	2.3E-02	Csoil	NO	DLBSL
	1634-04-4	Methyl-tert-butyl ether (MTBE)	ND		ND		mg/kg		0/10	0.0037 - 0.34	3.4E-01	N/A	4.3E+01	C	8.5E-02	Csoil	NO	DLBSL
	95-47-6	o-Xylene	ND		ND		mg/kg		0/11	0.0037 - 0.34	3.4E-01	N/A	6.9E+01	N	6.0E+00	Csoil	NO	DLBSL
	100-42-5	Styrene	ND		ND		mg/kg		0/11	0.0037 - 0.34	3.4E-01	N/A	6.3E+02	N	9.2E-01	Csoil	NO	DLBSL
	127-18-4	Tetrachloroethene	ND		ND		mg/kg		0/11	0.0037 - 0.34	3.4E-01	N/A	5.5E-01	C	5.0E-03	Csoil	NO	DLBSL
	108-88-3	Toluene	5.8E-02		5.8E-02		mg/kg	IR69-SS04-10A	1/11	0.0037 - 0.34	5.8E-02	N/A	5.0E+02	N	5.5E+00	Csoil	NO	BSL
	156-60-5	trans-1,2-Dichloroethene	ND		ND		mg/kg		0/10	0.0037 - 0.34	3.4E-01	N/A	1.5E+01	N	5.1E-01	Csoil	NO	DLBSL
	10061-02-6	trans-1,3-Dichloropropene	ND		ND		mg/kg		0/11	0.0037 - 0.34	3.4E-01	N/A	1.7E+00	C*	2.3E-03	Csoil	NO	DLBSL
	79-01-6	Trichloroethene	ND		ND		mg/kg		0/10	0.0037 - 0.34	3.4E-01	N/A	2.5E+00	C**	1.8E-02	Csoil	NO	DLBSL

TABLE G 2.1

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening [2]	Background Value [3]	Screening Toxicity Value [4]		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection [5]
	75-69-4	Trichlorofluoromethane(Freon-11)	ND		ND		mg/kg		0/10	0.0037 - 0.34	3.4E-01	N/A	7.9E+01	N	2.4E+01	Csoil	NO	DLBSL
	75-01-4	Vinyl chloride	ND		ND		mg/kg		0/10	0.0037 - 0.34	3.4E-01	N/A	6.0E-02	C	1.9E-04	Csoil	YES	DLASL
	1330-20-7	Xylene, total	1.4E-02	J	1.4E-02	J	mg/kg	IR69-SS04-10A	1/11	0.0037 - 0.34	1.4E-02	N/A	6.3E+01	N	6.0E+00	Csoil	NO	BSL
	92-52-4	1,1-Biphenyl	ND		ND		mg/kg		0/11	0.2 - 0.33	3.3E-01	N/A	5.1E+00	N	4.3E+01	Csoil	NO	DLBSL
	108-60-1	2,2'-Oxybis(1-chloropropane)	ND		ND		mg/kg		0/11	0.2 - 0.33	3.3E-01	N/A	4.6E+00	C	N/A	N/A	NO	DLBSL
	95-95-4	2,4,5-Trichlorophenol	ND		ND		mg/kg		0/11	0.38 - 0.63	6.3E-01	N/A	6.1E+02	N	N/A	N/A	NO	DLBSL
	88-06-2	2,4,6-Trichlorophenol	ND		ND		mg/kg		0/11	0.38 - 0.63	6.3E-01	N/A	6.1E+00	C**	N/A	N/A	NO	DLBSL
	120-83-2	2,4-Dichlorophenol	ND		ND		mg/kg		0/11	0.38 - 0.63	6.3E-01	N/A	1.8E+01	N	N/A	N/A	NO	DLBSL
	105-67-9	2,4-Dimethylphenol	ND		ND		mg/kg		0/11	0.38 - 0.63	6.3E-01	N/A	1.2E+02	N	1.4E+00	Csoil	NO	DLBSL
	51-28-5	2,4-Dinitrophenol	ND		ND		mg/kg		0/11	0.38 - 0.63	6.3E-01	N/A	1.2E+01	N	N/A	N/A	NO	DLBSL
	121-14-2	2,4-Dinitrotoluene	ND		ND		mg/kg		0/12	0.2 - 0.58	5.8E-01	N/A	1.6E+00	C*	N/A	N/A	NO	DLBSL
	606-20-2	2,6-Dinitrotoluene	ND		ND		mg/kg		0/12	0.2 - 0.58	5.8E-01	N/A	6.1E+00	N	N/A	N/A	NO	DLBSL
	91-58-7	2-Chloronaphthalene	ND		ND		mg/kg		0/11	0.2 - 0.33	3.3E-01	N/A	1.8E+02	NS	N/A	N/A	NO	DLBSL
	95-57-8	2-Chlorophenol	ND		ND		mg/kg		0/11	0.38 - 0.63	6.3E-01	N/A	3.9E+01	N	4.1E-03	Csoil	NO	DLBSL
	91-57-6	2-Methylnaphthalene	1.2E-03	J	3.6E-03	J	mg/kg	MR02-IR69-SS06-10A	9/11	0.0095 - 0.016	3.6E-03	N/A	3.1E+01	N	1.6E+00	Csoil	NO	BSL
	95-48-7	2-Methylphenol	ND		ND		mg/kg		0/11	0.38 - 0.63	6.3E-01	N/A	3.1E+02	N	N/A	N/A	NO	DLBSL
	88-74-4	2-Nitroaniline	ND		ND		mg/kg		0/11	0.38 - 0.63	6.3E-01	N/A	6.1E+01	N	N/A	N/A	NO	DLBSL
	88-75-5	2-Nitrophenol	ND		ND		mg/kg		0/11	0.38 - 0.63	6.3E-01	N/A	3.9E+01	N	N/A	N/A	NO	DLBSL
	91-94-1	3,3'-Dichlorobenzidine	ND		ND		mg/kg		0/10	0.2 - 0.33	3.3E-01	N/A	1.1E+00	C	N/A	N/A	NO	DLBSL
	99-09-2	3-Nitroaniline	ND		ND		mg/kg		0/11	0.38 - 0.63	6.3E-01	N/A	6.1E+01	N	N/A	N/A	NO	DLBSL
	534-52-1	4,6-Dinitro-2-methylphenol	ND		ND		mg/kg		0/11	0.38 - 0.63	6.3E-01	N/A	4.9E-01	N	N/A	N/A	YES	DLASL
	101-55-3	4-Bromophenyl-phenylether	ND		ND		mg/kg		0/11	0.2 - 0.33	3.3E-01	N/A	N/A		N/A	N/A	NO	NTX
	59-50-7	4-Chloro-3-methylphenol	ND		ND		mg/kg		0/11	0.38 - 0.63	6.3E-01	N/A	6.1E+02	N	N/A	N/A	NO	DLBSL
	106-47-8	4-Chloroaniline	ND		ND		mg/kg		0/11	0.38 - 0.63	6.3E-01	N/A	2.4E+00	C	N/A	N/A	NO	DLBSL
	7005-72-3	4-Chlorophenyl-phenylether	ND		ND		mg/kg		0/11	0.2 - 0.33	3.3E-01	N/A	3.1E+01	N	N/A	N/A	NO	DLBSL
	106-44-5	4-Methylphenol	ND		ND		mg/kg		0/11	0.38 - 0.63	6.3E-01	N/A	3.1E+01	N	4.0E-01	Csoil	NO	DLBSL
	100-01-6	4-Nitroaniline	ND		ND		mg/kg		0/11	0.38 - 0.63	6.3E-01	N/A	2.4E+01	C*	N/A	N/A	NO	DLBSL
	100-02-7	4-Nitrophenol	ND		ND		mg/kg		0/11	0.38 - 0.63	6.3E-01	N/A	4.8E+00	C*	N/A	N/A	NO	DLBSL
	83-32-9	Acenaphthene	8.0E-04	J	4.6E-03	J	mg/kg	IR69-SS06-10A	9/11	0.0095 - 0.016	4.6E-03	N/A	3.4E+02	N	8.4E+00	Csoil	NO	BSL
	208-96-8	Acenaphthylene	9.3E-04	J	1.1E-03	J	mg/kg	MR02-IR69-SS04-10A : MR02-IR69-SS06-10A	3/11	0.0095 - 0.016	1.1E-03	N/A	3.4E+02	N	1.1E+01	Csoil	NO	BSL
	98-86-2	Acetophenone	ND		ND		mg/kg		0/11	0.2 - 0.33	3.3E-01	N/A	7.8E+02	N	N/A	N/A	NO	DLBSL
	120-12-7	Anthracene	6.8E-04	J	1.7E-03	J	mg/kg	MR02-IR69-SS06-10A	8/11	0.0095 - 0.016	1.7E-03	N/A	1.7E+03	N	6.6E+02	Csoil	NO	BSL
	1912-24-9	Atrazine	ND		ND		mg/kg		0/11	0.2 - 0.33	3.3E-01	N/A	2.1E+00	C	2.5E-02	Csoil	NO	DLBSL
	100-52-7	Benzaldehyde	3.6E-02	J	1.7E-01	J	mg/kg	MR02-IR69-SS06-10A	11/11	0.2 - 0.33	1.7E-01	N/A	7.8E+02	N	N/A	N/A	NO	BSL
	56-55-3	Benzo(a)anthracene	8.1E-04	J	3.2E-03	J	mg/kg	MR02-IR69-SS01D-10A	9/11	0.0095 - 0.016	3.2E-03	N/A	1.5E-01	C	1.8E-01	Csoil	NO	BSL
	50-32-8	Benzo(a)pyrene	1.4E-03	J	7.3E-03	J	mg/kg	MR02-IR69-SS04-10A	11/11	0.0095 - 0.016	7.3E-03	N/A	1.5E-02	C	5.9E-02	Csoil	NO	BSL
	205-99-2	Benzo(b)fluoranthene	2.1E-03	J	6.2E-03	J	mg/kg	MR02-IR69-SS06-10A	11/11	0.0095 - 0.016	6.2E-03	N/A	1.5E-01	C	6.0E-01	Csoil	NO	BSL
	191-24-2	Benzo(g,h,i)perylene	6.4E-04	J	1.8E-03	J	mg/kg	IR69-SS02-10A	5/11	0.0095 - 0.016	1.8E-03	N/A	1.7E+02	N	3.6E+02	Csoil	NO	BSL
	207-08-9	Benzo(k)fluoranthene	1.8E-03	J	3.9E-03	J	mg/kg	MR02-IR69-SS04-10A	11/11	0.0095 - 0.016	3.9E-03	N/A	1.5E+00	C	5.9E+00	Csoil	NO	BSL
	111-91-1	bis(2-Chloroethoxy)methane	ND		ND		mg/kg		0/11	0.2 - 0.33	3.3E-01	N/A	1.8E+01	N	N/A	N/A	NO	DLBSL
	111-44-4	bis(2-Chloroethyl)ether	ND		ND		mg/kg		0/11	0.2 - 0.33	3.3E-01	N/A	2.1E-01	C	1.4E-04	Csoil	YES	DLASL
	117-81-7	bis(2-Ethylhexyl)phthalate	2.0E-01	J	3.1E-01		mg/kg	MR02-IR69-SS06-10A	2/11	0.2 - 0.33	3.1E-01	N/A	3.5E+01	C*	7.2E+00	Csoil	NO	BSL
	85-68-7	Butylbenzylphthalate	ND		ND		mg/kg		0/11	0.2 - 0.33	3.3E-01	N/A	2.6E+02	C*	1.5E+02	Csoil	NO	DLBSL
	105-60-2	Caprolactam	8.1E-02	J	8.1E-02	J	mg/kg	IR69-SS05-10A	1/11	0.2 - 0.33	8.1E-02	N/A	3.1E+03	N	1.8E+01	Csoil	NO	BSL
	86-74-8	Carbazole	ND		ND		mg/kg		0/11	0.2 - 0.33	3.3E-01	N/A	N/A		N/A	N/A	NO	NTX
	218-01-9	Chrysene	1.3E-03	J	4.2E-03	J	mg/kg	MR02-IR69-SS04-10A	10/11	0.0095 - 0.016	4.2E-03	N/A	1.5E+01	C	1.8E+01	Csoil	NO	BSL
	53-70-3	Dibenz(a,h)anthracene	ND		ND		mg/kg		0/11	0.0095 - 0.016	1.6E-02	N/A	1.5E-02	C	1.9E-01	Csoil	YES	DLASL
	132-64-9	Dibenzofuran	ND		ND		mg/kg		0/11	0.2 - 0.33	3.3E-01	N/A	7.8E+00	N	4.7E+00	Csoil	NO	DLBSL

TABLE G 2.1

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening [2]	Background Value [3]	Screening Toxicity Value [4]		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection [5]
	84-66-2	Diethylphthalate	ND		ND		mg/kg		0/11	0.2 - 0.33	3.3E-01	N/A	4.9E+03	N	3.7E+01	Csoil	NO	DLBSL
	60-51-5	Dimethoate	ND		ND		mg/kg		0/11	0.077 - 0.14	1.4E-01	N/A	1.2E+00	N	N/A	N/A	NO	DLBSL
	131-11-3	Dimethyl phthalate	ND		ND		mg/kg		0/11	0.2 - 0.33	3.3E-01	N/A	N/A		N/A	N/A	NO	NTX
	84-74-2	Di-n-butylphthalate	ND		ND		mg/kg		0/11	0.2 - 0.33	3.3E-01	N/A	6.1E+02	N	1.9E+01	Csoil	NO	DLBSL
	117-84-0	Di-n-octylphthalate	ND		ND		mg/kg		0/11	0.2 - 0.33	3.3E-01	N/A	N/A		3.8E+01	Csoil	NO	NTX
	52-85-7	Famphur	ND		ND		mg/kg		0/11	0.077 - 0.14	1.4E-01	N/A	N/A		N/A	N/A	NO	NTX
	206-44-0	Fluoranthene	2.6E-03	J	5.8E-03	J	mg/kg	IR69-SS01D-10A	9/11	0.0095 - 0.016	5.8E-03	N/A	2.3E+02	N	3.3E+02	Csoil	NO	BSL
	86-73-7	Fluorene	5.6E-04	J	1.2E-03	J	mg/kg	MR02-IR69-SS01-10A	6/11	0.0095 - 0.016	1.2E-03	N/A	2.3E+02	N	5.6E+01	Csoil	NO	BSL
	118-74-1	Hexachlorobenzene	ND		ND		mg/kg		0/11	0.2 - 0.33	3.3E-01	N/A	3.0E-01	C	2.6E-03	Csoil	YES	DLASL
	87-68-3	Hexachlorobutadiene	ND		ND		mg/kg		0/11	0.2 - 0.33	3.3E-01	N/A	6.1E+00	C**	8.7E-03	Csoil	NO	DLBSL
	77-47-4	Hexachlorocyclopentadiene	ND		ND		mg/kg		0/11	0.2 - 0.33	3.3E-01	N/A	3.7E+01	N	N/A	N/A	NO	DLBSL
	67-72-1	Hexachloroethane	ND		ND		mg/kg		0/11	0.2 - 0.33	3.3E-01	N/A	6.1E+00	C**	N/A	N/A	NO	DLBSL
	193-39-5	Indeno(1,2,3-cd)pyrene	7.5E-04	J	2.1E-03	J	mg/kg	IR69-SS02-10A : MR02-IR69-SS06-10A	8/11	0.0095 - 0.016	2.1E-03	N/A	1.5E-01	C	2.0E+00	Csoil	NO	BSL
	78-59-1	Isophorone	ND		ND		mg/kg		0/11	0.2 - 0.33	3.3E-01	N/A	5.1E+02	C*	2.1E-01	Csoil	NO	DLBSL
	91-20-3	Naphthalene	1.7E-03	J	3.2E-03	J	mg/kg	IR69-SS03-10A	6/11	0.0095 - 0.016	3.2E-03	N/A	3.6E+00	C*	2.1E-01	Csoil	NO	BSL
	621-64-7	n-Nitroso-di-n-propylamine	ND		ND		mg/kg		0/11	0.2 - 0.33	3.3E-01	N/A	6.9E-02	C	N/A	N/A	YES	DLASL
	86-30-6	n-Nitrosodiphenylamine	ND		ND		mg/kg		0/11	0.2 - 0.33	3.3E-01	N/A	9.9E+01	C	N/A	N/A	NO	DLBSL
	98-95-3	Nitrobenzene	ND		ND		mg/kg		0/12	0.2 - 0.58	5.8E-01	N/A	4.8E+00	C*	N/A	N/A	NO	DLBSL
	87-86-5	Pentachlorophenol	ND		ND		mg/kg		0/11	0.38 - 0.63	6.3E-01	N/A	8.9E-01	C	3.1E-02	Csoil	NO	DLBSL
	85-01-8	Phenanthrene	3.1E-03	J	6.0E-03	J	mg/kg	MR02-IR69-SS06-10A	11/11	0.0095 - 0.016	6.0E-03	N/A	1.7E+03	N	5.7E+01	Csoil	NO	BSL
	108-95-2	Phenol	ND		ND		mg/kg		0/11	0.38 - 0.63	6.3E-01	N/A	1.8E+03	N	2.3E-01	Csoil	NO	DLBSL
	298-02-2	Phorate	ND		ND		mg/kg		0/11	0.038 - 0.068	6.8E-02	N/A	1.2E+00	N	1.3E-02	Csoil	NO	DLBSL
	129-00-0	Pyrene	1.2E-03	J	4.4E-03	J	mg/kg	IR69-SS01D-10A : MR02-IR69-SS04-10A	10/11	0.0095 - 0.016	4.4E-03	N/A	1.7E+02	N	2.2E+02	Csoil	NO	BSL
	72-54-8	4,4'-DDD	1.2E-03	NJ	3.5E-03	NJ	mg/kg	IR69-SS01D-10A	7/11	0.0038 - 0.025	3.5E-03	N/A	2.0E+00	C	2.4E-01	Csoil	NO	BSL
	72-55-9	4,4'-DDE	1.3E-03	NJ	1.1E-01	NJ	mg/kg	IR69-SS01D-10A	11/11	0.0038 - 0.025	1.1E-01	N/A	1.4E+00	C	N/A	N/A	NO	BSL
	50-29-3	4,4'-DDT	1.6E-03	J	5.6E-02	J	mg/kg	IR69-SS01D-10A	10/10	0.0039 - 0.025	5.6E-02	N/A	1.7E+00	C*	3.4E-01	Csoil	NO	BSL
	309-00-2	Aldrin	2.2E-04	J	2.0E-03	J	mg/kg	IR69-SS02-10A : IR69-SS06-10A	7/11	0.002 - 0.013	2.0E-03	N/A	2.9E-02	C*	N/A	N/A	NO	BSL
	319-84-6	alpha-BHC	5.8E-04	J	3.3E-03	J	mg/kg	MR02-IR69-SS01D-10A	5/11	0.002 - 0.013	3.3E-03	N/A	7.7E-02	C	1.2E-03	Csoil	NO	BSL
	5103-71-9	alpha-Chlordane	6.1E-04	J	1.0E-02	J	mg/kg	MR02-IR69-SS02-10A	9/11	0.002 - 0.013	1.0E-02	N/A	1.6E+00	C*	6.8E-02	Csoil	NO	BSL
	12674-11-2	Aroclor-1016	ND		ND		mg/kg		0/11	0.028 - 0.18	1.8E-01	N/A	3.9E-01	N	N/A	N/A	NO	DLBSL
	11104-28-2	Aroclor-1221	ND		ND		mg/kg		0/11	0.039 - 0.26	2.6E-01	N/A	1.4E-01	C	N/A	N/A	YES	DLASL
	11141-16-5	Aroclor-1232	ND		ND		mg/kg		0/11	0.02 - 0.13	1.3E-01	N/A	1.4E-01	C	N/A	N/A	NO	DLBSL
	53469-21-9	Aroclor-1242	ND		ND		mg/kg		0/11	0.02 - 0.13	1.3E-01	N/A	2.2E-01	C	N/A	N/A	NO	DLBSL
	12672-29-6	Aroclor-1248	ND		ND		mg/kg		0/11	0.02 - 0.13	1.3E-01	N/A	2.2E-01	C	N/A	N/A	NO	DLBSL
	11097-69-1	Aroclor-1254	ND		ND		mg/kg		0/11	0.02 - 0.13	1.3E-01	N/A	1.1E-01	C**	N/A	N/A	YES	DLASL
	11096-82-5	Aroclor-1260	ND		ND		mg/kg		0/11	0.02 - 0.13	1.3E-01	N/A	2.2E-01	C	N/A	N/A	NO	DLBSL
	86-50-0	Azinphos methyl	ND		ND		mg/kg		0/11	0.038 - 0.068	6.8E-02	N/A	1.8E+01	N	N/A	N/A	NO	DLBSL
	319-85-7	beta-BHC	2.0E-03	J	2.0E-03	J	mg/kg	MR02-IR69-SS02-10A	1/11	0.00098 - 0.0064	2.0E-03	N/A	2.7E-01	C	1.2E-03	Csoil	NO	BSL
	35400-43-2	Bolstar	ND		ND		mg/kg		0/11	0.038 - 0.068	6.8E-02	N/A	N/A		N/A	N/A	NO	NTX
	2921-88-2	Chlorpyrifos	ND		ND		mg/kg		0/11	0.038 - 0.068	6.8E-02	N/A	1.8E+01	N	N/A	N/A	NO	DLBSL
	56-72-4	Coumaphos	ND		ND		mg/kg		0/11	0.038 - 0.068	6.8E-02	N/A	N/A		N/A	N/A	NO	NTX
	319-86-8	delta-BHC	5.5E-04	J	2.1E-03	J	mg/kg	MR02-IR69-SS02-10A	4/11	0.002 - 0.013	2.1E-03	N/A	2.7E-01	C	1.2E-03	Csoil	NO	BSL
	8065-48-3	Demeton-O	ND		ND		mg/kg		0/11	0.095 - 0.17	1.7E-01	N/A	2.4E-01	N	N/A	N/A	NO	DLBSL
	8065-48-3	Demeton-S	ND		ND		mg/kg		0/10	0.095 - 0.17	1.7E-01	N/A	2.4E-01	N	N/A	N/A	NO	DLBSL
	333-41-5	Diazinon	ND		ND		mg/kg		0/11	0.038 - 0.068	6.8E-02	N/A	4.3E+00	N	N/A	N/A	NO	DLBSL
	62-73-7	Dichlorvos	ND		ND		mg/kg		0/11	0.077 - 0.14	1.4E-01	N/A	1.7E+00	C*	N/A	N/A	NO	DLBSL
	60-57-1	Dieldrin	ND		ND		mg/kg		0/11	0.0038 - 0.025	2.5E-02	N/A	3.0E-02	C	8.1E-04	Csoil	NO	DLBSL

TABLE G 2.1

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening [2]	Background Value [3]	Screening Toxicity Value [4]		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection [5]
	298-04-4	Disulfoton	ND		ND		mg/kg		0/11	0.077 - 0.14	1.4E-01	N/A	2.4E-01	N	6.2E-03	Csoil	NO	DLBSL
	959-98-8	Endosulfan I	2.7E-04	J	2.3E-03	J	mg/kg	IR69-SS03-10A	5/11	0.002 - 0.013	2.3E-03	N/A	3.7E+01	N	5.6E+00	Csoil	NO	BSL
	33213-65-9	Endosulfan II	1.2E-03	J	1.9E-03	J	mg/kg	IR69-SS06-10A	2/11	0.0038 - 0.025	1.9E-03	N/A	3.7E+01	N	5.6E+00	Csoil	NO	BSL
	1031-07-8	Endosulfan sulfate	2.8E-03	J	4.3E-02	J	mg/kg	MR02-IR69-SS04-10A	11/11	0.0038 - 0.025	4.3E-02	N/A	3.7E+01	N	5.6E+00	Csoil	NO	BSL
	72-20-8	Endrin	8.7E-04	J	3.9E-03	J	mg/kg	IR69-SS05-10A	3/11	0.0038 - 0.025	3.9E-03	N/A	1.8E+00	N	8.1E-01	Csoil	NO	BSL
	7421-93-4	Endrin aldehyde	2.2E-03	J	2.5E-02		mg/kg	IR69-SS04-10A	4/11	0.0038 - 0.025	2.5E-02	N/A	1.8E+00	N	8.1E-01	Csoil	NO	BSL
	53494-70-5	Endrin ketone	2.5E-03	J	2.0E-02	J	mg/kg	MR02-IR69-SS01D-10A	10/11	0.0038 - 0.025	2.0E-02	N/A	1.8E+00	N	8.1E-01	Csoil	NO	BSL
	13194-48-4	Ethoprop	ND		ND		mg/kg		0/11	0.02 - 0.035	3.5E-02	N/A	N/A		N/A	N/A	NO	NTX
	115-90-2	Fensulfothion	ND		ND		mg/kg		0/11	0.2 - 0.35	3.5E-01	N/A	N/A		N/A	N/A	NO	NTX
	2104-64-5	Ethyl p-nitrophenyl phenylphosphorothioate	ND		ND		mg/kg		0/11	0.038 - 0.068	6.8E-02	N/A	6.1E-02	N	N/A	N/A	YES	DLASL
	55-38-9	Fenthion	ND		ND		mg/kg		0/11	0.038 - 0.068	6.8E-02	N/A	N/A		N/A	N/A	NO	NTX
	58-89-9	gamma-BHC (Lindane)	1.4E-03	J	8.4E-03		mg/kg	IR69-SS04-10A	4/11	0.002 - 0.013	8.4E-03	N/A	5.2E-01	C*	1.8E-03	Csoil	NO	BSL
	5103-74-2	gamma-Chlordane	9.6E-04	J	3.9E-03	J	mg/kg	MR02-IR69-SS04-10A	7/11	0.002 - 0.013	3.9E-03	N/A	1.6E+00	C*	6.8E-02	Csoil	NO	BSL
	76-44-8	Heptachlor	5.2E-04	J	1.5E-03	J	mg/kg	MR02-IR69-SS02-10A	6/11	0.002 - 0.013	1.5E-03	N/A	1.1E-01	C	6.6E-03	Csoil	NO	BSL
	1024-57-3	Heptachlor epoxide	1.6E-03	J	1.6E-03	J	mg/kg	MR02-IR69-SS06-10A	1/11	0.002 - 0.013	1.6E-03	N/A	5.3E-02	C*	8.2E-04	Csoil	NO	BSL
	121-75-5	Malathion	ND		ND		mg/kg		0/11	0.038 - 0.068	6.8E-02	N/A	1.2E+02	N	N/A	N/A	NO	DLBSL
	150-50-5	Merphos	ND		ND		mg/kg		0/11	0.057 - 0.1	1.0E-01	N/A	1.8E-01	N	N/A	N/A	NO	DLBSL
	72-43-5	Methoxychlor	4.9E-03	J	1.1E-02	J	mg/kg	IR69-SS04-10A	2/11	0.02 - 0.13	1.1E-02	N/A	3.1E+01	N	2.2E+01	Csoil	NO	BSL
	298-00-0	Methyl parathion	ND		ND		mg/kg		0/11	0.02 - 0.035	3.5E-02	N/A	1.5E+00	N	N/A	N/A	NO	DLBSL
	7786-34-7	Mevinphos	ND		ND		mg/kg		0/11	0.077 - 0.14	1.4E-01	N/A	N/A		N/A	N/A	NO	NTX
	6923-22-4	Monocrotophos	ND		ND		mg/kg		0/11	0.38 - 0.68	6.8E-01	N/A	N/A		N/A	N/A	NO	NTX
	300-76-5	Naled	ND		ND		mg/kg		0/11	0.2 - 0.35	3.5E-01	N/A	1.2E+01	N	N/A	N/A	NO	DLBSL
	56-38-2	Parathion	ND		ND		mg/kg		0/11	0.038 - 0.068	6.8E-02	N/A	3.7E+01	N	N/A	N/A	NO	DLBSL
	299-84-3	Ronnel	ND		ND		mg/kg		0/11	0.038 - 0.068	6.8E-02	N/A	3.1E+02	N	N/A	N/A	NO	DLBSL
	3689-24-5	Sulfotepp	ND		ND		mg/kg		0/11	0.02 - 0.035	3.5E-02	N/A	3.1E+00	N	N/A	N/A	NO	DLBSL
	22248-79-9	Tetrachlorvinphos	ND		ND		mg/kg		0/11	0.038 - 0.068	6.8E-02	N/A	N/A		N/A	N/A	NO	NTX
	297-97-2	Thionazin	ND		ND		mg/kg		0/11	0.038 - 0.068	6.8E-02	N/A	N/A		N/A	N/A	NO	NTX
	34643-46-4	Tokuthion (Prothiophos)	ND		ND		mg/kg		0/11	0.038 - 0.068	6.8E-02	N/A	N/A		N/A	N/A	NO	NTX
	8001-35-2	Toxaphene	ND		ND		mg/kg		0/11	0.095 - 0.63	6.3E-01	N/A	4.4E-01	C	4.6E-02	Csoil	YES	DLASL
	327-98-0	Trichloronate	ND		ND		mg/kg		0/11	0.038 - 0.068	6.8E-02	N/A	N/A		N/A	N/A	NO	NTX
	7429-90-5	Aluminum	2.3E+02		6.4E+03		mg/kg	IR69-SS05-10A	12/12	22.9 - 54	6.4E+03	5.5E+03	7.7E+03	N	N/A	N/A	NO	BSL
	7440-36-0	Antimony	1.2E-01	J	1.1E+00	J	mg/kg	IR69-SS02-10A	3/12	1.1 - 2.7	1.1E+00	4.5E-01	3.1E+00	N	N/A	N/A	NO	BSL
	7440-38-2	**Arsenic**	**2.4E-01**	**J**	**1.3E+00**	**J**	**mg/kg**	**IR69-SS01-10A**	**7/12**	**0.49 - 1.9**	**1.3E+00**	**6.3E-01**	**3.9E-01**	**C***	**5.8E+00**	**Csoil**	**YES**	**ASL**
	7440-39-3	Barium	2.8E+00	J	6.5E+01		mg/kg	IR69-SS05-10A	12/12	22.9 - 54	6.5E+01	1.5E+01	1.5E+03	N	5.8E+02	Csoil	NO	BSL
	7440-41-7	Beryllium	8.0E-02	J	1.5E-01	J	mg/kg	IR69-SS05-10A	3/12	0.57 - 1.3	1.5E-01	1.0E-01	1.6E+01	N	N/A	N/A	NO	BSL
	7440-43-9	Cadmium	9.0E-02	J	9.0E-02	J	mg/kg	IR69-SS01-10A	1/12	0.57 - 0.97	9.0E-02	3.3E-02	7.0E+00	N	3.0E+00	Csoil	NO	BSL
	7440-70-2	Calcium	3.6E+02	J	3.9E+03		mg/kg	IR69-SS05-10A	5/12	572 - 1300	3.9E+03	6.4E+03	N/A		N/A	N/A	NO	NUT
	7440-47-3	**Chromium**	**5.5E-01**	**J**	**8.8E+00**		**mg/kg**	**IR69-SS01-10A**	**8/12**	**1.1 - 2.7**	**8.8E+00**	**6.1E+00**	**2.9E-01**	**C**	**3.8E+00**	**Csoil**	**YES**	**ASL**
	7440-48-4	Cobalt	1.2E-01	J	5.0E-01	J	mg/kg	IR69-SS01-10A	3/12	0.57 - 13	5.0E-01	2.9E-01	2.3E+00	N	N/A	N/A	NO	BSL
	7440-50-8	Copper	9.0E-01		4.9E+00		mg/kg	IR69-SS01D-10A	6/12	0.57 - 6.7	4.9E+00	4.8E+00	3.1E+02	N	7.0E+02	Csoil	NO	BSL
	7439-89-6	Iron	1.7E+02		5.0E+03		mg/kg	IR69-SS01-10A	12/12	11.4 - 27	5.0E+03	3.2E+03	5.5E+03	N	1.5E+02	Csoil	NO	BSL
	7439-92-1	Lead	2.3E+00		1.6E+01		mg/kg	IR69-SS05-10A	12/12	0.34 - 0.81	1.6E+01	1.2E+01	4.0E+02	NL	2.7E+02	Csoil	NO	BSL
	7439-95-4	Magnesium	7.7E+01	J	5.5E+02	J	mg/kg	IR69-SS05-10A	5/12	572 - 1300	5.5E+02	2.4E+02	N/A		N/A	N/A	NO	NUT
	7439-96-5	**Manganese**	**1.2E+01**		**3.5E+02**		**mg/kg**	**IR69-SS05-10A**	**12/12**	**1.1 - 4**	**3.5E+02**	**1.4E+01**	**1.8E+02**	**N**	**6.5E+01**	**Csoil**	**YES**	**ASL**
	7439-97-6	Mercury	2.0E-02	J	3.1E-01		mg/kg	IR69-SS05-10A	11/12	0.04 - 0.29	3.1E-01	8.1E-02	2.3E+00	N	1.0E+00	Csoil	NO	BSL
	7440-02-0	Nickel	3.5E-01	J	2.2E+00		mg/kg	IR69-SS05-10A	4/12	0.57 - 11	2.2E+00	1.2E+00	1.5E+02	N	1.3E+02	Csoil	NO	BSL
	7440-09-7	Potassium	4.8E+01	J	5.3E+02	J	mg/kg	IR69-SS01D-10A	12/12	572 - 1300	5.3E+02	1.2E+02	N/A		N/A	N/A	NO	NUT
	7782-49-2	Selenium	1.1E-01	J	8.6E-01		mg/kg	IR69-SS01-10A	3/12	0.57 - 1.3	8.6E-01	5.6E-01	3.9E+01	N	2.1E+00	Csoil	NO	BSL
	7440-22-4	Silver	ND		ND		mg/kg		0/12	0.57 - 2.7	2.7E+00	1.4E-01	3.9E+01	N	3.4E+00	Csoil	NO	DLBSL

TABLE G 2.1

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening [2]	Background Value [3]	Screening Toxicity Value [4]		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection [5]
	7440-23-5	Sodium	4.2E+01	J	2.6E+02	J	mg/kg	IR69-SS05-10A	6/12	572 - 1300	2.6E+02	8.1E+01	N/A		N/A	N/A	NO	NUT
	7440-28-0	Thallium	3.0E-02	J	5.0E-02	J	mg/kg	MR02-IR69-SS01-10A	2/12	0.49 - 1.9	5.0E-02	3.6E-01	7.8E-02	N	N/A	N/A	NO	BSL
	7440-62-2	Vanadium	6.9E-01	J	1.2E+01		mg/kg	IR69-SS01-10A	12/12	2.3 - 13	1.2E+01	8.9E+00	3.9E+01	N	N/A	N/A	NO	BSL
	7440-66-6	Zinc	2.3E+00		1.4E+01		mg/kg	MR02-IR69-SS01-10A	8/12	2.3 - 5.4	1.4E+01	1.1E+01	2.3E+03	N	1.2E+03	Csoil	NO	BSL

[1] Minimum/Maximum detected concentrations.
[2] Maximum concentration is used for screening. If ND, maximum detection limit used for screening.
[3] Background values are two times the arithmetic mean basewide background surface soil concentrations.
[4] Oak Ridge National Laboratory (ORNL). June 2011. Residential Regional Screening Levels for Chemical Contaminants at Superfund Sites(based on 10-6 for carcinogens. and HQ of 0.1 for noncarcinogens). [Online]. Used RSL for residential soil. Available: http://epa-prgs.ornl.gov/chemicals/index.shtml
RSL value for 1,3-Dichloropropene used as a surrogate for cis-1,3-Dichloropropene and trans-1,3-Dichloropropene.
RSL value for 2-Chlorophenol used as surrogate for 2-Nitrophenol.
RSL value for 2-Nitroaniline used as surrogate for 3-N'itroaniline.
RSL value for Acenaphthene used as surrogate for Acenaphthylene.
RSL value for Anthracene used as surrogate for Phenanthrene.
RSL value for Chlordane used as surrogate for alpha-Chlordane and gamma-Chlordane.
RSL value for Chromium(VI) used as surrogate for Chromium.
RSL value for Demeton used as surrogate for Demeton-O and Demeton-S
RSL value for Endosulfan used as surrogate for Endosulfan I, Endosulfan II, and Endosulfan sulfate.
RSL value for Endrin used as surrogate for Endrin aldehyde and Endrin ketone.
RSL value for Manganese (water) used as surrogate for Manganese.
RSL value for Mercury Chloride (and other Mercury salts) used as surrogate for Mercury.
RSL value for Methoxychlor used as surrogate for 4-Chlorophenyl-phenylether.
RSL value for n-Hexane used as surrogate for Methylcyclohexane.
RSL value for Nitrobenzene used as surrogate for 4-Nitrophenol.
RSL value for Pyrene used as surrogate for Benzo(g,h,i)perylene.
RSL value for technical-HCH used as surrogate for delta-BHC.
The soil value of 400 mg/kg for lead is from the Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities, USEPA, July 14, 1994.

[5] Rationale Codes

Selection Reason:
- Above Screening Levels (ASL)
- Detection Limit Above Screening Level (DLASL), not quantitatively evaluated

Deletion Reason:
- No Toxicity Information (NTX)
- Essential Nutrient (NUT)
- Below Screening Level (BSL)
- Detection Limit Below Screening Level (DLBSL)
- Below Background Level (BBK)

Generated by: M. White/ATL
Checked by: T.Carleton/DAY

ARAR/TBC - Applicable or relevant and appropriate requirement/to be considered
J - Estimated value
N/A - Not applicable/not available
ND - Not detected
NL - Noncarcinogenic lead residential soil RSL not adjusted by dividing by 10.
NJ = The analysis indicates the presence of an analyte that has been tentatively identified and the associated numerical value represents its approximate concentration.
C - Carcinogenic
N - Noncarcinogenic
C* - N screening level < 100x C screening level, therefore N screening value used as screening level
C** - N screening level < 10x C screening level, therefore N screening value/10 used as screening level
N - Noncarcinogenic
S - Concentration exceeds Csat, used Csat as screening value
C_{sat} - The contaminant concentration in soil at which the absorptive limits of the soil particles, the solubility limits of the soil pore water, and saturation of soil pore air have been reached
Csoil - Federal Remediation Branch Target Screening Values, calculated source concentration for soil which is protective of groundwater, January 2010
COPC - Chemical of potential concern
mg/kg - milligram per kilogram

TABLE G 2.2

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Air

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening [2]	Background Value [3]	Screening Toxicity Value [4]		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection [5]
Emissions from Surface Soil	71-55-6	1,1,1-Trichloroethane	ND	ND	µg/m^3		0/10	N/A - N/A	1.7E-01	N/A	5.2E+02	N	N/A	N/A	NO	DLBSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND	ND	µg/m^3		0/11	N/A - N/A	1.8E-02	N/A	4.2E-02	C	N/A	N/A	NO	DLBSL
	76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	ND	ND	µg/m^3		0/10	N/A - N/A	2.2E-01	N/A	3.1E+03	N	N/A	N/A	NO	DLBSL
	79-00-5	1,1,2-Trichloroethane	ND	ND	µg/m^3		0/11	N/A - N/A	3.9E-02	N/A	2.1E-02	c**	N/A	N/A	YES	DLASL
	75-34-3	1,1-Dichloroethane	ND	ND	µg/m^3		0/10	N/A - N/A	1.3E-01	N/A	1.5E+00	C	N/A	N/A	NO	DLBSL
	75-35-4	1,1-Dichloroethene	ND	ND	µg/m^3		0/10	N/A - N/A	2.4E-01	N/A	2.1E+01	N	N/A	N/A	NO	DLBSL
	120-82-1	1,2,4-Trichlorobenzene	3.0E-05 J	3.0E-05 J	µg/m^3	MR02-IR69-SS06-10A	1/11	N/A - N/A	3.0E-05	N/A	2.1E-01	N	N/A	N/A	NO	BSL
	96-12-8	1,2-Dibromo-3-chloropropane	ND	ND	µg/m^3		0/11	N/A - N/A	8.7E-03	N/A	1.6E-04	C	N/A	N/A	YES	DLASL
	106-93-4	1,2-Dibromoethane	ND	ND	µg/m^3		0/11	N/A - N/A	3.2E-02	N/A	4.1E-03	C	N/A	N/A	YES	DLASL
	95-50-1	1,2-Dichlorobenzene	ND	ND	µg/m^3		0/11	N/A - N/A	2.4E-02	N/A	2.1E+01	N	N/A	N/A	NO	DLBSL
	107-06-2	1,2-Dichloroethane	ND	ND	µg/m^3		0/10	N/A - N/A	6.1E-02	N/A	9.4E-02	C*	N/A	N/A	NO	DLBSL
	78-87-5	1,2-Dichloropropane	ND	ND	µg/m^3		0/10	N/A - N/A	7.9E-02	N/A	2.4E-01	C*	N/A	N/A	NO	DLBSL
	541-73-1	1,3-Dichlorobenzene	ND	ND	µg/m^3		0/11	N/A - N/A	2.7E-02	N/A	2.2E-01	C	N/A	N/A	NO	DLBSL
	106-46-7	1,4-Dichlorobenzene	ND	ND	µg/m^3		0/11	N/A - N/A	2.7E-02	N/A	2.2E-01	C	N/A	N/A	NO	DLBSL
	78-93-3	2-Butanone	1.7E-03 J	7.3E-03 J	µg/m^3	IR69-SS04-10A	3/10	N/A - N/A	7.3E-03	N/A	5.2E+02	N	N/A	N/A	NO	BSL
	591-78-6	2-Hexanone	ND	ND	µg/m^3		0/11	N/A - N/A	5.2E-02	N/A	3.1E+00	N	N/A	N/A	NO	DLBSL
	108-10-1	4-Methyl-2-pentanone	ND	ND	µg/m^3		0/11	N/A - N/A	6.6E-02	N/A	3.1E+02	N	N/A	N/A	NO	DLBSL
	67-64-1	Acetone	5.6E-03	5.1E-02	µg/m^3	IR69-SS05-10A	10/11	N/A - N/A	5.1E-02	N/A	3.2E+03	N	N/A	N/A	NO	BSL
	71-43-2	Benzene	ND	ND	µg/m^3		0/10	N/A - N/A	8.0E-02	N/A	3.1E-01	C	N/A	N/A	NO	DLBSL
	75-27-4	Bromodichloromethane	ND	ND	µg/m^3		0/10	N/A - N/A	7.0E-02	N/A	6.6E-02	C	N/A	N/A	YES	DLASL
	75-25-2	Bromoform	ND	ND	µg/m^3		0/11	N/A - N/A	2.0E-02	N/A	2.2E+00	C	N/A	N/A	NO	DLBSL
	74-83-9	Bromomethane	ND	ND	µg/m^3		0/10	N/A - N/A	2.0E-01	N/A	5.2E-01	N	N/A	N/A	NO	DLBSL
	75-15-0	Carbon disulfide	ND	ND	µg/m^3		0/10	N/A - N/A	2.4E-01	N/A	7.3E+01	N	N/A	N/A	NO	DLBSL
	56-23-5	Carbon tetrachloride	ND	ND	µg/m^3		0/10	N/A - N/A	1.8E-01	N/A	4.1E-01	C	N/A	N/A	NO	DLBSL
	108-90-7	Chlorobenzene	ND	ND	µg/m^3		0/11	N/A - N/A	4.4E-02	N/A	5.2E+00	N	N/A	N/A	NO	DLBSL
	75-00-3	Chloroethane	ND	ND	µg/m^3		0/10	N/A - N/A	2.1E-01	N/A	1.0E+03	N	N/A	N/A	NO	DLBSL
	67-66-3	Chloroform	ND	ND	µg/m^3		0/10	N/A - N/A	1.1E-01	N/A	1.1E-01	C	N/A	N/A	NO	DLBSL
	74-87-3	Chloromethane	ND	ND	µg/m^3		0/10	N/A - N/A	2.3E-01	N/A	9.4E+00	N	N/A	N/A	NO	DLBSL
	156-59-2	cis-1,2-Dichloroethene	ND	ND	µg/m^3		0/10	N/A - N/A	1.1E-01	N/A	6.3E+00	N	N/A	N/A	NO	DLBSL
	10061-01-5	cis-1,3-Dichloropropene	ND	ND	µg/m^3		0/10	N/A - N/A	8.3E-02	N/A	6.1E-01	C*	N/A	N/A	NO	DLBSL
	110-82-7	Cyclohexane	3.5E-04 J	3.5E-04 J	µg/m^3	MR02-IR69-SS04-10A : MR02-IR69-SS05-10A	2/11	N/A - N/A	3.5E-04	N/A	6.3E+02	N	N/A	N/A	NO	BSL
	124-48-1	Dibromochloromethane	ND	ND	µg/m^3		0/11	N/A - N/A	3.5E-02	N/A	9.0E-02	C	N/A	N/A	NO	DLBSL
	75-71-8	Dichlorodifluoromethane (Freon-12)	ND	ND	µg/m^3		0/10	N/A - N/A	3.4E-01	N/A	1.0E+01	N	N/A	N/A	NO	DLBSL
	100-41-4	Ethylbenzene	4.7E-04 J	4.7E-04 J	µg/m^3	IR69-SS04-10A	1/11	N/A - N/A	4.7E-04	N/A	9.7E-01	C	N/A	N/A	NO	BSL
	98-82-8	Isopropylbenzene	ND	ND	µg/m^3		0/11	N/A - N/A	4.5E-02	N/A	4.2E+01	N	N/A	N/A	NO	DLBSL
	1330-20-7	m- and p-Xylene	1.5E-03 J	1.5E-03 J	µg/m^3	IR69-SS04-10A	1/11	N/A - N/A	1.5E-03	N/A	1.0E+01	N	N/A	N/A	NO	BSL
	79-20-9	Methyl acetate	4.8E-04 J	7.2E-02	µg/m^3	MR02-IR69-SS02-10A	11/11	N/A - N/A	7.2E-02	N/A	N/A		N/A	N/A	NO	NTX
	108-87-2	Methylcyclohexane	ND	ND	µg/m^3		0/11	N/A - N/A	1.5E-01	N/A	7.3E+01	N	N/A	N/A	NO	DLBSL
	75-09-2	Methylene chloride	ND	ND	µg/m^3		0/10	N/A - N/A	1.3E-01	N/A	5.2E+00	C	N/A	N/A	NO	DLBSL
	1634-04-4	Methyl-tert-butyl ether (MTBE)	ND	ND	µg/m^3		0/10	N/A - N/A	5.7E-02	N/A	9.4E+00	C	N/A	N/A	NO	DLBSL
	95-47-6	o-Xylene	ND	ND	µg/m^3		0/11	N/A - N/A	4.3E-02	N/A	1.0E+01	N	N/A	N/A	NO	DLBSL
	100-42-5	Styrene	ND	ND	µg/m^3		0/11	N/A - N/A	2.9E-02	N/A	1.0E+02	N	N/A	N/A	NO	DLBSL
	127-18-4	Tetrachloroethene	ND	ND	µg/m^3		0/11	N/A - N/A	1.2E-01	N/A	4.1E-01	C	N/A	N/A	NO	DLBSL
	108-88-3	Toluene	1.1E-02	1.1E-02	µg/m^3	IR69-SS04-10A	1/11	N/A - N/A	1.1E-02	N/A	5.2E+02	N	N/A	N/A	NO	BSL
	156-60-5	trans-1,2-Dichloroethene	ND	ND	µg/m^3		0/10	N/A - N/A	1.1E-01	N/A	6.3E+00	N	N/A	N/A	NO	DLBSL
	10061-02-6	trans-1,3-Dichloropropene	ND	ND	µg/m^3		0/11	N/A - N/A	8.3E-02	N/A	6.1E-01	C*	N/A	N/A	NO	DLBSL
	79-01-6	Trichloroethene	ND	ND	µg/m^3		0/10	N/A - N/A	1.3E-01	N/A	1.0E+00	C**	N/A	N/A	NO	DLBSL

TABLE G 2.2

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Air

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	75-69-4	Trichlorofluoromethane(Freon-11)	ND		ND		µg/m^3		0/10	N/A - N/A	2.7E-01	N/A	7.3E+01	N	N/A	N/A	NO	DLBSL
	75-01-4	Vinyl chloride	ND		ND		µg/m^3		0/10	N/A - N/A	2.9E-01	N/A	1.6E-01	C	N/A	N/A	YES	DLASL
	1330-20-7	Xylene, total	2.0E-03	J	2.0E-03	J	µg/m^3	IR69-SS04-10A	1/11	N/A - N/A	2.0E-03	N/A	1.0E+01	N	N/A	N/A	NO	BSL
	92-52-4	1,1-Biphenyl	ND		ND		µg/m^3		0/11	N/A - N/A	2.4E-03	N/A	4.2E-02	N	N/A	N/A	NO	DLBSL
	108-60-1	2,2'-Oxybis(1-chloropropane)	ND		ND		µg/m^3		0/11	N/A - N/A	7.7E-03	N/A	2.4E-01	C	N/A	N/A	NO	DLBSL
	95-95-4	2,4,5-Trichlorophenol	ND		ND		µg/m^3		0/11	N/A - N/A	4.6E-07	N/A	N/A		N/A	N/A	NO	NTX
	88-06-2	2,4,6-Trichlorophenol	ND		ND		µg/m^3		0/11	N/A - N/A	4.6E-07	N/A	7.8E-01	C	N/A	N/A	NO	DLBSL
	120-83-2	2,4-Dichlorophenol	ND		ND		µg/m^3		0/11	N/A - N/A	4.6E-07	N/A	N/A		N/A	N/A	NO	NTX
	105-67-9	2,4-Dimethylphenol	ND		ND		µg/m^3		0/11	N/A - N/A	4.6E-07	N/A	N/A		N/A	N/A	NO	NTX
	51-28-5	2,4-Dinitrophenol	ND		ND		µg/m^3		0/11	N/A - N/A	4.6E-07	N/A	N/A		N/A	N/A	NO	NTX
	121-14-2	2,4-Dinitrotoluene	ND		ND		µg/m^3		0/12	N/A - N/A	4.3E-07	N/A	2.7E-02	C	N/A	N/A	NO	DLBSL
	606-20-2	2,6-Dinitrotoluene	ND		ND		µg/m^3		0/12	N/A - N/A	4.3E-07	N/A	N/A		N/A	N/A	NO	NTX
	91-58-7	2-Chloronaphthalene	ND		ND		µg/m^3		0/11	N/A - N/A	3.4E-03	N/A	N/A		N/A	N/A	NO	NTX
	95-57-8	2-Chlorophenol	ND		ND		µg/m^3		0/11	N/A - N/A	4.2E-03	N/A	N/A		N/A	N/A	NO	NTX
	91-57-6	2-Methylnaphthalene	1.7E-05	J	5.0E-05	J	µg/m^3	MR02-IR69-SS06-10A	9/11	N/A - N/A	5.0E-05	N/A	N/A		N/A	N/A	NO	NTX
	95-48-7	2-Methylphenol	ND		ND		µg/m^3		0/11	N/A - N/A	4.6E-07	N/A	6.3E+01	N	N/A	N/A	NO	DLBSL
	88-74-4	2-Nitroaniline	ND		ND		µg/m^3		0/11	N/A - N/A	4.6E-07	N/A	5.2E-03	N	N/A	N/A	NO	DLBSL
	88-75-5	2-Nitrophenol	ND		ND		µg/m^3		0/11	N/A - N/A	4.2E-03	N/A	N/A		N/A	N/A	NO	NTX
	91-94-1	3,3'-Dichlorobenzidine	ND		ND		µg/m^3		0/10	N/A - N/A	2.4E-07	N/A	7.2E-03	C	N/A	N/A	NO	DLBSL
	99-09-2	3-Nitroaniline	ND		ND		µg/m^3		0/11	N/A - N/A	4.6E-07	N/A	5.2E-03	N	N/A	N/A	NO	DLBSL
	534-52-1	4,6-Dinitro-2-methylphenol	ND		ND		µg/m^3		0/11	N/A - N/A	4.6E-07	N/A	N/A		N/A	N/A	NO	NTX
	101-55-3	4-Bromophenyl-phenylether	ND		ND		µg/m^3		0/11	N/A - N/A	2.4E-07	N/A	N/A		N/A	N/A	NO	NTX
	59-50-7	4-Chloro-3-methylphenol	ND		ND		µg/m^3		0/11	N/A - N/A	1.7E-03	N/A	N/A		N/A	N/A	NO	NTX
	106-47-8	4-Chloroaniline	ND		ND		µg/m^3		0/11	N/A - N/A	4.6E-07	N/A	N/A		N/A	N/A	NO	NTX
	7005-72-3	4-Chlorophenyl-phenylether	ND		ND		µg/m^3		0/11	N/A - N/A	2.4E-07	N/A	N/A		N/A	N/A	NO	NTX
	106-44-5	4-Methylphenol	ND		ND		µg/m^3		0/11	N/A - N/A	4.6E-07	N/A	6.3E+01	N	N/A	N/A	NO	DLBSL
	100-01-6	4-Nitroaniline	ND		ND		µg/m^3		0/11	N/A - N/A	4.6E-07	N/A	6.3E-01	N	N/A	N/A	NO	DLBSL
	100-02-7	4-Nitrophenol	ND		ND		µg/m^3		0/11	N/A - N/A	7.0E-03	N/A	6.1E-02	C	N/A	N/A	NO	DLBSL
	83-32-9	Acenaphthene	4.7E-06	J	2.7E-05	J	µg/m^3	IR69-SS06-10A	9/11	N/A - N/A	2.7E-05	N/A	N/A		N/A	N/A	NO	NTX
	208-96-8	Acenaphthylene	5.4E-06	J	6.4E-06	J	µg/m^3	MR02-IR69-SS04-10A : MR02-IR69-SS06-10A	3/11	N/A - N/A	6.4E-06	N/A	N/A		N/A	N/A	NO	NTX
	98-86-2	Acetophenone	ND		ND		µg/m^3		0/11	N/A - N/A	4.5E-03	N/A	N/A		N/A	N/A	NO	NTX
	120-12-7	Anthracene	1.1E-06	J	2.7E-06	J	µg/m^3	MR02-IR69-SS06-10A	8/11	N/A - N/A	2.7E-06	N/A	N/A		N/A	N/A	NO	NTX
	1912-24-9	Atrazine	ND		ND		µg/m^3		0/11	N/A - N/A	2.4E-07	N/A	N/A		N/A	N/A	NO	NTX
	100-52-7	Benzaldehyde	1.3E-03	J	6.2E-03	J	µg/m^3	MR02-IR69-SS06-10A	11/11	N/A - N/A	6.2E-03	N/A	N/A		N/A	N/A	NO	NTX
	56-55-3	Benzo(a)anthracene	6.0E-10	J	2.4E-09	J	µg/m^3	MR02-IR69-SS01D-10A	9/11	N/A - N/A	2.4E-09	N/A	8.7E-03	C	N/A	N/A	NO	BSL
	50-32-8	Benzo(a)pyrene	1.0E-09	J	5.4E-09	J	µg/m^3	MR02-IR69-SS04-10A	11/11	N/A - N/A	5.4E-09	N/A	8.7E-04	C	N/A	N/A	NO	BSL
	205-99-2	Benzo(b)fluoranthene	1.5E-09	J	4.6E-09	J	µg/m^3	MR02-IR69-SS06-10A	11/11	N/A - N/A	4.6E-09	N/A	8.7E-03	C	N/A	N/A	NO	BSL
	191-24-2	Benzo(g,h,i)perylene	2.2E-07	J	6.3E-07	J	µg/m^3	IR69-SS02-10A	5/11	N/A - N/A	6.3E-07	N/A	N/A		N/A	N/A	NO	NTX
	207-08-9	Benzo(k)fluoranthene	1.3E-09	J	2.9E-09	J	µg/m^3	MR02-IR69-SS04-10A	11/11	N/A - N/A	2.9E-09	N/A	8.7E-03	C	N/A	N/A	NO	BSL
	111-91-1	bis(2-Chloroethoxy)methane	ND		ND		µg/m^3		0/11	N/A - N/A	2.4E-07	N/A	N/A		N/A	N/A	NO	NTX
	111-44-4	bis(2-Chloroethyl)ether	ND		ND		µg/m^3		0/11	N/A - N/A	6.4E-03	N/A	7.4E-03	C	N/A	N/A	NO	DLBSL
	117-81-7	bis(2-Ethylhexyl)phthalate	1.5E-07	J	2.3E-07		µg/m^3	MR02-IR69-SS06-10A	2/11	N/A - N/A	2.3E-07	N/A	1.0E+00	C	N/A	N/A	NO	BSL
	85-68-7	Butylbenzylphthalate	ND		ND		µg/m^3		0/11	N/A - N/A	2.4E-07	N/A	N/A		N/A	N/A	NO	NTX
	105-60-2	Caprolactam	6.0E-08	J	6.0E-08	J	µg/m^3	IR69-SS05-10A	1/11	N/A - N/A	6.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	86-74-8	Carbazole	ND		ND		µg/m^3		0/11	N/A - N/A	1.6E-03	N/A	N/A		N/A	N/A	NO	NTX
	218-01-9	Chrysene	9.6E-10	J	3.1E-09	J	µg/m^3	MR02-IR69-SS04-10A	10/11	N/A - N/A	3.1E-09	N/A	8.7E-02	C	N/A	N/A	NO	BSL
	53-70-3	Dibenz(a,h)anthracene	ND		ND		µg/m^3		0/11	N/A - N/A	1.2E-08	N/A	8.0E-04	C	N/A	N/A	NO	DLBSL
	132-64-9	Dibenzofuran	ND		ND		µg/m^3		0/11	N/A - N/A	1.4E-03	N/A	N/A		N/A	N/A	NO	NTX

TABLE G 2.2

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Air

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	84-66-2	Diethylphthalate	ND		ND		µg/m³		0/11	N/A - N/A	2.4E-07	N/A	N/A		N/A	N/A	NO	NTX
	60-51-5	Dimethoate	ND		ND		µg/m³		0/11	N/A - N/A	1.0E-07	N/A	N/A		N/A	N/A	NO	NTX
	131-11-3	Dimethyl phthalate	ND		ND		µg/m³		0/11	N/A - N/A	1.5E-03	N/A	N/A		N/A	N/A	NO	NTX
	84-74-2	Di-n-butylphthalate	ND		ND		µg/m³		0/11	N/A - N/A	2.4E-07	N/A	N/A		N/A	N/A	NO	NTX
	117-84-0	Di-n-octylphthalate	ND		ND		µg/m³		0/11	N/A - N/A	2.4E-07	N/A	N/A		N/A	N/A	NO	NTX
	52-85-7	Famphur	ND		ND		µg/m³		0/11	N/A - N/A	1.0E-07	N/A	N/A		N/A	N/A	NO	NTX
	206-44-0	Fluoranthene	1.9E-09	J	4.3E-09	J	µg/m³	IR69-SS01D-10A	9/11	N/A - N/A	4.3E-09	N/A	N/A		N/A	N/A	NO	NTX
	86-73-7	Fluorene	1.6E-06	J	3.5E-06	J	µg/m³	MR02-IR69-SS01-10A	6/11	N/A - N/A	3.5E-06	N/A	N/A		N/A	N/A	NO	NTX
	118-74-1	Hexachlorobenzene	ND		ND		µg/m³		0/11	N/A - N/A	2.4E-07	N/A	5.3E-03	C	N/A	N/A	NO	DLBSL
	87-68-3	Hexachlorobutadiene	ND		ND		µg/m³		0/11	N/A - N/A	2.4E-07	N/A	1.1E-01	C	N/A	N/A	NO	DLBSL
	77-47-4	Hexachlorocyclopentadiene	ND		ND		µg/m³		0/11	N/A - N/A	2.4E-07	N/A	2.1E-02	N	N/A	N/A	NO	DLBSL
	67-72-1	Hexachloroethane	ND		ND		µg/m³		0/11	N/A - N/A	2.4E-07	N/A	6.1E-01	C	N/A	N/A	NO	DLBSL
	193-39-5	Indeno(1,2,3-cd)pyrene	5.5E-10	J	1.5E-09	J	µg/m³	IR69-SS02-10A : MR02-IR69-SS06-10A	8/11	N/A - N/A	1.5E-09	N/A	8.7E-03	C	N/A	N/A	NO	BSL
	78-59-1	Isophorone	ND		ND		µg/m³		0/11	N/A - N/A	2.4E-07	N/A	2.1E+02	N	N/A	N/A	NO	DLBSL
	91-20-3	Naphthalene	3.0E-05	J	5.6E-05	J	µg/m³	IR69-SS03-10A	6/11	N/A - N/A	5.6E-05	N/A	7.2E-02	C*	N/A	N/A	NO	BSL
	621-64-7	n-Nitroso-di-n-propylamine	ND		ND		µg/m³		0/11	N/A - N/A	2.4E-07	N/A	1.2E-03	C	N/A	N/A	NO	DLBSL
	86-30-6	n-Nitrosodiphenylamine	ND		ND		µg/m³		0/11	N/A - N/A	2.4E-07	N/A	9.4E-01	C	N/A	N/A	NO	DLBSL
	98-95-3	Nitrobenzene	ND		ND		µg/m³		0/12	N/A - N/A	6.5E-03	N/A	6.1E-02	C	N/A	N/A	NO	DLBSL
	87-86-5	Pentachlorophenol	ND		ND		µg/m³		0/11	N/A - N/A	4.6E-07	N/A	4.8E-01	C	N/A	N/A	NO	DLBSL
	85-01-8	Phenanthrene	4.9E-06	J	9.5E-06	J	µg/m³	MR02-IR69-SS06-10A	11/11	N/A - N/A	9.5E-06	N/A	N/A		N/A	N/A	NO	NTX
	108-95-2	Phenol	ND		ND		µg/m³		0/11	N/A - N/A	4.6E-07	N/A	2.1E+01	N	N/A	N/A	NO	DLBSL
	298-02-2	Phorate	ND		ND		µg/m³		0/11	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	129-00-0	Pyrene	4.2E-07	J	1.5E-06	J	µg/m³	IR69-SS01D-10A : MR02-IR69-SS04-10A	10/11	N/A - N/A	1.5E-06	N/A	N/A		N/A	N/A	NO	NTX
	72-54-8	4,4'-DDD	8.8E-10	NJ	2.6E-09	NJ	µg/m³	IR69-SS01D-10A	7/11	N/A - N/A	2.6E-09	N/A	3.5E-02	C	N/A	N/A	NO	BSL
	72-55-9	4,4'-DDE	9.6E-10	NJ	8.1E-08	NJ	µg/m³	IR69-SS01D-10A	11/11	N/A - N/A	8.1E-08	N/A	2.5E-02	C	N/A	N/A	NO	BSL
	50-29-3	4,4'-DDT	1.2E-09	J	4.1E-08	J	µg/m³	IR69-SS01D-10A	10/10	N/A - N/A	4.1E-08	N/A	2.5E-02	C	N/A	N/A	NO	BSL
	309-00-2	Aldrin	1.6E-10	J	1.5E-09	J	µg/m³	SS06-10A	7/11	N/A - N/A	1.5E-09	N/A	5.0E-04	C	N/A	N/A	NO	BSL
	319-84-6	alpha-BHC	4.3E-10	J	2.4E-09	J	µg/m³	MR02-IR69-SS01D-10A	5/11	N/A - N/A	2.4E-09	N/A	1.4E-03	C	N/A	N/A	NO	BSL
	5103-71-9	alpha-Chlordane	4.5E-10	J	7.4E-09	J	µg/m³	MR02-IR69-SS02-10A	9/11	N/A - N/A	7.4E-09	N/A	2.4E-02	C*	N/A	N/A	NO	BSL
	12674-11-2	Aroclor-1016	ND		ND		µg/m³		0/11	N/A - N/A	1.3E-07	N/A	1.2E-01	C	N/A	N/A	NO	DLBSL
	11104-28-2	Aroclor-1221	ND		ND		µg/m³		0/11	N/A - N/A	2.5E-03	N/A	4.3E-03	C	N/A	N/A	NO	DLBSL
	11141-16-5	Aroclor-1232	ND		ND		µg/m³		0/11	N/A - N/A	1.3E-03	N/A	4.3E-03	C	N/A	N/A	NO	DLBSL
	53469-21-9	Aroclor-1242	ND		ND		µg/m³		0/11	N/A - N/A	9.6E-08	N/A	4.3E-03	C	N/A	N/A	NO	DLBSL
	12672-29-6	Aroclor-1248	ND		ND		µg/m³		0/11	N/A - N/A	9.6E-08	N/A	4.3E-03	C	N/A	N/A	NO	DLBSL
	11097-69-1	Aroclor-1254	ND		ND		µg/m³		0/11	N/A - N/A	9.6E-08	N/A	4.3E-03	C	N/A	N/A	NO	DLBSL
	11096-82-5	Aroclor-1260	ND		ND		µg/m³		0/11	N/A - N/A	9.6E-08	N/A	4.3E-03	C	N/A	N/A	NO	DLBSL
	86-50-0	Azinphos methyl	ND		ND		µg/m³		0/11	N/A - N/A	5.0E-08	N/A	1.0E+00	N	N/A	N/A	NO	DLBSL
	319-85-7	beta-BHC	1.5E-09	J	1.5E-09	J	µg/m³	MR02-IR69-SS02-10A	1/11	N/A - N/A	1.5E-09	N/A	4.6E-03	C	N/A	N/A	NO	BSL
	35400-43-2	Bolstar	ND		ND		µg/m³		0/11	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	2921-88-2	Chlorpyrifos	ND		ND		µg/m³		0/11	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	56-72-4	Coumaphos	ND		ND		µg/m³		0/11	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	319-86-8	delta-BHC	4.0E-10	J	1.5E-09	J	µg/m³	MR02-IR69-SS02-10A	4/11	N/A - N/A	1.5E-09	N/A	4.8E-03	C	N/A	N/A	NO	BSL
	8065-48-3	Demeton-O	ND		ND		µg/m³		0/11	N/A - N/A	1.3E-07	N/A	N/A		N/A	N/A	NO	NTX
	8065-48-3	Demeton-S	ND		ND		µg/m³		0/10	N/A - N/A	1.3E-07	N/A	N/A		N/A	N/A	NO	NTX
	333-41-5	Diazinon	ND		ND		µg/m³		0/11	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	62-73-7	Dichlorvos	ND		ND		µg/m³		0/11	N/A - N/A	1.0E-07	N/A	2.9E-02	C*	N/A	N/A	NO	DLBSL
	60-57-1	Dieldrin	ND		ND		µg/m³		0/11	N/A - N/A	1.8E-08	N/A	5.3E-04	C	N/A	N/A	NO	DLBSL

TABLE G 2.2

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Air

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	298-04-4	Disulfoton	ND		ND		µg/m^3		0/11	N/A - N/A	1.0E-07	N/A	N/A		N/A	N/A	NO	NTX
	959-98-8	Endosulfan I	2.0E-10	J	1.7E-09	J	µg/m^3	IR69-SS03-10A	5/11	N/A - N/A	1.7E-09	N/A	N/A		N/A	N/A	NO	NTX
	33213-65-9	Endosulfan II	8.8E-10	J	1.4E-09	J	µg/m^3	IR69-SS06-10A	2/11	N/A - N/A	1.4E-09	N/A	N/A		N/A	N/A	NO	NTX
	1031-07-8	Endosulfan sulfate	2.1E-09	J	3.2E-08	J	µg/m^3	MR02-IR69-SS04-10A	11/11	N/A - N/A	3.2E-08	N/A	N/A		N/A	N/A	NO	NTX
	72-20-8	Endrin	6.4E-10	J	2.9E-09	J	µg/m^3	IR69-SS05-10A	3/11	N/A - N/A	2.9E-09	N/A	N/A		N/A	N/A	NO	NTX
	7421-93-4	Endrin aldehyde	1.6E-09	J	1.8E-08		µg/m^3	IR69-SS04-10A	4/11	N/A - N/A	1.8E-08	N/A	N/A		N/A	N/A	NO	NTX
	53494-70-5	Endrin ketone	1.8E-09	J	1.5E-08	J	µg/m^3	MR02-IR69-SS01D-10A	10/11	N/A - N/A	1.5E-08	N/A	N/A		N/A	N/A	NO	NTX
	13194-48-4	Ethoprop	ND		ND		µg/m^3		0/11	N/A - N/A	2.6E-08	N/A	N/A		N/A	N/A	NO	NTX
	115-90-2	Fensulfothion	ND		ND		µg/m^3		0/11	N/A - N/A	2.6E-07	N/A	N/A		N/A	N/A	NO	NTX
	2104-64-5	Ethyl p-nitrophenyl phenylphosphorothioate	ND		ND		µg/m^3		0/11	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	55-38-9	Fenthion	ND		ND		µg/m^3		0/11	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	58-89-9	gamma-BHC (Lindane)	1.0E-09	J	6.2E-09		µg/m^3	IR69-SS04-10A	4/11	N/A - N/A	6.2E-09	N/A	7.8E-03	C	N/A	N/A	NO	BSL
	5103-74-2	gamma-Chlordane	7.1E-10	J	2.9E-09	J	µg/m^3	MR02-IR69-SS04-10A	7/11	N/A - N/A	2.9E-09	N/A	2.4E-02	C*	N/A	N/A	NO	BSL
	76-44-8	Heptachlor	3.8E-10	J	1.1E-09	J	µg/m^3	MR02-IR69-SS02-10A	6/11	N/A - N/A	1.1E-09	N/A	1.9E-03	C	N/A	N/A	NO	BSL
	1024-57-3	Heptachlor epoxide	1.2E-09	J	1.2E-09	J	µg/m^3	MR02-IR69-SS06-10A	1/11	N/A - N/A	1.2E-09	N/A	9.4E-04	C	N/A	N/A	NO	BSL
	121-75-5	Malathion	ND		ND		µg/m^3		0/11	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	150-50-5	Merphos	ND		ND		µg/m^3		0/11	N/A - N/A	7.4E-08	N/A	N/A		N/A	N/A	NO	NTX
	72-43-5	Methoxychlor	3.6E-09	J	8.1E-09	J	µg/m^3	IR69-SS04-10A	2/11	N/A - N/A	8.1E-09	N/A	N/A		N/A	N/A	NO	NTX
	298-00-0	Methyl parathion	ND		ND		µg/m^3		0/11	N/A - N/A	2.6E-08	N/A	N/A		N/A	N/A	NO	NTX
	7786-34-7	Mevinphos	ND		ND		µg/m^3		0/11	N/A - N/A	1.0E-07	N/A	N/A		N/A	N/A	NO	NTX
	6923-22-4	Monocrotophos	ND		ND		µg/m^3		0/11	N/A - N/A	5.0E-07	N/A	N/A		N/A	N/A	NO	NTX
	300-76-5	Naled	ND		ND		µg/m^3		0/11	N/A - N/A	2.6E-07	N/A	N/A		N/A	N/A	NO	NTX
	56-38-2	Parathion	ND		ND		µg/m^3		0/11	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	299-84-3	Ronnel	ND		ND		µg/m^3		0/11	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	3689-24-5	Sulfotepp	ND		ND		µg/m^3		0/11	N/A - N/A	2.6E-08	N/A	N/A		N/A	N/A	NO	NTX
	22248-79-9	Tetrachlorvinphos	ND		ND		µg/m^3		0/11	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	297-97-2	Thionazin	ND		ND		µg/m^3		0/11	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	34643-46-4	Tokuthion (Prothiophos)	ND		ND		µg/m^3		0/11	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	8001-35-2	Toxaphene	ND		ND		µg/m^3		0/11	N/A - N/A	4.6E-07	N/A	7.6E-03	C	N/A	N/A	NO	DLBSL
	327-98-0	Trichloronate	ND		ND		µg/m^3		0/11	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	7429-90-5	Aluminum	1.7E-04		4.7E-03		µg/m^3	IR69-SS05-10A	12/12	N/A - N/A	4.7E-03	N/A	5.2E-01	N	N/A	N/A	NO	BSL
	7440-36-0	Antimony	8.8E-08	J	8.1E-07	J	µg/m^3	IR69-SS02-10A	3/12	N/A - N/A	8.1E-07	N/A	N/A		N/A	N/A	NO	NTX
	7440-38-2	Arsenic	1.8E-07	J	9.6E-07	J	µg/m^3	IR69-SS01-10A	7/12	N/A - N/A	9.6E-07	N/A	5.7E-04	C*	N/A	N/A	NO	BSL
	7440-39-3	Barium	2.1E-06	J	4.7E-05		µg/m^3	IR69-SS05-10A	12/12	N/A - N/A	4.7E-05	N/A	5.2E-02	N	N/A	N/A	NO	BSL
	7440-41-7	Beryllium	5.9E-08	J	1.1E-07	J	µg/m^3	IR69-SS05-10A	3/12	N/A - N/A	1.1E-07	N/A	1.0E-03	C*	N/A	N/A	NO	BSL
	7440-43-9	Cadmium	6.6E-08	J	6.6E-08	J	µg/m^3	IR69-SS01-10A	1/12	N/A - N/A	6.6E-08	N/A	1.4E-03	C*	N/A	N/A	NO	BSL
	7440-70-2	Calcium	2.6E-04	J	2.8E-03		µg/m^3	IR69-SS05-10A	5/12	N/A - N/A	2.8E-03	N/A	N/A		N/A	N/A	NO	NUT
	7440-47-3	Chromium	4.0E-07	J	6.5E-06		µg/m^3	IR69-SS01-10A	8/12	N/A - N/A	6.5E-06	N/A	1.1E-05	C	N/A	N/A	NO	BSL
	7440-48-4	Cobalt	8.8E-08	J	3.7E-07	J	µg/m^3	IR69-SS01-10A	3/12	N/A - N/A	3.7E-07	N/A	2.7E-04	C*	N/A	N/A	NO	BSL
	7440-50-8	Copper	6.6E-07		3.6E-06		µg/m^3	IR69-SS01D-10A	6/12	N/A - N/A	3.6E-06	N/A	N/A		N/A	N/A	NO	NTX
	7439-89-6	Iron	1.3E-04		3.6E-03		µg/m^3	IR69-SS01-10A	12/12	N/A - N/A	3.6E-03	N/A	N/A		N/A	N/A	NO	NTX
	7439-92-1	Lead	1.7E-06		1.2E-05		µg/m^3	IR69-SS05-10A	12/12	N/A - N/A	1.2E-05	N/A	N/A		N/A	N/A	NO	NTX
	7439-95-4	Magnesium	5.6E-05	J	4.1E-04	J	µg/m^3	IR69-SS05-10A	5/12	N/A - N/A	4.1E-04	N/A	N/A		N/A	N/A	NO	NUT
	7439-96-5	Manganese	8.8E-06		2.6E-04		µg/m^3	IR69-SS05-10A	12/12	N/A - N/A	2.6E-04	N/A	5.2E-03	N	N/A	N/A	NO	BSL
	7439-97-6	Mercury	1.5E-08	J	2.3E-07		µg/m^3	IR69-SS05-10A	11/12	N/A - N/A	2.3E-07	N/A	3.1E-03	N	N/A	N/A	NO	BSL
	7440-02-0	Nickel	2.6E-07	J	1.6E-06		µg/m^3	IR69-SS05-10A	4/12	N/A - N/A	1.6E-06	N/A	9.4E-03	C*	N/A	N/A	NO	BSL
	7440-09-7	Potassium	3.5E-05	J	3.9E-04	J	µg/m^3	IR69-SS01D-10A	12/12	N/A - N/A	3.9E-04	N/A	N/A		N/A	N/A	NO	NUT
	7782-49-2	Selenium	8.1E-08	J	6.3E-07		µg/m^3	IR69-SS01-10A	3/12	N/A - N/A	6.3E-07	N/A	2.1E+00	N	N/A	N/A	NO	BSL
	7440-22-4	Silver	ND		ND		µg/m^3		0/12	N/A - N/A	2.0E-06	N/A	N/A		N/A	N/A	NO	NTX

TABLE G 2.2

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Air

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening [2]	Background Value [3]	Screening Toxicity Value [4]	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection [5]
	7440-23-5	Sodium	3.1E-05	J	1.9E-04	J	µg/m^3	IR69-SS05-10A	6/12	N/A - N/A	1.9E-04	N/A	N/A	N/A	N/A	NO	NUT
	7440-28-0	Thallium	2.2E-08	J	3.7E-08	J	µg/m^3	MR02-IR69-SS01-10A	2/12	N/A - N/A	3.7E-08	N/A	N/A	N/A	N/A	NO	NTX
	7440-62-2	Vanadium	5.1E-07	J	8.9E-06		µg/m^3	IR69-SS01-10A	12/12	N/A - N/A	8.9E-06	N/A	N/A	N/A	N/A	NO	NTX
	7440-66-6	Zinc	1.7E-06		1.1E-05		µg/m^3	MR02-IR69-SS01-10A	8/12	N/A - N/A	1.1E-05	N/A	N/A	N/A	N/A	NO	NTX

[1] Minimum/Maximum calculated air concentrations from surface soil concentrations. Air concentrations calculated as $C_{air} = C_{soil}$*1000*(1/PEF + 1/VF).
PEF = 1.36E+09 m^3/kg. VF calculated for volatile constituents only, on Table 2.2A. PEF and VF from USEPA's Soil Screening Guidance. (USEPA, July 19
[2] Maximum concentration is used for screening. If ND, maximum detection limit used for screening.
[3] Background values not available.
[4] Oak Ridge National Laboratory (ORNL). June 2011. Regional Screening Levels for Chemical Contaminants at Superfund Sites. [Online].
and HQ of 0.1 for noncarcinogens). Used RSL for residential air. [Online]. Available: http://epa-prgs.ornl.gov/chemicals/index.shtml
RSL value for 1,3-Dichloropropene used as a surrogate for cis-1,3-Dichloropropene and trans-1,3-Dichloropropene.
RSL value for 2-Chlorophenol used as surrogate for 2-Nitrophenol.
RSL value for 2-Nitroaniline used as surrogate for 3-N'itroaniline.
RSL value for Acenaphthene used as surrogate for Acenaphthylene.
RSL value for Anthracene used as surrogate for Phenanthrene.
RSL value for Chlordane used as surrogate for alpha-Chlordane and gamma-Chlordane.
RSL value for Chromium(VI) used as surrogate for Chromium.
RSL value for Demeton used as surrogate for Demeton-O and Demeton-S
RSL value for Endosulfan used as surrogate for Endosulfan I, Endosulfan II, and Endosulfan sulfate.
RSL value for Endrin used as surrogate for Endrin aldehyde and Endrin ketone.
RSL value for Manganese (water) used as surrogate for Manganese.
RSL value for Mercury Chloride (and other Mercury salts) used as surrogate for Mercury.
RSL value for Methoxychlor used as surrogate for 4-Chlorophenyl-phenylether.
RSL value for n-Hexane used as surrogate for Methylcyclohexane.
RSL value for Nitrobenzene used as surrogate for 4-Nitrophenol.
RSL value for Pyrene used as surrogate for Benzo(g,h,i)perylene.
RSL value for technical-HCH used as surrogate for delta-BHC.
The soil value of 400 mg/kg for lead is from the Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action
Facilities, USEPA, July 14, 1994.
[5] Rationale Codes

Selection Reason:	Above Screening Levels (ASL)
	Detection Limit Above Screening Level (DLASL), not quantitatively evaluated
Deletion Reason:	No Toxicity Information (NTX)
	Essential Nutrient (NUT)
	Below Screening Level (BSL)
	Detection Limit Below Screening Level (DLBSL)
	Below Background Level (BBK)

Generated by:M. White/ATL
Checked by: T.Carleton/DAY

ARAR/TBC - Applicable or relevant and appropriate requirement/to be considered
J - Estimated value
N/A - Not applicable/not available
ND - Not detected
C - Carcinogenic
N - Noncarcinogenic
C* - N screening level < 100x C screening level, therefore N screening value used as screening level
C** - N screening level < 10x C screening level, therefore N screening value/10 used as screening level
N - Noncarcinogenic
COPC - Chemical of potential concern
µg/m3 - microgram per meter cubed

TABLE G 2.2A

Calculation of Volatilization Factor

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Chemical	CAS Number	Diffusivity in Air (D_i) (cm^2/s)	Henry's Law Constant (H') (unitless)	Diffusivity in Water (D_w) (cm^2/s)	Soil Organic Carbon Partition Coeff. (K_{oc}) (L/kg)	Soil Water Partition Coeff. ($K_d = K_{oc} \times F_{oc}$) ($g/cm^3$)	Solubility in Water (S) (mg/L)	Apparent Diffusivity (D_A) (cm^2/s)	Volatilization Factor (VF) (m^3/kg)	Soil Saturation Concentration (C_{sat}) (mg/kg)
1,1,1-Trichloroethane	71-55-6	6.50E-02	7.00E-01	9.60E-06	4.39E+01	2.63E-01	1.29E+03	4.89E-03	2.01E+03	6.40E+02
1,1,2,2-Tetrachloroethane	79-34-5	4.90E-02	1.50E-02	9.30E-06	9.49E+01	5.70E-01	2.83E+03	5.83E-05	1.84E+04	1.90E+03
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	76-13-1	3.80E-02	2.20E+01	8.60E-06	1.97E+02	1.18E+00	1.70E+02	8.18E-03	1.56E+03	9.26E+02
1,1,2-Trichloroethane	79-00-5	6.70E-02	3.40E-02	1.00E-05	6.07E+01	3.64E-01	4.59E+03	2.58E-04	8.76E+03	2.16E+03
1,1-Dichloroethane	75-34-3	8.40E-02	2.30E-01	1.10E-05	3.18E+01	1.91E-01	5.04E+03	3.08E-03	2.54E+03	1.69E+03
1,1-Dichloroethene	75-35-4	8.60E-02	1.10E+00	1.10E-05	3.18E+01	1.91E-01	2.42E+03	1.01E-02	1.40E+03	1.21E+03
1,2,4-Trichlorobenzene	120-82-1	4.00E-02	5.80E-02	8.40E-06	1.36E+03	8.14E+00	4.90E+01	1.50E-05	3.63E+04	4.04E+02
1,2-Dibromo-3-chloropropane	96-12-8	3.20E-02	6.00E-03	8.90E-06	1.16E+02	6.95E-01	1.23E+03	1.29E-05	3.91E+04	9.79E+02
1,2-Dibromoethane	106-93-4	4.30E-02	2.70E-02	1.00E-05	3.96E+01	2.38E-01	3.91E+03	1.81E-04	1.05E+04	1.34E+03
1,2-Dichlorobenzene	95-50-1	5.60E-02	7.80E-02	8.90E-06	3.83E+02	2.30E+00	1.56E+02	9.65E-05	1.43E+04	3.76E+02
1,2-Dichloroethane	107-06-2	8.60E-02	4.80E-02	1.10E-05	3.96E+01	2.38E-01	8.60E+03	6.35E-04	5.58E+03	2.98E+03
1,2-Dichloropropane	78-87-5	8.10E-02	1.20E-01	9.50E-06	6.07E+01	3.64E-01	2.80E+03	1.06E-03	4.31E+03	1.36E+03
1,3-Dichlorobenzene	541-73-1	5.50E-02	9.90E-02	8.70E-06	3.75E+02	2.25E+00	8.13E+01	1.22E-04	1.27E+04	1.93E+02
1,4-Dichlorobenzene	106-46-7	5.50E-02	9.90E-02	8.70E-06	3.75E+02	2.25E+00	8.13E+01	1.22E-04	1.27E+04	1.93E+02
2-Butanone	78-93-3	9.10E-02	2.30E-03	1.00E-05	4.51E+00	2.71E-02	2.23E+05	8.80E-05	1.50E+04	2.84E+04
2-Hexanone	591-78-6	7.00E-02	3.80E-03	8.40E-06	1.50E+01	8.99E-02	1.72E+04	7.46E-05	1.63E+04	3.28E+03
4-Methyl-2-pentanone	108-10-1	7.00E-02	5.60E-03	8.30E-06	1.26E+01	7.56E-02	1.90E+04	1.19E-04	1.29E+04	3.36E+03
Acetone	67-64-1	1.10E-01	1.40E-03	1.10E-05	2.36E+00	1.42E-02	1.00E+06	7.23E-05	1.65E+04	1.14E+05
Benzene	71-43-2	9.00E-02	2.30E-01	1.00E-05	1.46E+02	8.75E-01	1.79E+03	1.08E-03	4.27E+03	1.82E+03
Bromodichloromethane	75-27-4	5.60E-02	8.70E-02	1.10E-05	3.18E+01	1.91E-01	3.03E+03	8.45E-04	4.84E+03	9.31E+02
Bromoform*	75-25-2	1.49E-02	2.56E-02	1.03E-05	3.18E+01	1.91E-01	3.10E+03	6.88E-05	1.70E+04	9.17E+02
Bromomethane	74-83-9	1.00E-01	3.00E-01	1.30E-05	1.32E+01	7.93E-02	1.52E+04	6.77E-03	1.71E+03	3.59E+03
Carbon Disulfide	75-15-0	1.10E-01	5.90E-01	1.30E-05	2.17E+01	1.30E-01	2.16E+03	1.01E-02	1.40E+03	7.39E+02
Carbon Tetrachloride	56-23-5	5.70E-02	1.10E+00	9.80E-06	4.39E+01	2.63E-01	7.93E+02	5.84E-03	1.84E+03	4.53E+02
Chlorobenzene	108-90-7	7.20E-02	1.30E-01	9.50E-06	2.34E+02	1.40E+00	4.98E+02	3.26E-04	7.79E+03	7.61E+02
Chloroethane	75-00-3	1.00E-01	4.50E-01	1.20E-05	2.17E+01	1.30E-01	6.71E+03	7.60E-03	1.61E+03	2.12E+03
Chloroform	67-66-3	7.70E-02	1.50E-01	1.10E-05	3.18E+01	1.91E-01	7.95E+03	1.93E-03	3.20E+03	2.54E+03
Chloromethane	74-87-3	1.20E-01	3.60E-01	1.40E-05	1.32E+01	7.93E-02	5.32E+03	9.30E-03	1.46E+03	1.32E+03
cis-1,2-Dichloroethene	156-59-2	8.80E-02	1.70E-01	1.10E-05	3.96E+01	2.38E-01	6.41E+03	2.16E-03	3.03E+03	2.37E+03
cis-1,3-Dichloropropene	10061-01-5	8.20E-02	1.50E-01	9.60E-06	7.22E+01	4.33E-01	2.80E+03	1.17E-03	4.12E+03	1.57E+03
Cyclohexane	110-82-7	8.00E-02	6.10E+00	9.10E-06	1.46E+02	8.75E-01	5.50E+01	1.22E-02	1.27E+03	1.17E+02
Dibromochloromethane	124-48-1	3.70E-02	3.20E-02	1.10E-05	3.18E+01	1.91E-01	2.70E+03	2.13E-04	9.65E+03	8.02E+02
Dichlorodifluoromethane (Freon-12)	75-71-8	7.80E-02	1.40E+01	9.10E-06	4.39E+01	2.63E-01	2.80E+02	1.93E-02	1.01E+03	8.44E+02
Ethylbenzene	100-41-4	6.80E-02	3.20E-01	8.50E-06	4.46E+02	2.68E+00	1.69E+02	4.09E-04	6.96E+03	4.79E+02
Isopropylbenzene	98-82-8	6.00E-02	4.70E-01	7.90E-06	6.98E+02	4.19E+00	6.13E+01	3.43E-04	7.59E+03	2.68E+02
m- and p-Xylene	1330-20-7	8.5E-02	2.1E-01	9.9E-06	3.83E+02	2.30E+00	1.06E+02	3.90E-04	7.12E+03	2.58E+02
Methyl Acetate	79-20-9	9.60E-02	4.70E-03	1.10E-05	3.06E+00	1.84E-02	2.43E+05	2.02E-04	9.89E+03	2.90E+04
Methylcyclohexane*	108-87-2	6.97E-02	1.59E+01	7.59E-06	2.13E+03	1.28E+01	1.04E+01	3.72E-03	2.31E+03	1.65E+02

TABLE G 2.2A

Calculation of Volatilization Factor

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Chemical	CAS Number	Diffusivity in Air (D_i) (cm^2/s)	Henry's Law Constant (H') (unitless)	Diffusivity in Water (D_w) (cm^2/s)	Soil Organic Carbon Partition Coeff. (K_{oc}) (L/kg)	Soil Water Partition Coeff. ($K_d = K_{oc} \times F_{oc}$) ($g/cm^3$)	Solubility in Water (S) (mg/L)	Apparent Diffusivity (D_A) (cm^2/s)	Volatilization Factor (VF) (m^3/kg)	Soil Saturation Concentration (C_{sat}) (mg/kg)
Methylene chloride	75-09-2	1.00E-01	1.30E-01	1.30E-05	2.17E+01	1.30E-01	1.30E+04	2.72E-03	2.70E+03	3.31E+03
Methyl-tert-butyl Ether (MTBE)	1634-04-4	7.50E-02	2.40E-02	8.60E-06	1.16E+01	6.94E-02	5.10E+04	5.52E-04	5.99E+03	8.87E+03
o-Xylene	95-47-6	6.90E-02	2.10E-01	8.50E-06	3.83E+02	2.30E+00	1.78E+02	3.17E-04	7.90E+03	4.34E+02
Styrene	100-42-5	7.10E-02	1.10E-01	8.80E-06	4.46E+02	2.68E+00	3.10E+02	1.49E-04	1.15E+04	8.67E+02
Tetrachloroethene	127-18-4	5.00E-02	7.20E-01	9.50E-06	9.49E+01	5.70E-01	2.06E+02	2.38E-03	2.88E+03	1.66E+02
Toluene	108-88-3	7.80E-02	2.70E-01	9.20E-06	2.34E+02	1.40E+00	5.26E+02	7.22E-04	5.24E+03	8.18E+02
trans-1,2-Dichloroethene	156-60-5	8.80E-02	1.70E-01	1.10E-05	3.96E+01	2.38E-01	4.52E+03	2.16E-03	3.03E+03	1.67E+03
trans-1,3-Dichloropropene	10061-02-6	8.20E-02	1.50E-01	9.60E-06	7.22E+01	4.33E-01	2.80E+03	1.17E-03	4.12E+03	1.57E+03
Trichloroethene	79-01-6	6.90E-02	4.00E-01	1.00E-05	6.07E+01	3.64E-01	1.28E+03	2.72E-03	2.70E+03	6.91E+02
Trichlorofluoromethane (Freon-11)	75-69-4	6.50E-02	4.00E+00	1.00E-05	4.39E+01	2.63E-01	1.10E+03	1.24E-02	1.27E+03	1.23E+03
Vinyl Chloride	75-01-4	1.10E-01	1.10E+00	1.20E-05	2.17E+01	1.30E-01	8.80E+03	1.47E-02	1.16E+03	3.86E+03
Xylene, Total	1330-20-7	8.50E-02	2.10E-01	9.90E-06	3.83E+02	2.30E+00	1.06E+02	3.90E-04	7.12E+03	2.58E+02
1,1-Biphenyl	92-52-4	4.70E-02	1.30E-02	7.60E-06	5.13E+03	3.08E+01	6.94E+00	1.06E-06	1.37E+05	2.14E+02
2,2'-Oxybis(1-chloropropane)	108-60-1	4.00E-02	3.00E-03	7.40E-06	8.29E+01	4.98E-01	1.70E+03	1.08E-05	4.29E+04	1.02E+03
2-Chloronaphthalene	91-58-7	4.50E-02	1.30E-02	7.70E-06	2.48E+03	1.49E+01	1.17E+01	2.09E-06	9.74E+04	1.75E+02
2-Chlorophenol	95-57-8	6.60E-02	4.60E-04	9.50E-06	3.07E+02	1.84E+00	1.13E+04	8.65E-07	1.51E+05	2.19E+04
2-Methylnaphthalene	91-57-6	5.20E-02	2.10E-02	7.80E-06	2.48E+03	1.49E+01	2.46E+01	3.89E-06	7.13E+04	3.68E+02
2-Nitrophenol	88-75-5	6.60E-02	4.60E-04	9.50E-06	3.07E+02	1.84E+00	1.13E+04	8.65E-07	1.51E+05	2.19E+04
4-Chloro-3-methylphenol	59-50-7	7.00E-02	1.00E-04	8.10E-06	4.92E+02	2.95E+00	3.83E+03	1.39E-07	3.77E+05	1.17E+04
4-Nitrophenol	100-02-7	6.80E-02	9.80E-04	9.40E-06	2.26E+02	1.36E+00	2.09E+03	2.48E-06	8.94E+04	3.05E+03
Acenaphthene	83-32-9	5.10E-02	7.50E-03	8.30E-06	5.03E+03	3.02E+01	3.90E+00	6.75E-07	1.71E+05	1.18E+02
Acenaphthylene	208-96-8	5.10E-02	7.50E-03	8.30E-06	5.03E+03	3.02E+01	3.90E+00	6.75E-07	1.71E+05	1.18E+02
Acetophenone	98-86-2	6.50E-02	4.30E-04	8.70E-06	5.19E+01	3.11E-01	6.13E+03	3.76E-06	7.26E+04	2.52E+03
Anthracene	120-12-7	3.90E-02	2.30E-03	7.90E-06	1.64E+04	9.82E+01	4.34E-02	4.91E-08	6.34E+05	4.26E+00
Benzaldehyde	100-52-7	7.40E-02	1.10E-03	9.50E-06	1.11E+01	6.65E-02	6.95E+03	2.64E-05	2.74E+04	1.16E+03
Benzo(g,h,i)perylene	191-24-2	2.80E-02	4.90E-04	7.20E-06	5.43E+04	3.26E+02	1.35E-01	2.38E-09	2.88E+06	4.40E+01
bis(2-Chloroethyl)ether	111-44-4	5.70E-02	7.00E-04	8.70E-06	3.22E+01	1.93E-01	1.72E+04	7.43E-06	5.16E+04	5.05E+03
Carbazole*	86-74-8	3.90E-02	3.38E-03	7.03E-06	2.45E+03	1.47E+01	7.21E-01	4.76E-07	2.04E+05	1.07E+01
Dibenzofuran	132-64-9	4.10E-02	8.70E-03	7.40E-06	9.16E+03	5.50E+01	3.10E+00	3.46E-07	2.39E+05	1.71E+02
Dimethyl phthalate*	131-11-3	5.68E-02	2.40E-05	6.30E-06	3.16E+01	1.90E-01	4.19E+03	3.89E-07	2.26E+05	1.21E+03
Fluorene	86-73-7	4.40E-02	3.90E-03	7.90E-06	9.16E+03	5.50E+01	1.69E+00	1.67E-07	3.44E+05	9.31E+01
Naphthalene	91-20-3	6.00E-02	1.80E-02	8.40E-06	1.54E+03	9.26E+00	3.10E+01	6.15E-06	5.67E+04	2.90E+02
Nitrobenzene	98-95-3	6.80E-02	9.80E-04	9.40E-06	2.26E+02	1.36E+00	2.09E+03	2.48E-06	8.94E+04	3.05E+03
Phenanthrene	85-01-8	3.90E-02	2.30E-03	7.90E-06	1.64E+04	9.82E+01	4.34E-02	4.91E-08	6.34E+05	4.26E+00
Pyrene	129-00-0	2.80E-02	4.90E-04	7.20E-06	5.43E+04	3.26E+02	1.35E-01	2.38E-09	2.88E+06	4.40E+01
Aroclor-1221	11104-28-2	5.80E-02	3.00E-02	6.70E-06	8.40E+03	5.04E+01	1.50E+01	1.84E-06	1.04E+05	7.57E+02
Aroclor-1232	11141-16-5	5.80E-02	3.00E-02	6.70E-06	8.40E+03	5.04E+01	1.45E+00	1.84E-06	1.04E+05	7.32E+01

TABLE G 2.2A

Calculation of Volatilization Factor

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Chemical	CAS Number	Diffusivity in Air (D_i) (cm^2/s)	Henry's Law Constant (H') (unitless)	Diffusivity in Water (D_w) (cm^2/s)	Soil Organic Carbon Partition Coeff. (K_{oc}) (L/kg)	Soil Water Partition Coeff. ($K_d = K_{oc} \times F_{oc}$) ($g/cm^3$)	Solubility in Water (S) (mg/L)	Apparent Diffusivity (D_A) (cm^2/s)	Volatilization Factor (VF) (m^3/kg)	Soil Saturation Concentration (C_{sat}) (mg/kg)

Volatilization factor (VF) = (m^3/kg)

$$\frac{Q/C * (3.14 * D_A * T)^{1/2} * 10^{-4}\ m^2/cm^2}{2 * r_b * D_A}$$

Apparent Diffusivity (D_A) = (cm^2/s)

$$\frac{[(Q_a^{10/3} * D_i * H' + Q_w^{10/3} * D_w)/n^2]}{(r_b * K_d + Q_w + Q_a * H')}$$

Soil Saturation Concentration (C_{sat}) =

$$S/r_b * (K_d * r_b + Q_w + H' * Q_a)$$

Parameters	Values
Q/C - Inverse of the mean concentration at the center of a 0.5-acre-square source located in Raleigh-Durham, NC (g/m^2-s per kg/m^3)	77.26
T - Exposure interval(s)	9.5E+08
ρ_b - Soil bulk density (g/cm^3)	1.5
Θ_a - Air-filled soil porosity (L_{air}/L_{water}) = n - Θ_w	0.28
n - Total soil porosity (Lpore/Lsoil) = 1 - (ρ_b/ρ_s)	0.43
Θ_w - Water-filled soil porosity (Lwater/Lsoil)	0.15
ρ_s - Soil particle density (g/cm^3)	2.65
f_{oc} - fraction organic carbon in soil (g/g)	0.006

Notes:

Equations from USEPA, 1996. *Soil Screening Guidance: User's Guide.* EPA/540/R-96/018.

Physical/chemical properties from Oak Ridge National Laboratory (ORNL). May 2010. Regional Screening Levels for Chemical Contaminants at Superfund Sites.

* Physical/chemical properties from Commission on Environmental Quality (http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html), Risk Assessment Information System (http://rais.ornl.gov/)

Generated by: M.White/ATL

Checked by: T.Carleton/DAY

TABLE G 2.3

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Surface Water
Exposure Medium: Surface Water

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier		Maximum [1] Concentration Qualifier		Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
Surface Water at Drainage Ditches/ Marshy Area	71-55-6	1,1,1-Trichloroethane	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	2.0E+02	A			NO	DLBSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	1.7E-01	A	4.0E+00	N	YES	DLASL
	76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	5.9E+03	R-n			NO	DLBSL
	79-00-5	1,1,2-Trichloroethane	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	5.9E-01	A			NO	DLBSL
	75-34-3	1,1-Dichloroethane	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	2.4E+00	R-c			NO	DLBSL
	75-35-4	1,1-Dichloroethene	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	3.3E+02	A			NO	DLBSL
	120-82-1	1,2,4-Trichlorobenzene	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	3.5E+01	A			NO	DLBSL
	96-12-8	1,2-Dibromo-3-chloropropane	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	3.2E-03	R-c			YES	DLASL
	106-93-4	1,2-Dibromoethane	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	6.5E-02	R-c			YES	DLASL
	95-50-1	1,2-Dichlorobenzene	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	4.2E+02	A			NO	DLBSL
	107-06-2	1,2-Dichloroethane	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	3.8E-01	A			YES	DLASL
	78-87-5	1,2-Dichloropropane	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	5.0E-01	A			YES	DLASL
	541-73-1	1,3-Dichlorobenzene	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	3.2E+02	A			NO	DLBSL
	106-46-7	1,4-Dichlorobenzene	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	6.3E+01	A			NO	DLBSL
	78-93-3	2-Butanone [1]	ND		ND		µg/L		0/	-		N/A	7.1E+02	R-n			NO	DLBSL
	591-78-6	2-Hexanone	ND		ND		µg/L		0/3	2.5 - 2.5	2.5E+00	N/A	4.7E+00	R-n			NO	DLBSL
	108-10-1	4-Methyl-2-pentanone	ND		ND		µg/L		0/3	2.5 - 2.5	2.5E+00	N/A	2.0E+02	R-n			NO	DLBSL
	67-64-1	Acetone [1]	ND		ND		µg/L		0/	-		N/A	2.2E+03	R-n			NO	DLBSL
	71-43-2	Benzene	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	2.2E+00	A	5.1E+01	N	NO	DLBSL
	75-27-4	Bromodichloromethane	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	5.5E-01	A			NO	DLBSL
	75-25-2	Bromoform	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	4.3E+00	A			NO	DLBSL
	74-83-9	Bromomethane	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	4.7E+01	A			NO	DLBSL
	75-15-0	Carbon disulfide	2.7E-02	J	3.6E-02	J	µg/L	IR69-SW02-10A	2/3	0.5 - 0.5	3.6E-02	N/A	1.0E+02	R-n			NO	BSL
	56-23-5	Carbon tetrachloride	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	2.3E-01	A	1.6E+00	N	YES	DLASL
	108-90-7	Chlorobenzene	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	1.0E+02	A			NO	DLBSL
	75-00-3	Chloroethane	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	2.1E+03	R-n			NO	DLBSL
	67-66-3	Chloroform	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	5.7E+00	A			NO	DLBSL
	74-87-3	Chloromethane	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	1.9E+01	R-n			NO	DLBSL
	156-59-2	cis-1,2-Dichloroethene	9.9E-02	J	1.2E+00		µg/L	IR69-SW01-10A : IR69-SW01D-10A	2/3	0.5 - 0.5	1.2E+00	N/A	7.3E+00	R-n			NO	BSL
	10061-01-5	cis-1,3-Dichloropropene	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	3.4E-01	A			YES	DLASL
	110-82-7	Cyclohexane	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	1.3E+03	R-n			NO	DLBSL
	124-48-1	Dibromochloromethane	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	4.0E-01	A			YES	DLASL
	75-71-8	Dichlorodifluoromethane (Freon-12)	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	2.0E+01	R-n			NO	DLBSL
	100-41-4	Ethylbenzene	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	5.3E+02	A			NO	DLBSL
	98-82-8	Isopropylbenzene	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	6.8E+01	R-n			NO	DLBSL
	1330-20-7	m- and p-Xylene	ND		ND		µg/L		0/3	1 - 1	1.0E+00	N/A	2.0E+01	R-n			NO	DLBSL
	79-20-9	Methyl acetate	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	3.7E+03	R-n			NO	DLBSL
	108-87-2	Methylcyclohexane	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	N/A				NO	NTX
	75-09-2	Methylene chloride	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	4.6E+00	A			NO	DLBSL
	1634-04-4	Methyl-tert-butyl ether (MTBE)	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	1.2E+01	R-c			NO	DLBSL
	95-47-6	o-Xylene	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	2.0E+01	R-n			NO	DLBSL
	100-42-5	Styrene	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	1.6E+02	R-n			NO	DLBSL
	127-18-4	Tetrachloroethene	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	6.9E-01	A	3.3E+00	N	NO	DLBSL
	108-88-3	Toluene	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	1.0E+03	A			NO	DLBSL
	156-60-5	trans-1,2-Dichloroethene	6.8E-02	J	6.8E-02	J	µg/L	IR69-SW01D-10A	1/3	0.5 - 0.5	6.8E-02	N/A	1.0E+02	N			NO	BSL
	10061-02-6	trans-1,3-Dichloropropene	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	3.4E-01	A			YES	DLASL
	79-01-6	Trichloroethene	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	2.5E+00	A	3.0E+01	N	NO	DLBSL
	75-69-4	Trichlorofluoromethane(Freon-11)	ND		ND		µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	1.3E+02	R-n			NO	DLBSL

TABLE G 2.3

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Surface Water
Exposure Medium: Surface Water

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	75-01-4	Vinyl chloride	ND	ND	µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	2.5E-02	A	2.4E+00	N	YES	DLASL
	1330-20-7	Xylene, total	ND	ND	µg/L		0/3	0.5 - 0.5	5.0E-01	N/A	2.0E+01	R-n			NO	DLBSL
	92-52-4	1,1-Biphenyl	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	8.3E-02	R-n			YES	DLASL
	108-60-1	2,2'-Oxybis(1-chloropropane)	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	1.4E+03	A			NO	DLBSL
	95-95-4	2,4,5-Trichlorophenol	ND	ND	µg/L		0/3	10 - 10	1.0E+01	N/A	1.8E+03	A			NO	DLBSL
	88-06-2	2,4,6-Trichlorophenol	ND	ND	µg/L		0/3	10 - 10	1.0E+01	N/A	1.4E+00	A			YES	DLASL
	120-83-2	2,4-Dichlorophenol	ND	ND	µg/L		0/3	10 - 10	1.0E+01	N/A	7.7E+01	A			NO	DLBSL
	105-67-9	2,4-Dimethylphenol	ND	ND	µg/L		0/3	10 - 10	1.0E+01	N/A	3.8E+02	A			NO	DLBSL
	51-28-5	2,4-Dinitrophenol	ND	ND	µg/L		0/3	10 - 10	1.0E+01	N/A	6.9E+01	A			NO	DLBSL
	121-14-2	2,4-Dinitrotoluene	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	1.1E-01	A			YES	DLASL
	606-20-2	2,6-Dinitrotoluene	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	3.7E+00	R-n			YES	DLASL
	91-58-7	2-Chloronaphthalene	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	1.0E+03	A			NO	DLBSL
	95-57-8	2-Chlorophenol	ND	ND	µg/L		0/3	10 - 10	1.0E+01	N/A	8.1E+01	A			NO	DLBSL
	91-57-6	2-Methylnaphthalene	ND	ND	µg/L		0/3	0.2 - 0.2	2.0E-01	N/A	1.5E+01	R-n			NO	DLBSL
	95-48-7	2-Methylphenol	ND	ND	µg/L		0/3	10 - 10	1.0E+01	N/A	1.8E+02	R-n			NO	DLBSL
	88-74-4	2-Nitroaniline	ND	ND	µg/L		0/3	10 - 10	1.0E+01	N/A	3.7E+01	R-n			NO	DLBSL
	88-75-5	2-Nitrophenol	ND	ND	µg/L		0/3	10 - 10	1.0E+01	N/A	1.8E+01	R-n			NO	DLBSL
	91-94-1	3,3'-Dichlorobenzidine	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	2.1E-02	A			YES	DLASL
	99-09-2	3-Nitroaniline	ND	ND	µg/L		0/3	10 - 10	1.0E+01	N/A	N/A				NO	NTX
	534-52-1	4,6-Dinitro-2-methylphenol	ND	ND	µg/L		0/3	10 - 10	1.0E+01	N/A	1.3E+01	A			NO	DLBSL
	101-55-3	4-Bromophenyl-phenylether	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	N/A				NO	NTX
	59-50-7	4-Chloro-3-methylphenol	ND	ND	µg/L		0/3	10 - 10	1.0E+01	N/A	3.0E+03	A			NO	DLBSL
	106-47-8	4-Chloroaniline	ND	ND	µg/L		0/3	10 - 10	1.0E+01	N/A	3.4E-01	R-c			YES	DLASL
	7005-72-3	4-Chlorophenyl-phenylether	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	1.8E+01	R-n			NO	DLBSL
	106-44-5	4-Methylphenol	ND	ND	µg/L		0/3	10 - 10	1.0E+01	N/A	1.8E+01	R-n			NO	DLBSL
	100-01-6	4-Nitroaniline	ND	ND	µg/L		0/3	10 - 10	1.0E+01	N/A	3.4E+00	R-c*			YES	DLASL
	100-02-7	4-Nitrophenol	ND	ND	µg/L		0/3	10 - 10	1.0E+01	N/A	1.2E-01	R-c			YES	DLASL
	83-32-9	Acenaphthene	ND	ND	µg/L		0/3	0.2 - 0.2	2.0E-01	N/A	6.7E+02	A			NO	DLBSL
	208-96-8	Acenaphthylene	ND	ND	µg/L		0/3	0.2 - 0.2	2.0E-01	N/A	2.2E+02	R-n			NO	DLBSL
	98-86-2	Acetophenone	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	3.7E+02	R-n			NO	DLBSL
	120-12-7	Anthracene	ND	ND	µg/L		0/3	0.2 - 0.2	2.0E-01	N/A	8.3E+03	A			NO	DLBSL
	1912-24-9	Atrazine	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	2.9E-01	R-c			YES	DLASL
	100-52-7	Benzaldehyde	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	3.7E+02	R-n			NO	DLBSL
	56-55-3	Benzo(a)anthracene	ND	ND	µg/L		0/3	0.2 - 0.2	2.0E-01	N/A	3.8E-03	A	3.1E-02	N	YES	DLASL
	50-32-8	Benzo(a)pyrene	ND	ND	µg/L		0/3	0.2 - 0.2	2.0E-01	N/A	3.8E-03	A	3.1E-02	N	YES	DLASL
	205-99-2	Benzo(b)fluoranthene	ND	ND	µg/L		0/3	0.2 - 0.2	2.0E-01	N/A	3.8E-03	A	3.1E-02	N	YES	DLASL
	191-24-2	Benzo(g,h,i)perylene	ND	ND	µg/L		0/3	0.2 - 0.2	2.0E-01	N/A	1.1E+02	R-n			NO	DLBSL
	207-08-9	Benzo(k)fluoranthene	ND	ND	µg/L		0/3	0.2 - 0.2	2.0E-01	N/A	3.8E-03	A	3.1E-02	N	YES	DLASL
	111-91-1	bis(2-Chloroethoxy)methane	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	1.1E+01	R-n			NO	DLBSL
	111-44-4	bis(2-Chloroethyl)ether	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	3.0E-02	A			YES	DLASL
	117-81-7	bis(2-Ethylhexyl)phthalate	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	1.2E+00	A			YES	DLASL
	85-68-7	Butylbenzylphthalate	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	1.5E+03	A			NO	DLBSL
	105-60-2	Caprolactam	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	1.8E+03	R-n			NO	DLBSL
	86-74-8	Carbazole	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	N/A				NO	NTX
	218-01-9	Chrysene	ND	ND	µg/L		0/3	0.2 - 0.2	2.0E-01	N/A	3.8E-03	A	3.1E-02	N	YES	DLASL
	53-70-3	Dibenz(a,h)anthracene	ND	ND	µg/L		0/3	0.2 - 0.2	2.0E-01	N/A	3.8E-03	A	3.1E-02	N	YES	DLASL
	132-64-9	Dibenzofuran	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	3.7E+00	R-n			YES	DLASL
	84-66-2	Diethylphthalate	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	1.7E+04	A			NO	DLBSL
	60-51-5	Dimethoate	ND	ND	µg/L		0/3	1.9 - 2	2.0E+00	N/A	7.3E-01	R-n			YES	DLASL

TABLE G 2.3

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Surface Water
Exposure Medium: Surface Water

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	131-11-3	Dimethyl phthalate	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	2.7E+05	A			NO	DLBSL
	84-74-2	Di-n-butylphthalate	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	2.0E+03	A			NO	DLBSL
	117-84-0	Di-n-octylphthalate	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	N/A				NO	NTX
	52-85-7	Famphur	ND	ND	µg/L		0/3	1.9 - 2	2.0E+00	N/A	N/A				NO	NTX
	206-44-0	Fluoranthene	ND	ND	µg/L		0/3	0.2 - 0.2	2.0E-01	N/A	1.3E+02	A			NO	DLBSL
	86-73-7	Fluorene	ND	ND	µg/L		0/3	0.2 - 0.2	2.0E-01	N/A	1.1E+03	A			NO	DLBSL
	118-74-1	Hexachlorobenzene	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	2.8E-04	A			YES	DLASL
	87-68-3	Hexachlorobutadiene	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	4.4E-01	A	1.8E+01	N	YES	DLASL
	77-47-4	Hexachlorocyclopentadiene	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	4.0E+01	A			NO	DLBSL
	67-72-1	Hexachloroethane	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	1.4E+00	A			YES	DLASL
	193-39-5	Indeno(1,2,3-cd)pyrene	ND	ND	µg/L		0/3	0.2 - 0.2	2.0E-01	N/A	3.8E-03	A	3.1E-02	N	YES	DLASL
	78-59-1	Isophorone	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	3.5E+01	A			NO	DLBSL
	91-20-3	Naphthalene	ND	ND	µg/L		0/3	0.2 - 0.2	2.0E-01	N/A	1.4E-01	R-c*			YES	DLASL
	621-64-7	n-Nitroso-di-n-propylamine	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	5.0E-03	A			YES	DLASL
	86-30-6	n-Nitrosodiphenylamine	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	3.3E+00	A			YES	DLASL
	98-95-3	Nitrobenzene	ND	ND	µg/L		0/3	5 - 5	5.0E+00	N/A	1.7E+01	A			NO	DLBSL
	87-86-5	Pentachlorophenol	ND	ND	µg/L		0/3	10 - 10	1.0E+01	N/A	2.7E-01	A			YES	DLASL
	85-01-8	Phenanthrene	ND	ND	µg/L		0/3	0.2 - 0.2	2.0E-01	N/A	1.1E+03	R-n			NO	DLBSL
	108-95-2	Phenol	ND	ND	µg/L		0/3	10 - 10	1.0E+01	N/A	2.1E+04	A			NO	DLBSL
	298-02-2	Phorate	ND	ND	µg/L		0/3	0.95 - 1	1.0E+00	N/A	7.3E-01	R-n			YES	DLASL
	129-00-0	Pyrene	ND	ND	µg/L		0/3	0.2 - 0.2	2.0E-01	N/A	8.3E+02	A			NO	DLBSL
	72-54-8	4,4'-DDD	ND	ND	µg/L		0/3	0.1 - 0.1	1.0E-01	N/A	3.1E-04	A			YES	DLASL
	72-55-9	4,4'-DDE	ND	ND	µg/L		0/3	0.1 - 0.1	1.0E-01	N/A	2.2E-04	A			YES	DLASL
	50-29-3	4,4'-DDT	ND	ND	µg/L		0/3	0.1 - 0.1	1.0E-01	N/A	2.0E-04	N	2.2E-04	A	YES	DLASL
	309-00-2	Aldrin	ND	ND	µg/L		0/3	0.05 - 0.051	5.1E-02	N/A	4.9E-05	A	5.0E-05	N	YES	DLASL
	319-84-6	alpha-BHC	ND	ND	µg/L		0/3	0.05 - 0.051	5.1E-02	N/A	2.6E-03	A			YES	DLASL
	5103-71-9	alpha-Chlordane	ND	ND	µg/L		0/3	0.05 - 0.051	5.1E-02	N/A	8.0E-04	N	8.0E-04	A	YES	DLASL
	12674-11-2	Aroclor-1016	ND	ND	µg/L		0/3	0.93 - 0.95	9.5E-01	N/A	6.4E-05	N	6.4E-05	A	YES	DLASL
	11104-28-2	Aroclor-1221	ND	ND	µg/L		0/3	1.3 - 1.3	1.3E+00	N/A	6.4E-05	N	6.4E-05	A	YES	DLASL
	11141-16-5	Aroclor-1232	ND	ND	µg/L		0/3	0.93 - 0.95	9.5E-01	N/A	6.4E-05	N	6.4E-05	A	YES	DLASL
	53469-21-9	Aroclor-1242	ND	ND	µg/L		0/3	0.63 - 0.64	6.4E-01	N/A	6.4E-05	N	6.4E-05	A	YES	DLASL
	12672-29-6	Aroclor-1248	ND	ND	µg/L		0/3	0.63 - 0.64	6.4E-01	N/A	6.4E-05	N	6.4E-05	A	YES	DLASL
	11097-69-1	Aroclor-1254	ND	ND	µg/L		0/3	0.63 - 0.64	6.4E-01	N/A	6.4E-05	N	6.4E-05	A	YES	DLASL
	11096-82-5	Aroclor-1260	ND	ND	µg/L		0/3	0.93 - 0.95	9.5E-01	N/A	6.4E-05	N	6.4E-05	A	YES	DLASL
	86-50-0	Azinphos methyl	ND	ND	µg/L		0/3	0.95 - 1	1.0E+00	N/A	1.1E+01	R-n			NO	DLBSL
	319-85-7	beta-BHC	ND	ND	µg/L		0/3	0.05 - 0.051	5.1E-02	N/A	9.1E-03	A			YES	DLASL
	35400-43-2	Bolstar	ND	ND	µg/L		0/3	0.95 - 1	1.0E+00	N/A	N/A				NO	NTX
	2921-88-2	Chlorpyrifos	ND	ND	µg/L		0/3	0.95 - 1	1.0E+00	N/A	1.1E+01	R-n			NO	DLBSL
	56-72-4	Coumaphos	ND	ND	µg/L		0/3	0.95 - 1	1.0E+00	N/A	N/A				NO	NTX
	319-86-8	delta-BHC	ND	ND	µg/L		0/3	0.05 - 0.051	5.1E-02	N/A	3.7E-02	R-c			YES	DLASL
	8065-48-3	Demeton-O	ND	ND	µg/L		0/3	2.4 - 2.5	2.5E+00	N/A	1.5E-01	R-n			YES	DLASL
	8065-48-3	Demeton-S	ND	ND	µg/L		0/2	2.4 - 2.4	2.4E+00	N/A	1.5E-01	R-n			YES	DLASL
	333-41-5	Diazinon	ND	ND	µg/L		0/3	0.95 - 1	1.0E+00	N/A	2.6E+00	R-n			NO	DLBSL
	62-73-7	Dichlorvos	ND	ND	µg/L		0/3	1.9 - 2	2.0E+00	N/A	2.3E-01	R-c*			YES	DLASL
	60-57-1	Dieldrin	ND	ND	µg/L		0/3	0.1 - 0.1	1.0E-01	N/A	5.0E-05	N	5.2E-05	A	YES	DLASL
	298-04-4	Disulfoton	ND	ND	µg/L		0/3	1.9 - 2	2.0E+00	N/A	1.5E-01	R-n			YES	DLASL
	959-98-8	Endosulfan I	ND	ND	µg/L		0/3	0.05 - 0.051	5.1E-02	N/A	6.2E+01	A			NO	DLBSL
	33213-65-9	Endosulfan II	ND	ND	µg/L		0/3	0.1 - 0.1	1.0E-01	N/A	6.2E+01	A			NO	DLBSL
	1031-07-8	Endosulfan sulfate	ND	ND	µg/L		0/3	0.1 - 0.1	1.0E-01	N/A	6.2E+01	A			NO	DLBSL

TABLE G 2.3

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Surface Water
Exposure Medium: Surface Water

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier		Maximum [1] Concentration Qualifier		Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	72-20-8	Endrin	ND		ND		µg/L		0/3	0.1 - 0.1	1.0E-01	N/A	5.9E-02	A			YES	DLASL
	7421-93-4	Endrin aldehyde	ND		ND		µg/L		0/3	0.1 - 0.1	1.0E-01	N/A	2.9E-01	A			NO	DLBSL
	53494-70-5	Endrin ketone	ND		ND		µg/L		0/3	0.1 - 0.1	1.0E-01	N/A	1.1E+00	R-n			NO	DLBSL
	13194-48-4	Ethoprop	ND		ND		µg/L		0/3	0.48 - 0.5	5.0E-01	N/A	N/A				NO	NTX
	115-90-2	Fensulfothion	ND		ND		µg/L		0/3	4.8 - 5	5.0E+00	N/A	N/A				NO	NTX
	2104-64-5	Ethyl p-nitrophenyl phenylphosphorothioate	ND		ND		µg/L		0/3	0.95 - 1	1.0E+00	N/A	3.7E-02	R-n			YES	DLASL
	55-38-9	Fenthion	ND		ND		µg/L		0/3	0.95 - 1	1.0E+00	N/A	N/A				NO	NTX
	58-89-9	gamma-BHC (Lindane)	ND		ND		µg/L		0/3	0.05 - 0.051	5.1E-02	N/A	9.8E-01	A			NO	DLBSL
	5103-74-2	gamma-Chlordane	ND		ND		µg/L		0/3	0.05 - 0.051	5.1E-02	N/A	8.0E-04	N	8.0E-04	A	YES	DLASL
	76-44-8	Heptachlor	ND		ND		µg/L		0/3	0.05 - 0.051	5.1E-02	N/A	7.9E-05	A	8.0E-05	N	YES	DLASL
	1024-57-3	Heptachlor epoxide	ND		ND		µg/L		0/3	0.05 - 0.051	5.1E-02	N/A	3.9E-05	A			YES	DLASL
	121-75-5	Malathion	ND		ND		µg/L		0/3	0.95 - 1	1.0E+00	N/A	7.3E+01	R-n			NO	DLBSL
	150-50-5	Merphos	ND		ND		µg/L		0/3	1.4 - 1.5	1.5E+00	N/A	1.1E-01	R-n			YES	DLASL
	72-43-5	Methoxychlor	ND		ND		µg/L		0/3	0.5 - 0.51	5.1E-01	N/A	1.8E+01	R-n			NO	DLBSL
	298-00-0	Methyl parathion	ND		ND		µg/L		0/3	0.48 - 0.5	5.0E-01	N/A	9.1E-01	R-n			NO	DLBSL
	7786-34-7	Mevinphos	ND		ND		µg/L		0/3	1.9 - 2	2.0E+00	N/A	N/A				NO	NTX
	6923-22-4	Monocrotophos	ND		ND		µg/L		0/3	9.5 - 10	1.0E+01	N/A	N/A				NO	NTX
	300-76-5	Naled	ND		ND		µg/L		0/3	4.8 - 5	5.0E+00	N/A	7.3E+00	R-n			NO	DLBSL
	56-38-2	Parathion	ND		ND		µg/L		0/3	0.95 - 1	1.0E+00	N/A	2.2E+01	R-n			NO	DLBSL
	299-84-3	Ronnel	ND		ND		µg/L		0/3	0.95 - 1	1.0E+00	N/A	1.8E+02	R-n			NO	DLBSL
	3689-24-5	Sulfotepp	ND		ND		µg/L		0/3	0.48 - 0.5	5.0E-01	N/A	1.8E+00	R-n			NO	DLBSL
	22248-79-9	Tetrachlorvinphos	ND		ND		µg/L		0/3	0.95 - 1	1.0E+00	N/A	N/A				NO	NTX
	297-97-2	Thionazin	ND		ND		µg/L		0/3	0.95 - 1	1.0E+00	N/A	N/A				NO	NTX
	34643-46-4	Tokuthion (Prothiophos)	ND		ND		µg/L		0/3	0.95 - 1	1.0E+00	N/A	N/A				NO	NTX
	8001-35-2	Toxaphene	ND		ND		µg/L		0/3	2.5 - 2.6	2.6E+00	N/A	2.8E-04	A			YES	DLASL
	327-98-0	Trichloronate	ND		ND		µg/L		0/3	0.95 - 1	1.0E+00	N/A	N/A				NO	NTX
	7429-90-5	Aluminum	4.7E+02		4.7E+02		µg/L	IR69-SW03-10A	1/3	200 - 200	4.7E+02	N/A	3.7E+03	R-n			NO	BSL
	7440-36-0	Antimony	ND		ND		µg/L		0/3	10 - 10	1.0E+01	N/A	5.6E+00	A			YES	DLASL
	7440-38-2	Arsenic	ND		ND		µg/L		0/3	10 - 10	1.0E+01	N/A	1.8E-02	A	1.0E+01	N	YES	DLASL
	7440-39-3	Barium	2.0E+01	J	3.2E+01	J	µg/L	IR69-SW03-10A	3/3	200 - 200	3.2E+01	N/A	1.0E+03	A			NO	BSL
	7440-41-7	Beryllium	ND		ND		µg/L		0/3	5 - 5	5.0E+00	N/A	4.0E+00	A			YES	DLASL
	7440-43-9	Cadmium	ND		ND		µg/L		0/3	5 - 5	5.0E+00	N/A	5.0E+00	A			YES	DLASL
	7440-70-2	Calcium	3.1E+03	J	4.3E+03	J	µg/L	IR69-SW02-10A	3/3	5000 - 5000	4.3E+03	N/A	N/A				NO	NUT
	7440-47-3	Chromium	ND		ND		µg/L		0/3	10 - 10	1.0E+01	N/A	1.0E+02	A			NO	DLBSL
	7440-48-4	Cobalt	ND		ND		µg/L		0/3	5 - 5	5.0E+00	N/A	1.1E+00	R-n			YES	DLASL
	7440-50-8	Copper	ND		ND		µg/L		0/3	5 - 5	5.0E+00	N/A	1.3E+03	A			NO	DLBSL
	7439-89-6	**Iron**	**9.7E+01**	**J**	**7.5E+02**		**µg/L**	**IR69-SW03-10A**	**3/3**	**100 - 100**	**7.5E+02**	**N/A**	**3.0E+02**	**A**			**YES**	**ASL**
	7439-92-1	Lead	2.3E+00	J	2.9E+00	J	µg/L	IR69-SW02-10A	3/3	3 - 3	2.9E+00	N/A	N/A				NO	NTX
	7439-95-4	Magnesium	1.2E+03	J	2.2E+03	J	µg/L	IR69-SW01D-10A	2/3	5000 - 5000	2.2E+03	N/A	N/A				NO	NUT
	7439-96-5	Manganese	1.7E+01	J	2.8E+01		µg/L	IR69-SW03-10A	3/3	10 - 10	2.8E+01	N/A	5.0E+01	A			NO	BSL
	7439-97-6	Mercury	ND		ND		µg/L		0/3	0.2 - 0.2	2.0E-01	N/A	1.1E+00	R-n			NO	DLBSL
	7440-02-0	Nickel	ND		ND		µg/L		0/3	5 - 5	5.0E+00	N/A	6.1E+02	A			NO	DLBSL
	7440-09-7	Potassium	6.5E+02	J	2.1E+03	J	µg/L	IR69-SW02-10A	3/3	5000 - 5000	2.1E+03	N/A	N/A				NO	NUT
	7782-49-2	Selenium	5.5E+00	J	6.2E+00	J	µg/L	IR69-SW02-10A	2/3	5 - 5	6.2E+00	N/A	5.0E+01	A			NO	BSL
	7440-22-4	Silver	ND		ND		µg/L		0/3	5 - 5	5.0E+00	N/A	1.8E+01	R-n			NO	DLBSL
	7440-23-5	Sodium	7.7E+03		5.7E+04		µg/L	IR69-SW02-10A	3/3	5000 - 5000	5.7E+04	N/A	N/A				NO	NUT
	7440-28-0	**Thallium**	**6.9E+00**	**J**	**6.9E+00**	**J**	**µg/L**	**IR69-SW02-10A**	**1/3**	**10 - 10**	**6.9E+00**	**N/A**	**2.4E-01**	**A**			**YES**	**ASL**
	7440-62-2	Vanadium	7.1E-01	J	7.1E-01	J	µg/L	IR69-SW03-10A	1/3	20 - 20	7.1E-01	N/A	1.8E+01	R-n			NO	BSL
	7440-66-6	Zinc	1.0E+02		1.0E+02		µg/L	IR69-SW03-10A	1/3	20 - 20	1.0E+02	N/A	7.4E+03	A			NO	BSL

TABLE G 2.3

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Surface Water
Exposure Medium: Surface Water

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection

Notes:

[1] Minimum/Maximum detected concentrations.
[2] Maximum concentration is used for screening. If ND, maximum detection limit used for screening.
[3] Background values not available.
[4] North Carolina WQS for Human Health and Water Supply, Federal Ambient Water Quality Criteria, Consumption of Water and Organisms, or USEPA Regional Screening Levels for Tap Water (June 2011).
Safe Drinking Water Act Action Level for Lead used as screening level for lead.
[1] = 2-Butanone and Acetone had all R (rejected) qualifiers associated with data. Data could not be used in risk assessme

[5] Rationale Codes
Selection Reason: Above Screening Levels (ASL)
Deletion Reason: No Toxicity Information (NTX)
Essential Nutrient (NUT)
Below Screening Level (BSL)
Detection Limit Above Screening Levels (DLASL)
Detection Limit Below Screening Levels (DLBSL)
Below Background Level (BBK)

Generated by:M. White/ATL
Checked by: T.Carleton/DAY

COPC - Chemical of potential concern
ARAR/TBC - Applicable or relevant and appropriate requirement/to be considered
J - Estimated value
K - Biased high
L - Biased low
N - North Carolina 15A NCAC 2B Human Health, amended Feb. 2010.
A - Federal Ambient Water Quality Criteria, Consumption of Water and Organisms
M - Action level for lead from Federal Drinking Water MCLs
R-n - USEPA Regional Screening Level, noncarcinogenic (therefore, RSL divided by 10, see text)
R-c - USEPA Regional Screening Level, Carcinogenic
R-c* - R-n screening level < 100x R-c screening level, therefore R-n screening value/10 used as screening level
R-c** - R-n screening level < 10x R-c screening level, therefore R-n screening value/10 used as screening level
N/A - Not available
COPC - Chemical of potential concern
µg/L - microgram per liter

TABLE G 2.4

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
Sediment at Drainage Ditches/ Marshy Area	71-55-6	1,1,1-Trichloroethane	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	6.4E+02	NS	N/A	N/A	NO	DLBSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	5.6E-01	C	N/A	N/A	NO	DLBSL
	76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	9.1E+02	NS	N/A	N/A	NO	DLBSL
	79-00-5	1,1,2-Trichloroethane	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	1.6E-01	C**	N/A	N/A	NO	DLBSL
	75-34-3	1,1-Dichloroethane	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	3.3E+00	C	N/A	N/A	NO	DLBSL
	75-35-4	1,1-Dichloroethene	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	2.4E+01	N	N/A	N/A	NO	DLBSL
	120-82-1	1,2,4-Trichlorobenzene	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	6.2E+00	C**	N/A	N/A	NO	DLBSL
	96-12-8	1,2-Dibromo-3-chloropropane	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	5.4E-03	C	N/A	N/A	YES	DLASL
	106-93-4	1,2-Dibromoethane	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	3.4E-02	C	N/A	N/A	NO	DLBSL
	95-50-1	1,2-Dichlorobenzene	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	1.9E+02	N	N/A	N/A	NO	DLBSL
	107-06-2	1,2-Dichloroethane	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	4.3E-01	C*	N/A	N/A	NO	DLBSL
	78-87-5	1,2-Dichloropropane	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	9.4E-01	C*	N/A	N/A	NO	DLBSL
	541-73-1	1,3-Dichlorobenzene	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	2.4E+00	C	N/A	N/A	NO	DLBSL
	106-46-7	1,4-Dichlorobenzene	1.1E-03	J	1.1E-03	J	mg/kg	IR69-SD02-10A	1/3	0.0048 - 0.023	1.1E-03	N/A	2.4E+00	C	N/A	N/A	NO	BSL
	78-93-3	2-Butanone	6.6E-02	J	6.6E-02	J	mg/kg	IR69-SD02-10A	1/3	0.012 - 0.058	6.6E-02	N/A	2.8E+03	N	N/A	N/A	NO	BSL
	591-78-6	2-Hexanone	ND		ND		mg/kg		0/3	0.012 - 0.058	5.8E-02	N/A	2.1E+01	N	N/A	N/A	NO	DLBSL
	108-10-1	4-Methyl-2-pentanone	ND		ND		mg/kg		0/3	0.012 - 0.058	5.8E-02	N/A	5.3E+02	N	N/A	N/A	NO	DLBSL
	67-64-1	Acetone	1.1E-01	J	7.6E-01	J	mg/kg	IR69-SD02-10A	3/3	0.012 - 0.058	7.6E-01	N/A	6.1E+03	N	N/A	N/A	NO	BSL
	71-43-2	Benzene	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	1.1E+00	C*	N/A	N/A	NO	DLBSL
	75-27-4	Bromodichloromethane	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	2.7E-01	C	N/A	N/A	NO	DLBSL
	75-25-2	Bromoform	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	6.2E+01	C*	N/A	N/A	NO	DLBSL
	74-83-9	Bromomethane	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	7.3E-01	N	N/A	N/A	NO	DLBSL
	75-15-0	Carbon disulfide	9.2E-03	J	1.7E-02	J	mg/kg	IR69-SD01-10A	2/3	0.0048 - 0.023	1.7E-02	N/A	8.2E+01	N	N/A	N/A	NO	BSL
	56-23-5	Carbon tetrachloride	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	6.1E-01	C	N/A	N/A	NO	DLBSL
	108-90-7	Chlorobenzene	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	2.9E+01	N	N/A	N/A	NO	DLBSL
	75-00-3	Chloroethane	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	1.5E+03	N	N/A	N/A	NO	DLBSL
	67-66-3	Chloroform	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	2.9E-01	C	N/A	N/A	NO	DLBSL
	74-87-3	Chloromethane	2.5E-03	J	2.5E-03	J	mg/kg	IR69-SD01-10A	1/3	0.0048 - 0.023	2.5E-03	N/A	1.2E+01	N	N/A	N/A	NO	BSL
	156-59-2	cis-1,2-Dichloroethene	5.1E-02	J	5.1E-02	J	mg/kg	IR69-SD01-10A	1/3	0.0048 - 0.023	5.1E-02	N/A	1.6E+01	N	N/A	N/A	NO	BSL
	10061-01-5	cis-1,3-Dichloropropene	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	1.7E+00	C*	N/A	N/A	NO	DLBSL
	110-82-7	Cyclohexane	1.8E-03	J	1.8E-03	J	mg/kg	IR69-SD01-10A	1/3	0.0048 - 0.023	1.8E-03	N/A	1.2E+02	NS	N/A	N/A	NO	BSL
	124-48-1	Dibromochloromethane	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	6.8E-01	C	N/A	N/A	NO	DLBSL
	75-71-8	Dichlorodifluoromethane (Freon-12)	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	9.4E+00	N	N/A	N/A	NO	DLBSL
	100-41-4	Ethylbenzene	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	5.4E+00	C	N/A	N/A	NO	DLBSL
	98-82-8	Isopropylbenzene	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	2.1E+02	N	N/A	N/A	NO	DLBSL
	1330-20-7	m- and p-Xylene	7.7E-04	J	7.7E-04	J	mg/kg	IR69-SD01-10A	1/3	0.0096 - 0.046	7.7E-04	N/A	6.3E+01	N	N/A	N/A	NO	BSL
	79-20-9	Methyl acetate	6.5E-02		5.7E-01	J	mg/kg	IR69-SD02-10A	3/3	0.0047 - 0.023	5.7E-01	N/A	7.8E+03	N	N/A	N/A	NO	BSL
	108-87-2	Methylcyclohexane	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	5.7E+01	N	N/A	N/A	NO	DLBSL
	75-09-2	Methylene chloride	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	1.1E+01	C	N/A	N/A	NO	DLBSL
	1634-04-4	Methyl-tert-butyl ether (MTBE)	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	4.3E+01	C	N/A	N/A	NO	DLBSL
	95-47-6	o-Xylene	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	6.9E+01	N	N/A	N/A	NO	DLBSL
	100-42-5	Styrene	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	6.3E+02	N	N/A	N/A	NO	DLBSL
	127-18-4	Tetrachloroethene	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	5.5E-01	C	N/A	N/A	NO	DLBSL
	108-88-3	Toluene	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	5.0E+02	N	N/A	N/A	NO	DLBSL
	156-60-5	trans-1,2-Dichloroethene	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	1.5E+01	N	N/A	N/A	NO	DLBSL
	10061-02-6	trans-1,3-Dichloropropene	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	1.7E+00	C*	N/A	N/A	NO	DLBSL
	79-01-6	Trichloroethene	2.8E-03	J	2.8E-03	J	mg/kg	IR69-SD01-10A	1/3	0.0048 - 0.023	2.8E-03	N/A	2.5E+00	C**	N/A	N/A	NO	BSL
	75-69-4	Trichlorofluoromethane(Freon-11)	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	7.9E+01	N	N/A	N/A	NO	DLBSL

TABLE G 2.4

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	75-01-4	Vinyl chloride	6.0E-03	J	6.0E-03	J	mg/kg	IR69-SD01-10A	1/3	0.0048 - 0.023	6.0E-03	N/A	6.0E-02	C	N/A	N/A	NO	BSL
	1330-20-7	Xylene, total	ND		ND		mg/kg		0/3	0.0048 - 0.023	2.3E-02	N/A	6.3E+01	N	N/A	N/A	NO	DLBSL
	92-52-4	1,1-Biphenyl	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	5.1E+00	N	N/A	N/A	NO	DLBSL
	108-60-1	2,2'-Oxybis(1-chloropropane)	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	4.6E+00	C	N/A	N/A	NO	DLBSL
	95-95-4	2,4,5-Trichlorophenol	ND		ND		mg/kg		0/3	0.44 - 1.4	1.4E+00	N/A	6.1E+02	N	N/A	N/A	NO	DLBSL
	88-06-2	2,4,6-Trichlorophenol	ND		ND		mg/kg		0/3	0.44 - 1.4	1.4E+00	N/A	6.1E+00	C**	N/A	N/A	NO	DLBSL
	120-83-2	2,4-Dichlorophenol	ND		ND		mg/kg		0/3	0.44 - 1.4	1.4E+00	N/A	1.8E+01	N	N/A	N/A	NO	DLBSL
	105-67-9	2,4-Dimethylphenol	ND		ND		mg/kg		0/3	0.44 - 1.4	1.4E+00	N/A	1.2E+02	N	N/A	N/A	NO	DLBSL
	51-28-5	2,4-Dinitrophenol	ND		ND		mg/kg		0/3	0.44 - 1.4	1.4E+00	N/A	1.2E+01	N	N/A	N/A	NO	DLBSL
	121-14-2	2,4-Dinitrotoluene	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	1.6E+00	C*	N/A	N/A	NO	DLBSL
	606-20-2	2,6-Dinitrotoluene	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	6.1E+00	N	N/A	N/A	NO	DLBSL
	91-58-7	2-Chloronaphthalene	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	1.8E+02	NS	N/A	N/A	NO	DLBSL
	95-57-8	2-Chlorophenol	ND		ND		mg/kg		0/3	0.44 - 1.4	1.4E+00	N/A	3.9E+01	N	N/A	N/A	NO	DLBSL
	91-57-6	2-Methylnaphthalene	1.3E-03	J	1.0E-02	J	mg/kg	IR69-SD01-10A	3/3	0.011 - 0.036	1.0E-02	N/A	3.1E+01	N	N/A	N/A	NO	BSL
	95-48-7	2-Methylphenol	ND		ND		mg/kg		0/3	0.44 - 1.4	1.4E+00	N/A	3.1E+02	N	N/A	N/A	NO	DLBSL
	88-74-4	2-Nitroaniline	ND		ND		mg/kg		0/3	0.44 - 1.4	1.4E+00	N/A	6.1E+01	N	N/A	N/A	NO	DLBSL
	88-75-5	2-Nitrophenol	ND		ND		mg/kg		0/3	0.44 - 1.4	1.4E+00	N/A	3.9E+01	N	N/A	N/A	NO	DLBSL
	91-94-1	3,3'-Dichlorobenzidine	ND		ND		mg/kg		0/2	0.23 - 0.74	7.4E-01	N/A	1.1E+00	C	N/A	N/A	NO	DLBSL
	99-09-2	3-Nitroaniline	ND		ND		mg/kg		0/3	0.44 - 1.4	1.4E+00	N/A	6.1E+01	N	N/A	N/A	NO	DLBSL
	534-52-1	4,6-Dinitro-2-methylphenol	ND		ND		mg/kg		0/3	0.44 - 1.4	1.4E+00	N/A	4.9E-01	N	N/A	N/A	YES	DLASL
	101-55-3	4-Bromophenyl-phenylether	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	N/A		N/A	N/A	NO	NTX
	59-50-7	4-Chloro-3-methylphenol	ND		ND		mg/kg		0/3	0.44 - 1.4	1.4E+00	N/A	6.1E+02	N	N/A	N/A	NO	DLBSL
	106-47-8	4-Chloroaniline	ND		ND		mg/kg		0/2	0.44 - 1.4	1.4E+00	N/A	2.4E+00	C	N/A	N/A	NO	DLBSL
	7005-72-3	4-Chlorophenyl-phenylether	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	3.1E+01	N	N/A	N/A	NO	DLBSL
	106-44-5	4-Methylphenol	ND		ND		mg/kg		0/3	0.44 - 1.4	1.4E+00	N/A	3.1E+01	N	N/A	N/A	NO	DLBSL
	100-01-6	4-Nitroaniline	ND		ND		mg/kg		0/3	0.44 - 1.4	1.4E+00	N/A	2.4E+01	C*	N/A	N/A	NO	DLBSL
	100-02-7	4-Nitrophenol	ND		ND		mg/kg		0/3	0.44 - 1.4	1.4E+00	N/A	4.8E+00	C*	N/A	N/A	NO	DLBSL
	83-32-9	Acenaphthene	4.3E-03	J	4.3E-03	J	mg/kg	IR69-SD01-10A	1/3	0.011 - 0.036	4.3E-03	N/A	3.4E+02	N	N/A	N/A	NO	BSL
	208-96-8	Acenaphthylene	ND		ND		mg/kg		0/3	0.011 - 0.036	3.6E-02	N/A	3.4E+02	N	N/A	N/A	NO	DLBSL
	98-86-2	Acetophenone	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	7.8E+02	N	N/A	N/A	NO	DLBSL
	120-12-7	Anthracene	3.8E-03	J	1.4E-02	J	mg/kg	IR69-SD01-10A	2/3	0.011 - 0.036	1.4E-02	N/A	1.7E+03	N	N/A	N/A	NO	BSL
	1912-24-9	Atrazine	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	2.1E+00	C	N/A	N/A	NO	DLBSL
	100-52-7	Benzaldehyde	2.4E-01	J	4.0E-01	J	mg/kg	IR69-SD02-10A	2/3	0.23 - 0.74	4.0E-01	N/A	7.8E+02	N	N/A	N/A	NO	BSL
	56-55-3	**Benzo(a)anthracene**	**2.9E-03**	**J**	**1.7E-02**	**J**	**mg/kg**	**IR69-SD01-10A**	**2/3**	**0.011 - 0.036**	**1.7E-02**	**N/A**	**1.5E-01**	**C**	**N/A**	**N/A**	**YES**	**CPAH**
	50-32-8	**Benzo(a)pyrene**	**8.4E-04**	**J**	**3.7E-02**		**mg/kg**	**IR69-SD01D-10A**	**3/3**	**0.011 - 0.036**	**3.7E-02**	**N/A**	**1.5E-02**	**C**	**N/A**	**N/A**	**YES**	**ASL**
	205-99-2	**Benzo(b)fluoranthene**	**7.0E-03**	**J**	**2.4E-02**	**J**	**mg/kg**	**IR69-SD01-10A**	**2/3**	**0.011 - 0.036**	**2.4E-02**	**N/A**	**1.5E-01**	**C**	**N/A**	**N/A**	**YES**	**CPAH**
	191-24-2	Benzo(g,h,i)perylene	5.9E-03	J	5.9E-03	J	mg/kg	IR69-SD02-10A	1/3	0.011 - 0.036	5.9E-03	N/A	1.7E+02	N	N/A	N/A	NO	BSL
	207-08-9	**Benzo(k)fluoranthene**	**4.7E-03**	**J**	**1.7E-02**	**J**	**mg/kg**	**IR69-SD01-10A**	**2/3**	**0.011 - 0.036**	**1.7E-02**	**N/A**	**1.5E+00**	**C**	**N/A**	**N/A**	**YES**	**CPAH**
	111-91-1	bis(2-Chloroethoxy)methane	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	1.8E+01	N	N/A	N/A	NO	DLBSL
	111-44-4	bis(2-Chloroethyl)ether	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	2.1E-01	C	N/A	N/A	YES	DLASL
	117-81-7	bis(2-Ethylhexyl)phthalate	4.0E-01	J	4.0E-01	J	mg/kg	IR69-SD01-10A	1/3	0.23 - 0.74	4.0E-01	N/A	3.5E+01	C*	N/A	N/A	NO	BSL
	85-68-7	Butylbenzylphthalate	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	2.6E+02	C*	N/A	N/A	NO	DLBSL
	105-60-2	Caprolactam	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	3.1E+03	N	N/A	N/A	NO	DLBSL
	86-74-8	Carbazole	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	N/A		N/A	N/A	NO	NTX
	218-01-9	**Chrysene**	**4.9E-03**	**J**	**1.8E-02**	**J**	**mg/kg**	**IR69-SD01-10A**	**2/3**	**0.011 - 0.036**	**1.8E-02**	**N/A**	**1.5E+01**	**C**	**N/A**	**N/A**	**YES**	**CPAH**
	53-70-3	Dibenz(a,h)anthracene	ND		ND		mg/kg		0/3	0.011 - 0.036	3.6E-02	N/A	1.5E-02	C	N/A	N/A	YES	DLASL
	132-64-9	Dibenzofuran	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	7.8E+00	N	N/A	N/A	NO	DLBSL
	84-66-2	Diethylphthalate	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	4.9E+03	N	N/A	N/A	NO	DLBSL
	60-51-5	Dimethoate	ND		ND		mg/kg		0/2	0.093 - 0.39	3.9E-01	N/A	1.2E+00	N	N/A	N/A	NO	DLBSL

TABLE G 2.4

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	131-11-3	Dimethyl phthalate	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	N/A		N/A	N/A	NO	NTX
	84-74-2	Di-n-butylphthalate	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	6.1E+02	N	N/A	N/A	NO	DLBSL
	117-84-0	Di-n-octylphthalate	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	N/A		N/A	N/A	NO	NTX
	52-85-7	Famphur	ND		ND		mg/kg		0/3	0.093 - 0.39	3.9E-01	N/A	N/A		N/A	N/A	NO	NTX
	206-44-0	Fluoranthene	6.9E-03	J	2.5E-02	J	mg/kg	IR69-SD01-10A	2/3	0.011 - 0.036	2.5E-02	N/A	2.3E+02	N	N/A	N/A	NO	BSL
	86-73-7	Fluorene	2.4E-03	J	5.4E-03	J	mg/kg	IR69-SD01-10A	2/3	0.011 - 0.036	5.4E-03	N/A	2.3E+02	N	N/A	N/A	NO	BSL
	118-74-1	Hexachlorobenzene	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	3.0E-01	C	N/A	N/A	YES	DLASL
	87-68-3	Hexachlorobutadiene	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	6.1E+00	C**	N/A	N/A	NO	DLBSL
	77-47-4	Hexachlorocyclopentadiene	ND		ND		mg/kg		0/2	0.23 - 0.74	7.4E-01	N/A	3.7E+01	N	N/A	N/A	NO	DLBSL
	67-72-1	Hexachloroethane	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	6.1E+00	C**	N/A	N/A	NO	DLBSL
	193-39-5	**Indeno(1,2,3-cd)pyrene**	**3.1E-03**	**J**	**3.1E-03**	**J**	**mg/kg**	**IR69-SD02-10A**	**1/3**	**0.011 - 0.036**	**3.1E-03**	**N/A**	**1.5E-01**	**C**	**N/A**	**N/A**	**YES**	**CPAH**
	78-59-1	Isophorone	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	5.1E+02	C*	N/A	N/A	NO	DLBSL
	91-20-3	Naphthalene	ND		ND		mg/kg		0/3	0.011 - 0.036	3.6E-02	N/A	3.6E+00	C*	N/A	N/A	NO	DLBSL
	621-64-7	n-Nitroso-di-n-propylamine	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	6.9E-02	C	N/A	N/A	YES	DLASL
	86-30-6	n-Nitrosodiphenylamine	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	9.9E+01	C	N/A	N/A	NO	DLBSL
	98-95-3	Nitrobenzene	ND		ND		mg/kg		0/3	0.23 - 0.74	7.4E-01	N/A	4.8E+00	C*	N/A	N/A	NO	DLBSL
	87-86-5	Pentachlorophenol	ND		ND		mg/kg		0/3	0.44 - 1.4	1.4E+00	N/A	8.9E-01	C	N/A	N/A	YES	DLASL
	85-01-8	Phenanthrene	2.0E-03	J	2.1E-02	J	mg/kg	IR69-SD01-10A	3/3	0.011 - 0.036	2.1E-02	N/A	1.7E+03	N	N/A	N/A	NO	BSL
	108-95-2	Phenol	ND		ND		mg/kg		0/3	0.44 - 1.4	1.4E+00	N/A	1.8E+03	N	N/A	N/A	NO	DLBSL
	298-02-2	Phorate	ND		ND		mg/kg		0/3	0.046 - 0.19	1.9E-01	N/A	1.2E+00	N	N/A	N/A	NO	DLBSL
	129-00-0	Pyrene	7.6E-04	J	2.2E-02	J	mg/kg	IR69-SD01-10A	3/3	0.011 - 0.036	2.2E-02	N/A	1.7E+02	N	N/A	N/A	NO	BSL
	72-54-8	4,4'-DDD	1.3E-02	J	1.3E-02	NJ	mg/kg	IR69-SD01-10A : IR69-SD02-10A	2/3	0.0044 - 0.069	1.3E-02	N/A	2.0E+00	C	N/A	N/A	NO	BSL
	72-55-9	4,4'-DDE	6.5E-04	NJ	1.4E-02	NJ	mg/kg	IR69-SD02-10A	3/3	0.0044 - 0.069	1.4E-02	N/A	1.4E+00	C	N/A	N/A	NO	BSL
	50-29-3	4,4'-DDT	4.5E-03	J	5.5E-03	J	mg/kg	IR69-SD01-10A	2/2	0.0044 - 0.014	5.5E-03	N/A	1.7E+00	C*	N/A	N/A	NO	BSL
	309-00-2	Aldrin	2.3E-03	J	2.3E-03	J	mg/kg	IR69-SD01-10A	1/3	0.0023 - 0.035	2.3E-03	N/A	2.9E-02	C*	N/A	N/A	NO	BSL
	319-84-6	alpha-BHC	ND		ND		mg/kg		0/3	0.0023 - 0.035	3.5E-02	N/A	7.7E-02	C	N/A	N/A	NO	DLBSL
	5103-71-9	alpha-Chlordane	9.8E-04	J	6.0E-03	J	mg/kg	IR69-SD01D-10A	2/3	0.0023 - 0.035	6.0E-03	N/A	1.6E+00	C*	N/A	N/A	NO	BSL
	12674-11-2	Aroclor-1016	ND		ND		mg/kg		0/3	0.032 - 0.5	5.0E-01	N/A	3.9E-01	N	N/A	N/A	YES	DLASL
	11104-28-2	Aroclor-1221	ND		ND		mg/kg		0/3	0.045 - 0.71	7.1E-01	N/A	1.4E-01	C	N/A	N/A	YES	DLASL
	11141-16-5	Aroclor-1232	ND		ND		mg/kg		0/3	0.023 - 0.35	3.5E-01	N/A	1.4E-01	C	N/A	N/A	YES	DLASL
	53469-21-9	Aroclor-1242	ND		ND		mg/kg		0/3	0.023 - 0.35	3.5E-01	N/A	2.2E-01	C	N/A	N/A	YES	DLASL
	12672-29-6	Aroclor-1248	ND		ND		mg/kg		0/3	0.023 - 0.35	3.5E-01	N/A	2.2E-01	C	N/A	N/A	YES	DLASL
	11097-69-1	Aroclor-1254	ND		ND		mg/kg		0/3	0.023 - 0.35	3.5E-01	N/A	1.1E-01	C**	N/A	N/A	YES	DLASL
	11096-82-5	Aroclor-1260	ND		ND		mg/kg		0/3	0.023 - 0.35	3.5E-01	N/A	2.2E-01	C	N/A	N/A	YES	DLASL
	86-50-0	Azinphos methyl	ND		ND		mg/kg		0/3	0.046 - 0.19	1.9E-01	N/A	1.8E+01	N	N/A	N/A	NO	DLBSL
	319-85-7	beta-BHC	4.8E-04	J	2.3E-03	J	mg/kg	IR69-SD01-10A	2/3	0.0011 - 0.018	2.3E-03	N/A	2.7E-01	C	N/A	N/A	NO	BSL
	35400-43-2	Bolstar	ND		ND		mg/kg		0/3	0.046 - 0.19	1.9E-01	N/A	N/A		N/A	N/A	NO	NTX
	2921-88-2	Chlorpyrifos	ND		ND		mg/kg		0/3	0.046 - 0.19	1.9E-01	N/A	1.8E+01	N	N/A	N/A	NO	DLBSL
	56-72-4	Coumaphos	ND		ND		mg/kg		0/3	0.046 - 0.19	1.9E-01	N/A	N/A		N/A	N/A	NO	NTX
	319-86-8	delta-BHC	6.7E-03	J	6.7E-03	J	mg/kg	IR69-SD01D-10A	1/3	0.0023 - 0.035	6.7E-03	N/A	2.7E-01	C	N/A	N/A	NO	BSL
	8065-48-3	Demeton-O	ND		ND		mg/kg		0/3	0.12 - 0.49	4.9E-01	N/A	2.4E-01	N	N/A	N/A	YES	DLASL
	8065-48-3	Demeton-S	ND		ND		mg/kg		0/2	0.12 - 0.49	4.9E-01	N/A	2.4E-01	N	N/A	N/A	YES	DLASL
	333-41-5	Diazinon	ND		ND		mg/kg		0/3	0.046 - 0.19	1.9E-01	N/A	4.3E+00	N	N/A	N/A	NO	DLBSL
	62-73-7	Dichlorvos	ND		ND		mg/kg		0/3	0.093 - 0.39	3.9E-01	N/A	1.7E+00	C*	N/A	N/A	NO	DLBSL
	60-57-1	Dieldrin	1.1E-03	J	2.7E-03	J	mg/kg	IR69-SD01-10A	2/3	0.0044 - 0.069	2.7E-03	N/A	3.0E-02	C	N/A	N/A	NO	BSL
	298-04-4	Disulfoton	ND		ND		mg/kg		0/3	0.093 - 0.39	3.9E-01	N/A	2.4E-01	N	N/A	N/A	YES	DLASL
	959-98-8	Endosulfan I	9.9E-04	J	1.3E-02	J	mg/kg	IR69-SD01-10A	2/3	0.0023 - 0.035	1.3E-02	N/A	3.7E+01	N	N/A	N/A	NO	BSL
	33213-65-9	Endosulfan II	ND		ND		mg/kg		0/3	0.0044 - 0.069	6.9E-02	N/A	3.7E+01	N	N/A	N/A	NO	DLBSL
	1031-07-8	Endosulfan sulfate	2.9E-03	J	1.7E-01	J	mg/kg	IR69-SD02-10A	3/3	0.0044 - 0.069	1.7E-01	N/A	3.7E+01	N	N/A	N/A	NO	BSL

TABLE G 2.4

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	72-20-8	Endrin	9.7E-04	J	9.7E-04	J	mg/kg	IR69-SD03-10A	1/3	0.0044 - 0.069	9.7E-04	N/A	1.8E+00	N	N/A	N/A	NO	BSL
	7421-93-4	Endrin aldehyde	4.7E-03	J	5.6E-01	NJ	mg/kg	IR69-SD02-10A	2/3	0.0044 - 0.069	5.6E-01	N/A	1.8E+00	N	N/A	N/A	NO	BSL
	53494-70-5	Endrin ketone	1.3E-03	J	1.3E-01	J	mg/kg	IR69-SD02-10A	3/3	0.0044 - 0.069	1.3E-01	N/A	1.8E+00	N	N/A	N/A	NO	BSL
	13194-48-4	Ethoprop	ND		ND		mg/kg		0/3	0.024 - 0.1	1.0E-01	N/A	N/A		N/A	N/A	NO	NTX
	115-90-2	Fensulfothion	ND		ND		mg/kg		0/3	0.24 - 1	1.0E+00	N/A	N/A		N/A	N/A	NO	NTX
	2104-64-5	Ethyl p-nitrophenyl phenylphosphorothioate	ND		ND		mg/kg		0/3	0.046 - 0.19	1.9E-01	N/A	6.1E-02	N	N/A	N/A	YES	DLASL
	55-38-9	Fenthion	ND		ND		mg/kg		0/3	0.046 - 0.19	1.9E-01	N/A	N/A		N/A	N/A	NO	NTX
	58-89-9	gamma-BHC (Lindane)	2.0E-03	J	2.0E-03	J	mg/kg	IR69-SD03-10A	1/3	0.0023 - 0.035	2.0E-03	N/A	5.2E-01	C*	N/A	N/A	NO	BSL
	5103-74-2	gamma-Chlordane	1.1E-03	J	9.1E-03	J	mg/kg	IR69-SD01-10A	3/3	0.0023 - 0.035	9.1E-03	N/A	1.6E+00	C*	N/A	N/A	NO	BSL
	76-44-8	Heptachlor	3.4E-04	J	6.0E-03	J	mg/kg	IR69-SD01-10A	2/3	0.0023 - 0.035	6.0E-03	N/A	1.1E-01	C	N/A	N/A	NO	BSL
	1024-57-3	Heptachlor epoxide	3.7E-03	J	3.7E-03	J	mg/kg	IR69-SD01-10A	1/3	0.0023 - 0.035	3.7E-03	N/A	5.3E-02	C*	N/A	N/A	NO	BSL
	121-75-5	Malathion	ND		ND		mg/kg		0/3	0.046 - 0.19	1.9E-01	N/A	1.2E+02	N	N/A	N/A	NO	DLBSL
	150-50-5	Merphos	ND		ND		mg/kg		0/3	0.07 - 0.29	2.9E-01	N/A	1.8E-01	N	N/A	N/A	YES	DLASL
	72-43-5	Methoxychlor	1.5E-01	J	1.5E-01	J	mg/kg	IR69-SD02-10A	1/3	0.023 - 0.35	1.5E-01	N/A	3.1E+01	N	N/A	N/A	NO	BSL
	298-00-0	Methyl parathion	ND		ND		mg/kg		0/3	0.024 - 0.1	1.0E-01	N/A	1.5E+00	N	N/A	N/A	NO	DLBSL
	7786-34-7	Mevinphos	ND		ND		mg/kg		0/3	0.093 - 0.39	3.9E-01	N/A	N/A		N/A	N/A	NO	NTX
	6923-22-4	Monocrotophos	4.2E-01	J	4.2E-01	J	mg/kg	IR69-SD03-10A	1/2	0.46 - 1.9	4.2E-01	N/A	N/A		N/A	N/A	NO	NTX
	300-76-5	Naled	ND		ND		mg/kg		0/2	0.24 - 1	1.0E+00	N/A	1.2E+01	N	N/A	N/A	NO	DLBSL
	56-38-2	Parathion	ND		ND		mg/kg		0/3	0.046 - 0.19	1.9E-01	N/A	3.7E+01	N	N/A	N/A	NO	DLBSL
	299-84-3	Ronnel	ND		ND		mg/kg		0/3	0.046 - 0.19	1.9E-01	N/A	3.1E+02	N	N/A	N/A	NO	DLBSL
	3689-24-5	Sulfotepp	ND		ND		mg/kg		0/3	0.024 - 0.1	1.0E-01	N/A	3.1E+00	N	N/A	N/A	NO	DLBSL
	22248-79-9	Tetrachlorvinphos	ND		ND		mg/kg		0/3	0.046 - 0.19	1.9E-01	N/A	N/A		N/A	N/A	NO	NTX
	297-97-2	Thionazin	ND		ND		mg/kg		0/3	0.046 - 0.19	1.9E-01	N/A	N/A		N/A	N/A	NO	NTX
	34643-46-4	Tokuthion (Prothiophos)	ND		ND		mg/kg		0/3	0.046 - 0.19	1.9E-01	N/A	N/A		N/A	N/A	NO	NTX
	8001-35-2	Toxaphene	ND		ND		mg/kg		0/3	0.11 - 1.7	1.7E+00	N/A	4.4E-01	C	N/A	N/A	YES	DLASL
	327-98-0	Trichloronate	ND		ND		mg/kg		0/3	0.046 - 0.19	1.9E-01	N/A	N/A		N/A	N/A	NO	NTX
	7429-90-5	**Aluminum**	**4.7E+02**		**8.7E+03**		**mg/kg**	**IR69-SD02-10A**	**3/3**	**25.7 - 83**	**8.7E+03**	**N/A**	**7.7E+03**	**N**	**N/A**	**N/A**	**YES**	**ASL**
	7440-36-0	**Antimony**	**1.5E+00**	**J**	**5.3E+00**	**J**	**mg/kg**	**IR69-SD02-10A**	**2/3**	**1.3 - 4.1**	**5.3E+00**	**N/A**	**3.1E+00**	**N**	**N/A**	**N/A**	**YES**	**ASL**
	7440-38-2	Arsenic	ND		ND		mg/kg		0/3	1.3 - 4.1	4.1E+00	N/A	3.9E-01	C*	N/A	N/A	YES	DLASL
	7440-39-3	Barium	1.8E+00	J	3.7E+01	J	mg/kg	IR69-SD01-10A	3/3	25.7 - 83	3.7E+01	N/A	1.5E+03	N	N/A	N/A	NO	BSL
	7440-41-7	Beryllium	2.7E-01	J	6.7E-01	J	mg/kg	IR69-SD02-10A	2/3	0.64 - 2.1	6.7E-01	N/A	1.6E+01	N	N/A	N/A	NO	BSL
	7440-43-9	Cadmium	ND		ND		mg/kg		0/3	0.64 - 2.1	2.1E+00	N/A	7.0E+00	N	N/A	N/A	NO	DLBSL
	7440-70-2	Calcium	2.4E+03		4.0E+03		mg/kg	IR69-SD01-10A	2/3	643 - 2070	4.0E+03	N/A	N/A		N/A	N/A	NO	NUT
	7440-47-3	**Chromium**	**7.5E-01**	**J**	**9.0E+00**		**mg/kg**	**IR69-SD02-10A**	**3/3**	**1.3 - 4.1**	**9.0E+00**	**N/A**	**2.9E-01**	**C**	**N/A**	**N/A**	**YES**	**ASL**
	7440-48-4	Cobalt	6.9E-01	J	6.9E-01	J	mg/kg	IR69-SD01-10A	1/3	0.64 - 2.1	6.9E-01	N/A	2.3E+00	N	N/A	N/A	NO	BSL
	7440-50-8	Copper	9.5E-01		9.5E+00		mg/kg	IR69-SD01-10A	3/3	0.64 - 2.1	9.5E+00	N/A	3.1E+02	N	N/A	N/A	NO	BSL
	7439-89-6	Iron	1.1E+02		3.1E+03		mg/kg	IR69-SD01-10A	3/3	12.9 - 41.5	3.1E+03	N/A	5.5E+03	N	N/A	N/A	NO	BSL
	7439-92-1	Lead	1.7E+00		1.4E+01		mg/kg	IR69-SD02-10A	3/3	0.39 - 1.2	1.4E+01	N/A	4.0E+02	NL	N/A	N/A	NO	BSL
	7439-95-4	Magnesium	2.2E+01	J	1.3E+03	J	mg/kg	IR69-SD02-10A	2/3	643 - 2070	1.3E+03	N/A	N/A		N/A	N/A	NO	NUT
	7439-96-5	Manganese	8.1E-01	J	9.8E+01		mg/kg	IR69-SD01-10A	3/3	1.3 - 4.1	9.8E+01	N/A	1.8E+02	N	N/A	N/A	NO	BSL
	7439-97-6	Mercury	1.9E-01		1.9E-01		mg/kg	IR69-SD01-10A	1/3	0.04 - 0.14	1.9E-01	N/A	2.3E+00	N	N/A	N/A	NO	BSL
	7440-02-0	Nickel	3.8E+00		4.3E+00		mg/kg	IR69-SD02-10A	2/3	0.64 - 2.1	4.3E+00	N/A	1.5E+02	N	N/A	N/A	NO	BSL
	7440-09-7	Potassium	2.5E+01	J	5.2E+02	J	mg/kg	IR69-SD02-10A	2/3	643 - 2070	5.2E+02	N/A	N/A		N/A	N/A	NO	NUT
	7782-49-2	Selenium	9.4E-01	J	9.4E-01	J	mg/kg	IR69-SD02-10A	1/3	0.64 - 2.1	9.4E-01	N/A	3.9E+01	N	N/A	N/A	NO	BSL
	7440-22-4	Silver	ND		ND		mg/kg		0/3	0.64 - 2.1	2.1E+00	N/A	3.9E+01	N	N/A	N/A	NO	DLBSL
	7440-23-5	Sodium	7.0E+01	J	1.4E+03	J	mg/kg	IR69-SD02-10A	2/3	643 - 2070	1.4E+03	N/A	N/A		N/A	N/A	NO	NUT
	7440-28-0	Thallium	ND		ND		mg/kg		0/3	1.3 - 4.1	4.1E+00	N/A	7.8E-02	N	N/A	N/A	YES	DLASL
	7440-62-2	Vanadium	7.0E-01	J	1.3E+01		mg/kg	IR69-SD01-10A	3/3	2.6 - 8.3	1.3E+01	N/A	3.9E+01	N	N/A	N/A	NO	BSL
	7440-66-6	Zinc	1.2E+01		1.7E+01		mg/kg	IR69-SD02-10A	3/3	2.6 - 8.3	1.7E+01	N/A	2.3E+03	N	N/A	N/A	NO	BSL

TABLE G 2.4

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection

TABLE G 2.4

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection

Notes:

[1] Minimum/Maximum detected concentrations.
[2] Maximum concentration is used for screening. If ND, maximum detection limit used for screening.
[3] Background values not available.
[4] Oak Ridge National Laboratory (ORNL). June, 2011. Regional Screening Levels for Chemical Contaminants at Superfund Sites. [Online].
Used RSL for residential soil. Available: http://epa-prgs.ornl.gov/chemicals/index.shtml
RSL value for 1,3-Dichloropropene used as a surrogate for cis-1,3-Dichloropropene and trans-1,3-Dichloropropene.
RSL value for 2-Chlorophenol used as surrogate for 2-Nitrophenol.
RSL value for 2-Nitroaniline used as surrogate for 3-N'itroaniline.
RSL value for Acenaphthene used as surrogate for Acenaphthylene.
RSL value for Anthracene used as surrogate for Phenanthrene.
RSL value for Chlordane used as surrogate for alpha-Chlordane and gamma-Chlordane.
RSL value for Chromium(VI) used as surrogate for Chromium.
RSL value for Demeton used as surrogate for Demeton-O and Demeton-S
RSL value for Endosulfan used as surrogate for Endosulfan I, Endosulfan II, and Endosulfan sulfate.
RSL value for Endrin used as surrogate for Endrin aldehyde and Endrin ketone.
RSL value for Manganese (water) used as surrogate for Manganese.
RSL value for Mercury Chloride (and other Mercury salts) used as surrogate for Mercury.
RSL value for Methoxychlor used as ·Facilities, USEPA, July 14, 1994.
RSL value for n-Hexane used as surrogate for Methylcyclohexane.
RSL value for Nitrobenzene used as surrogate for 4-Nitrophenol.
RSL value for Pyrene used as surrogate for Benzo(g,h,i)perylene.
RSL value for technical-HCH used as surrogate for delta-BHC.
The soil value of 400 mg/kg for lead is from the Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities, USEPA, July 14, 1994.

[5] Rationale Codes

Selection Reason:
- Above Screening Levels (ASL)
- Detection Limit Above Screening Level (DLASL), not quantitatively evaluated in HHRA
- Chemical from same class (carcinogenic PAH) identified as a COPC (CPAH)

Deletion Reason:
- No Toxicity Information (NTX)
- Essential Nutrient (NUT)
- Below Screening Level (BSL)
- Detection Limit Below Screening Level (DLBSL)
- Below Background Level (BBK)

Generated by:M. White/ATL
Checked by: T.Carleton/DAY

ARAR/TBC - Applicable or relevant and appropriate requirement/to be considered
J - Estimated value
N/A - Not applicable/not available
ND - Not detected
NL - Noncarcinogenic lead residential soil RSL not adjusted by dividing by 10.
NJ = The analysis indicates the presence of an analyte that has been tentatively identified and the associated numerical value represents its approximate concentration.
C - Carcinogenic
N - Noncarcinogenic
C* - N screening level < 100x C screening level, therefore N screening value used as screening level
C** - N screening level < 10x C screening level, therefore N screening value/10 used as screening level
N - Noncarcinogenic
S - Concentration exceeds Csat, used Csat as screening value
C_{sat} - The contaminant concentration in soil at which the absorptive limits of the soil particles, the solubility limits of the soil pore water, and saturation of soil pore air have been reached
COPC - Chemical of potential concern
mg/kg - milligram per kilogram

TABLE G 2.5

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier		Maximum [1] Concentration Qualifier		Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening Toxicity Value [4]		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
Soil*	71-55-6	1,1,1-Trichloroethane	ND		ND		mg/kg		0/16	0.0025 - 0.34	3.4E-01	N/A	6.4E+02	NS	1.2E+00	Csoil	NO	DLBSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		mg/kg		0/17	0.0025 - 0.34	3.4E-01	N/A	5.6E-01	C	1.2E-03	Csoil	NO	DLBSL
	76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	ND		ND		mg/kg		0/16	0.0025 - 0.34	3.4E-01	N/A	9.1E+02	NS	9.2E+03	Csoil	NO	DLBSL
	79-00-5	1,1,2-Trichloroethane	ND		ND		mg/kg		0/17	0.0025 - 0.34	3.4E-01	N/A	1.6E-01	C**	N/A	N/A	YES	DLASL
	75-34-3	1,1-Dichloroethane	ND		ND		mg/kg		0/16	0.0025 - 0.34	3.4E-01	N/A	3.3E+00	C	3.0E-02	Csoil	NO	DLBSL
	75-35-4	1,1-Dichloroethene	ND		ND		mg/kg		0/16	0.0025 - 0.34	3.4E-01	N/A	2.4E+01	N	4.6E-02	Csoil	NO	DLBSL
	120-82-1	1,2,4-Trichlorobenzene	1.1E-03	J	1.1E-03	J	mg/kg	MR02-IR69-SS06-10A	1/17	0.0025 - 0.34	1.1E-03	N/A	6.2E+00	C**	2.2E+00	Csoil	NO	BSL
	96-12-8	1,2-Dibromo-3-chloropropane	ND		ND		mg/kg		0/17	0.0025 - 0.34	3.4E-01	N/A	5.4E-03	C	2.5E-04	Csoil	YES	DLASL
	106-93-4	1,2-Dibromoethane	ND		ND		mg/kg		0/17	0.0025 - 0.34	3.4E-01	N/A	3.4E-02	C	9.7E-05	Csoil	YES	DLASL
	95-50-1	1,2-Dichlorobenzene	ND		ND		mg/kg		0/17	0.0025 - 0.34	3.4E-01	N/A	1.9E+02	N	2.4E-01	Csoil	NO	DLBSL
	107-06-2	1,2-Dichloroethane	ND		ND		mg/kg		0/16	0.0025 - 0.34	3.4E-01	N/A	4.3E-01	C*	2.0E-03	Csoil	NO	DLBSL
	78-87-5	1,2-Dichloropropane	ND		ND		mg/kg		0/16	0.0025 - 0.34	3.4E-01	N/A	9.4E-01	C*	3.3E-03	Csoil	NO	DLBSL
	541-73-1	1,3-Dichlorobenzene	ND		ND		mg/kg		0/17	0.0025 - 0.34	3.4E-01	N/A	2.4E+00	C	7.6E+00	Csoil	NO	DLBSL
	106-46-7	1,4-Dichlorobenzene	ND		ND		mg/kg		0/17	0.0025 - 0.34	3.4E-01	N/A	2.4E+00	C	7.0E-02	Csoil	NO	DLBSL
	78-93-3	2-Butanone	2.5E-02	J	1.1E-01	J	mg/kg	IR69-SS04-10A	3/16	0.0063 - 0.85	1.1E-01	N/A	2.8E+03	N	1.6E+01	Csoil	NO	BSL
	591-78-6	2-Hexanone	ND		ND		mg/kg		0/17	0.0063 - 0.85	8.5E-01	N/A	2.1E+01	N	1.2E+00	Csoil	NO	DLBSL
	108-10-1	4-Methyl-2-pentanone	ND		ND		mg/kg		0/17	0.0063 - 0.85	8.5E-01	N/A	5.3E+02	N	N/A	N/A	NO	DLBSL
	67-64-1	Acetone	4.1E-02	J	8.4E-01		mg/kg	IR69-SS05-10A	12/17	0.0063 - 0.85	8.4E-01	N/A	6.1E+03	N	2.4E+01	Csoil	NO	BSL
	71-43-2	Benzene	ND		ND		mg/kg		0/16	0.0025 - 0.34	3.4E-01	N/A	1.1E+00	C*	7.3E-03	Csoil	NO	DLBSL
	75-27-4	Bromodichloromethane	ND		ND		mg/kg		0/16	0.0025 - 0.34	3.4E-01	N/A	2.7E-01	C	2.9E-03	Csoil	YES	DLASL
	75-25-2	Bromoform	ND		ND		mg/kg		0/17	0.0025 - 0.34	3.4E-01	N/A	6.2E+01	C*	1.9E-02	Csoil	NO	DLBSL
	74-83-9	Bromomethane	ND		ND		mg/kg		0/16	0.0025 - 0.34	3.4E-01	N/A	7.3E-01	N	N/A	N/A	NO	DLBSL
	75-15-0	Carbon disulfide	5.3E-04	J	5.3E-04	J	mg/kg	IR69-SB03-04-05-10A	1/16	0.0025 - 0.34	5.3E-04	N/A	8.2E+01	N	3.8E+00	Csoil	NO	BSL
	56-23-5	Carbon tetrachloride	ND		ND		mg/kg		0/16	0.0025 - 0.34	3.4E-01	N/A	6.1E-01	C	2.0E-03	Csoil	NO	DLBSL
	108-90-7	Chlorobenzene	ND		ND		mg/kg		0/17	0.0025 - 0.34	3.4E-01	N/A	2.9E+01	N	4.5E-01	Csoil	NO	DLBSL
	75-00-3	Chloroethane	ND		ND		mg/kg		0/16	0.0025 - 0.34	3.4E-01	N/A	1.5E+03	N	1.6E+01	Csoil	NO	DLBSL
	67-66-3	Chloroform	ND		ND		mg/kg		0/16	0.0025 - 0.34	3.4E-01	N/A	2.9E-01	C	3.4E-01	Csoil	YES	DLASL
	74-87-3	Chloromethane	ND		ND		mg/kg		0/16	0.0025 - 0.34	3.4E-01	N/A	1.2E+01	N	1.5E-02	Csoil	NO	DLBSL
	156-59-2	cis-1,2-Dichloroethene	ND		ND		mg/kg		0/16	0.0025 - 0.34	3.4E-01	N/A	1.6E+01	N	3.6E-01	Csoil	NO	DLBSL
	10061-01-5	cis-1,3-Dichloropropene	ND		ND		mg/kg		0/16	0.0025 - 0.34	3.4E-01	N/A	1.7E+00	C*	2.3E-03	Csoil	NO	DLBSL
	110-82-7	Cyclohexane	4.4E-04	J	4.4E-04	J	mg/kg	MR02-IR69-SS04-10A : MR02-IR69-SS05-10A	2/17	0.0025 - 0.34	4.4E-04	N/A	1.2E+02	NS	N/A	N/A	NO	BSL
	124-48-1	Dibromochloromethane	ND		ND		mg/kg		0/17	0.0025 - 0.34	3.4E-01	N/A	6.8E-01	C	1.9E-03	Csoil	NO	DLBSL
	75-71-8	Dichlorodifluoromethane (Freon-12)	ND		ND		mg/kg		0/16	0.0025 - 0.34	3.4E-01	N/A	9.4E+01	N	2.9E+01	Csoil	NO	DLBSL
	100-41-4	Ethylbenzene	3.3E-03	J	3.3E-03	J	mg/kg	IR69-SS04-10A	1/17	0.0025 - 0.34	3.3E-03	N/A	5.4E+00	C	8.1E+00	Csoil	NO	BSL
	98-82-8	Isopropylbenzene	ND		ND		mg/kg		0/17	0.0025 - 0.34	3.4E-01	N/A	2.1E+02	N	1.3E+00	Csoil	NO	DLBSL
	1330-20-7	m- and p-Xylene	1.1E-02	J	1.1E-02	J	mg/kg	IR69-SS04-10A	1/17	0.005 - 0.68	1.1E-02	N/A	6.3E+01	N	6.0E+00	Csoil	NO	BSL
	79-20-9	Methyl acetate	2.5E-03	J	7.1E-01		mg/kg	MR02-IR69-SS02-10A	14/17	0.0025 - 0.34	7.1E-01	N/A	7.8E+03	N	N/A	N/A	NO	BSL
	108-87-2	Methylcyclohexane	ND		ND		mg/kg		0/17	0.0025 - 0.34	3.4E-01	N/A	5.7E+01	N	N/A	N/A	NO	DLBSL
	75-09-2	Methylene chloride	ND		ND		mg/kg		0/16	0.0025 - 0.34	3.4E-01	N/A	1.1E+01	C	2.3E-02	Csoil	NO	DLBSL
	1634-04-4	Methyl-tert-butyl ether (MTBE)	ND		ND		mg/kg		0/16	0.0025 - 0.34	3.4E-01	N/A	4.3E+01	C	8.5E-02	Csoil	NO	DLBSL
	95-47-6	o-Xylene	ND		ND		mg/kg		0/17	0.0025 - 0.34	3.4E-01	N/A	6.9E+01	N	6.0E+00	Csoil	NO	DLBSL
	100-42-5	Styrene	ND		ND		mg/kg		0/17	0.0025 - 0.34	3.4E-01	N/A	6.3E+02	N	9.2E-01	Csoil	NO	DLBSL
	127-18-4	Tetrachloroethene	ND		ND		mg/kg		0/17	0.0025 - 0.34	3.4E-01	N/A	5.5E-01	C	5.0E-03	Csoil	NO	DLBSL
	108-88-3	Toluene	5.8E-02		5.8E-02		mg/kg	IR69-SS04-10A	1/17	0.0025 - 0.34	5.8E-02	N/A	5.0E+02	N	5.5E+00	Csoil	NO	BSL
	156-60-5	trans-1,2-Dichloroethene	ND		ND		mg/kg		0/16	0.0025 - 0.34	3.4E-01	N/A	1.5E+01	N	5.1E-01	Csoil	NO	DLBSL
	10061-02-6	trans-1,3-Dichloropropene	ND		ND		mg/kg		0/17	0.0025 - 0.34	3.4E-01	N/A	1.7E+00	C*	2.3E-03	Csoil	NO	DLBSL
	79-01-6	Trichloroethene	ND		ND		mg/kg		0/16	0.0025 - 0.34	3.4E-01	N/A	2.5E+00	C**	1.8E-02	Csoil	NO	DLBSL

TABLE G 2.5

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	75-69-4	Trichlorofluoromethane(Freon-11)	ND		ND		mg/kg		0/16	0.0025 - 0.34	3.4E-01	N/A	7.9E+01	N	2.4E+01	Csoil	NO	DLBSL
	75-01-4	Vinyl chloride	ND		ND		mg/kg		0/16	0.0025 - 0.34	3.4E-01	N/A	6.0E-02	C	1.9E-04	Csoil	YES	DLASL
	1330-20-7	Xylene, total	1.4E-02	J	1.4E-02	J	mg/kg	IR69-SS04-10A	1/17	0.0025 - 0.34	1.4E-02	N/A	6.3E+01	N	6.0E+00	Csoil	NO	BSL
	92-52-4	1,1-Biphenyl	ND		ND		mg/kg		0/17	0.2 - 0.33	3.3E-01	N/A	5.1E+00	N	4.3E+01	Csoil	NO	DLBSL
	108-60-1	2,2'-Oxybis(1-chloropropane)	ND		ND		mg/kg		0/17	0.2 - 0.33	3.3E-01	N/A	4.6E+00	C	N/A	N/A	NO	DLBSL
	95-95-4	2,4,5-Trichlorophenol	ND		ND		mg/kg		0/17	0.38 - 0.63	6.3E-01	N/A	6.1E+02	N	N/A	N/A	NO	DLBSL
	88-06-2	2,4,6-Trichlorophenol	ND		ND		mg/kg		0/17	0.38 - 0.63	6.3E-01	N/A	6.1E+00	C**	N/A	N/A	NO	DLBSL
	120-83-2	2,4-Dichlorophenol	ND		ND		mg/kg		0/17	0.38 - 0.63	6.3E-01	N/A	1.8E+01	N	N/A	N/A	NO	DLBSL
	105-67-9	2,4-Dimethylphenol	ND		ND		mg/kg		0/17	0.38 - 0.63	6.3E-01	N/A	1.2E+02	N	1.4E+00	Csoil	NO	DLBSL
	51-28-5	2,4-Dinitrophenol	ND		ND		mg/kg		0/17	0.38 - 0.63	6.3E-01	N/A	1.2E+01	N	N/A	N/A	NO	DLBSL
	121-14-2	2,4-Dinitrotoluene	ND		ND		mg/kg		0/18	0.2 - 0.58	5.8E-01	N/A	1.6E+00	C*	N/A	N/A	NO	DLBSL
	606-20-2	2,6-Dinitrotoluene	ND		ND		mg/kg		0/18	0.2 - 0.58	5.8E-01	N/A	6.1E+00	N	N/A	N/A	NO	DLBSL
	91-58-7	2-Chloronaphthalene	ND		ND		mg/kg		0/17	0.2 - 0.33	3.3E-01	N/A	1.8E+02	NS	N/A	N/A	NO	DLBSL
	95-57-8	2-Chlorophenol	ND		ND		mg/kg		0/17	0.38 - 0.63	6.3E-01	N/A	3.9E+01	N	4.1E-03	Csoil	NO	DLBSL
	91-57-6	2-Methylnaphthalene	1.2E-03	J	3.6E-03	J	mg/kg	MR02-IR69-SS06-10A	9/17	0.0095 - 0.016	3.6E-03	N/A	3.1E+01	N	1.6E+00	Csoil	NO	BSL
	95-48-7	2-Methylphenol	ND		ND		mg/kg		0/17	0.38 - 0.63	6.3E-01	N/A	3.1E+02	N	N/A	N/A	NO	DLBSL
	88-74-4	2-Nitroaniline	ND		ND		mg/kg		0/17	0.38 - 0.63	6.3E-01	N/A	6.1E+01	N	N/A	N/A	NO	DLBSL
	88-75-5	2-Nitrophenol	ND		ND		mg/kg		0/17	0.38 - 0.63	6.3E-01	N/A	3.9E+01	N	N/A	N/A	NO	DLBSL
	91-94-1	3,3'-Dichlorobenzidine	ND		ND		mg/kg		0/16	0.2 - 0.33	3.3E-01	N/A	1.1E+00	C	N/A	N/A	NO	DLBSL
	99-09-2	3-Nitroaniline	ND		ND		mg/kg		0/17	0.38 - 0.63	6.3E-01	N/A	6.1E+01	N	N/A	N/A	NO	DLBSL
	534-52-1	4,6-Dinitro-2-methylphenol	ND		ND		mg/kg		0/17	0.38 - 0.63	6.3E-01	N/A	4.9E-01	N	N/A	N/A	YES	DLASL
	101-55-3	4-Bromophenyl-phenylether	ND		ND		mg/kg		0/17	0.2 - 0.33	3.3E-01	N/A	N/A		N/A	N/A	NO	NTX
	59-50-7	4-Chloro-3-methylphenol	ND		ND		mg/kg		0/17	0.38 - 0.63	6.3E-01	N/A	6.1E+02	N	N/A	N/A	NO	DLBSL
	106-47-8	4-Chloroaniline	ND		ND		mg/kg		0/17	0.38 - 0.63	6.3E-01	N/A	2.4E+00	C	N/A	N/A	NO	DLBSL
	7005-72-3	4-Chlorophenyl-phenylether	ND		ND		mg/kg		0/17	0.2 - 0.33	3.3E-01	N/A	3.1E+01	N	N/A	N/A	NO	DLBSL
	106-44-5	4-Methylphenol	ND		ND		mg/kg		0/17	0.38 - 0.63	6.3E-01	N/A	3.1E+01	N	4.0E-01	Csoil	NO	DLBSL
	100-01-6	4-Nitroaniline	ND		ND		mg/kg		0/17	0.38 - 0.63	6.3E-01	N/A	2.4E+01	C*	N/A	N/A	NO	DLBSL
	100-02-7	4-Nitrophenol	ND		ND		mg/kg		0/17	0.38 - 0.63	6.3E-01	N/A	4.8E+00	C*	N/A	N/A	NO	DLBSL
	83-32-9	Acenaphthene	8.0E-04	J	4.6E-03	J	mg/kg	IR69-SS06-10A	9/17	0.0095 - 0.016	4.6E-03	N/A	3.4E+02	N	8.4E+00	Csoil	NO	BSL
	208-96-8	Acenaphthylene	9.3E-04	J	1.1E-03	J	mg/kg	IR69-SS06-10A	3/17	0.0095 - 0.016	1.1E-03	N/A	3.4E+02	N	1.1E+01	Csoil	NO	BSL
	98-86-2	Acetophenone	ND		ND		mg/kg		0/17	0.2 - 0.33	3.3E-01	N/A	7.8E+02	N	N/A	N/A	NO	DLBSL
	120-12-7	Anthracene	6.8E-04	J	1.7E-03	J	mg/kg	MR02-IR69-SS06-10A	8/17	0.0095 - 0.016	1.7E-03	N/A	1.7E+03	N	6.6E+02	Csoil	NO	BSL
	1912-24-9	Atrazine	ND		ND		mg/kg		0/17	0.2 - 0.33	3.3E-01	N/A	2.1E+00	C	2.5E-02	Csoil	NO	DLBSL
	100-52-7	Benzaldehyde	3.6E-02	J	1.7E-01	J	mg/kg	MR02-IR69-SS06-10A	11/17	0.2 - 0.33	1.7E-01	N/A	7.8E+02	N	N/A	N/A	NO	BSL
	56-55-3	Benzo(a)anthracene	8.1E-04	J	3.2E-03	J	mg/kg	MR02-IR69-SS01D-10A	9/17	0.0095 - 0.016	3.2E-03	N/A	1.5E-01	C	1.8E-01	Csoil	NO	BSL
	50-32-8	Benzo(a)pyrene	1.4E-03	J	7.3E-03	J	mg/kg	MR02-IR69-SS04-10A	11/17	0.0095 - 0.016	7.3E-03	N/A	1.5E-02	C	5.9E-02	Csoil	NO	BSL
	205-99-2	Benzo(b)fluoranthene	7.9E-04	J	6.2E-03	J	mg/kg	MR02-IR69-SS06-10A	12/17	0.0095 - 0.016	6.2E-03	N/A	1.5E-01	C	6.0E-01	Csoil	NO	BSL
	191-24-2	Benzo(g,h,i)perylene	6.4E-04	J	1.8E-03	J	mg/kg	IR69-SS02-10A	5/17	0.0095 - 0.016	1.8E-03	N/A	1.7E+02	N	3.6E+02	Csoil	NO	BSL
	207-08-9	Benzo(k)fluoranthene	5.2E-04	J	3.9E-03	J	mg/kg	MR02-IR69-SS04-10A	12/17	0.0095 - 0.016	3.9E-03	N/A	1.5E+00	C	5.9E+00	Csoil	NO	BSL
	111-91-1	bis(2-Chloroethoxy)methane	ND		ND		mg/kg		0/17	0.2 - 0.33	3.3E-01	N/A	1.8E+01	N	N/A	N/A	NO	DLBSL
	111-44-4	bis(2-Chloroethyl)ether	ND		ND		mg/kg		0/17	0.2 - 0.33	3.3E-01	N/A	2.1E-01	C	1.4E-04	Csoil	YES	DLASL
	117-81-7	bis(2-Ethylhexyl)phthalate	2.0E-01	J	5.4E-01		mg/kg	IR69-SB05-06-07-10A	3/17	0.2 - 0.33	5.4E-01	N/A	3.5E+01	C*	7.2E+00	Csoil	NO	BSL
	85-68-7	Butylbenzylphthalate	ND		ND		mg/kg		0/17	0.2 - 0.33	3.3E-01	N/A	2.6E+02	C*	1.5E+02	Csoil	NO	DLBSL
	105-60-2	Caprolactam	6.1E-02	J	1.5E-01	J	mg/kg	IR69-SB05-06-07-10A	3/17	0.2 - 0.33	1.5E-01	N/A	3.1E+03	N	1.8E+01	Csoil	NO	BSL
	86-74-8	Carbazole	ND		ND		mg/kg		0/17	0.2 - 0.33	3.3E-01	N/A	N/A		N/A	N/A	NO	NTX
	218-01-9	Chrysene	1.3E-03	J	4.2E-03	J	mg/kg	MR02-IR69-SS04-10A	10/17	0.0095 - 0.016	4.2E-03	N/A	1.5E+01	C	1.8E+01	Csoil	NO	BSL
	53-70-3	Dibenz(a,h)anthracene	ND		ND		mg/kg		0/17	0.0095 - 0.016	1.6E-02	N/A	1.5E-02	C	1.9E-01	Csoil	YES	DLASL
	132-64-9	Dibenzofuran	ND		ND		mg/kg		0/17	0.2 - 0.33	3.3E-01	N/A	7.8E+00	N	4.7E+00	Csoil	NO	DLBSL
	84-66-2	Diethylphthalate	ND		ND		mg/kg		0/17	0.2 - 0.33	3.3E-01	N/A	4.9E+03	N	3.7E+01	Csoil	NO	DLBSL

TABLE G 2.5

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening Toxicity Value	[4]	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	60-51-5	Dimethoate	ND		ND		mg/kg		0/16	0.077 - 0.14	1.4E-01	N/A	1.2E+00	N	N/A	N/A	NO	DLBSL
	131-11-3	Dimethyl phthalate	ND		ND		mg/kg		0/17	0.2 - 0.33	3.3E-01	N/A	N/A		N/A	N/A	NO	NTX
	84-74-2	Di-n-butylphthalate	ND		ND		mg/kg		0/17	0.2 - 0.33	3.3E-01	N/A	6.1E+02	N	1.9E+01	Csoil	NO	DLBSL
	117-84-0	Di-n-octylphthalate	ND		ND		mg/kg		0/17	0.2 - 0.33	3.3E-01	N/A	N/A		3.8E+01	Csoil	NO	NTX
	52-85-7	Famphur	ND		ND		mg/kg		0/17	0.077 - 0.14	1.4E-01	N/A	N/A		N/A	N/A	NO	NTX
	206-44-0	Fluoranthene	2.6E-03	J	5.8E-03	J	mg/kg	IR69-SS01D-10A	9/17	0.0095 - 0.016	5.8E-03	N/A	2.3E+02	N	3.3E+02	Csoil	NO	BSL
	86-73-7	Fluorene	5.6E-04	J	1.2E-03	J	mg/kg	MR02-IR69-SS01-10A	6/17	0.0095 - 0.016	1.2E-03	N/A	2.3E+02	N	5.6E+01	Csoil	NO	BSL
	118-74-1	Hexachlorobenzene	ND		ND		mg/kg		0/17	0.2 - 0.33	3.3E-01	N/A	3.0E-01	C	2.6E-03	Csoil	YES	DLASL
	87-68-3	Hexachlorobutadiene	ND		ND		mg/kg		0/17	0.2 - 0.33	3.3E-01	N/A	6.1E+00	C**	8.7E-03	Csoil	NO	DLBSL
	77-47-4	Hexachlorocyclopentadiene	ND		ND		mg/kg		0/17	0.2 - 0.33	3.3E-01	N/A	3.7E+01	N	N/A	N/A	NO	DLBSL
	67-72-1	Hexachloroethane	ND		ND		mg/kg		0/17	0.2 - 0.33	3.3E-01	N/A	6.1E+00	C**	N/A	N/A	NO	DLBSL
	193-39-5	Indeno(1,2,3-cd)pyrene	7.5E-04	J	2.1E-03	J	mg/kg	IR69-SS02-10A : MR02-IR69-SS06-10A	8/17	0.0095 - 0.016	2.1E-03	N/A	1.5E-01	C	2.0E+00	Csoil	NO	BSL
	78-59-1	Isophorone	ND		ND		mg/kg		0/17	0.2 - 0.33	3.3E-01	N/A	5.1E+02	C*	2.1E-01	Csoil	NO	DLBSL
	91-20-3	Naphthalene	1.7E-03	J	3.2E-03	J	mg/kg	IR69-SS03-10A	6/17	0.0095 - 0.016	3.2E-03	N/A	3.6E+00	C*	2.1E-01	Csoil	NO	BSL
	621-64-7	n-Nitroso-di-n-propylamine	ND		ND		mg/kg		0/17	0.2 - 0.33	3.3E-01	N/A	6.9E-02	C	N/A	N/A	YES	DLASL
	86-30-6	n-Nitrosodiphenylamine	ND		ND		mg/kg		0/17	0.2 - 0.33	3.3E-01	N/A	9.9E+01	C	N/A	N/A	NO	DLBSL
	98-95-3	Nitrobenzene	ND		ND		mg/kg		0/18	0.2 - 0.58	5.8E-01	N/A	4.8E+00	C*	N/A	N/A	NO	DLBSL
	87-86-5	Pentachlorophenol	ND		ND		mg/kg		0/17	0.38 - 0.63	6.3E-01	N/A	8.9E-01	C	3.1E-02	Csoil	NO	DLBSL
	85-01-8	Phenanthrene	1.7E-03	J	6.0E-03	J	mg/kg	MR02-IR69-SS06-10A	12/17	0.0095 - 0.016	6.0E-03	N/A	1.7E+03	N	5.7E+01	Csoil	NO	BSL
	108-95-2	Phenol	ND		ND		mg/kg		0/17	0.38 - 0.63	6.3E-01	N/A	1.8E+03	N	2.3E-01	Csoil	NO	DLBSL
	298-02-2	Phorate	ND		ND		mg/kg		0/17	0.038 - 0.068	6.8E-02	N/A	1.2E+00	N	1.3E-02	Csoil	NO	DLBSL
	129-00-0	Pyrene	1.2E-03	J	4.4E-03	J	mg/kg	IR69-SS01D-10A : MR02-IR69-SS04-10A	10/17	0.0095 - 0.016	4.4E-03	N/A	1.7E+02	N	2.2E+02	Csoil	NO	BSL
	72-54-8	4,4'-DDD	4.4E-04	J	3.5E-03	NJ	mg/kg	IR69-SS01D-10A	10/17	0.0038 - 0.025	3.5E-03	N/A	2.0E+00	C	2.4E-01	Csoil	NO	BSL
	72-55-9	4,4'-DDE	1.3E-03	NJ	1.1E-01	NJ	mg/kg	IR69-SS01D-10A	12/17	0.0038 - 0.025	1.1E-01	N/A	1.4E+00	C	N/A	N/A	NO	BSL
	50-29-3	4,4'-DDT	1.6E-03	J	5.6E-02	J	mg/kg	IR69-SS01D-10A	11/12	0.0039 - 0.025	5.6E-02	N/A	1.7E+00	C*	3.4E-01	Csoil	NO	BSL
	309-00-2	Aldrin	2.2E-04	J	2.0E-03	J	mg/kg	IR69-SS02-10A : IR69-SS06-10A	7/17	0.002 - 0.013	2.0E-03	N/A	2.9E-02	C*	N/A	N/A	NO	BSL
	319-84-6	alpha-BHC	5.8E-04	J	3.3E-03	J	mg/kg	MR02-IR69-SS01D-10A	5/17	0.002 - 0.013	3.3E-03	N/A	7.7E-02	C	1.2E-03	Csoil	NO	BSL
	5103-71-9	alpha-Chlordane	3.2E-04	J	1.0E-02	J	mg/kg	MR02-IR69-SS02-10A	12/17	0.002 - 0.013	1.0E-02	N/A	1.6E+00	C*	6.8E-02	Csoil	NO	BSL
	12674-11-2	Aroclor-1016	ND		ND		mg/kg		0/17	0.028 - 0.18	1.8E-01	N/A	3.9E-01	N	N/A	N/A	NO	DLBSL
	11104-28-2	Aroclor-1221	ND		ND		mg/kg		0/17	0.039 - 0.26	2.6E-01	N/A	1.4E-01	C	N/A	N/A	YES	DLASL
	11141-16-5	Aroclor-1232	ND		ND		mg/kg		0/17	0.02 - 0.13	1.3E-01	N/A	1.4E-01	C	N/A	N/A	NO	DLBSL
	53469-21-9	Aroclor-1242	ND		ND		mg/kg		0/17	0.02 - 0.13	1.3E-01	N/A	2.2E-01	C	N/A	N/A	NO	DLBSL
	12672-29-6	Aroclor-1248	ND		ND		mg/kg		0/17	0.02 - 0.13	1.3E-01	N/A	2.2E-01	C	N/A	N/A	NO	DLBSL
	11097-69-1	Aroclor-1254	ND		ND		mg/kg		0/17	0.02 - 0.13	1.3E-01	N/A	1.1E-01	C**	N/A	N/A	YES	DLASL
	11096-82-5	Aroclor-1260	ND		ND		mg/kg		0/17	0.02 - 0.13	1.3E-01	N/A	2.2E-01	C	N/A	N/A	NO	DLBSL
	86-50-0	Azinphos methyl	ND		ND		mg/kg		0/17	0.038 - 0.068	6.8E-02	N/A	1.8E+01	N	N/A	N/A	NO	DLBSL
	319-85-7	beta-BHC	4.5E-04	J	2.0E-03	J	mg/kg	MR02-IR69-SS02-10A	3/17	0.00098 - 0.0064	2.0E-03	N/A	2.7E-01	C	1.2E-03	Csoil	NO	BSL
	35400-43-2	Bolstar	ND		ND		mg/kg		0/17	0.038 - 0.068	6.8E-02	N/A	N/A		N/A	N/A	NO	NTX
	2921-88-2	Chlorpyrifos	ND		ND		mg/kg		0/17	0.038 - 0.068	6.8E-02	N/A	1.8E+01	N	N/A	N/A	NO	DLBSL
	56-72-4	Coumaphos	ND		ND		mg/kg		0/17	0.038 - 0.068	6.8E-02	N/A	N/A		N/A	N/A	NO	NTX
	319-86-8	delta-BHC	5.5E-04	J	2.1E-03	J	mg/kg	MR02-IR69-SS02-10A	4/17	0.002 - 0.013	2.1E-03	N/A	2.7E-01	C	1.2E-03	Csoil	NO	BSL
	8065-48-3	Demeton-O	ND		ND		mg/kg		0/17	0.095 - 0.17	1.7E-01	N/A	2.4E-01	N	N/A	N/A	NO	DLBSL
	8065-48-3	Demeton-S	ND		ND		mg/kg		0/14	0.095 - 0.17	1.7E-01	N/A	2.4E-01	N	N/A	N/A	NO	DLBSL
	333-41-5	Diazinon	ND		ND		mg/kg		0/17	0.038 - 0.068	6.8E-02	N/A	4.3E+00	N	N/A	N/A	NO	DLBSL
	62-73-7	Dichlorvos	ND		ND		mg/kg		0/17	0.077 - 0.14	1.4E-01	N/A	1.7E+00	C*	N/A	N/A	NO	DLBSL
	60-57-1	Dieldrin	ND		ND		mg/kg		0/17	0.0038 - 0.025	2.5E-02	N/A	3.0E-02	C	8.1E-04	Csoil	NO	DLBSL
	298-04-4	Disulfoton	ND		ND		mg/kg		0/17	0.077 - 0.14	1.4E-01	N/A	2.4E-01	N	6.2E-03	Csoil	NO	DLBSL

TABLE G 2.5

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening Toxicity Value [4]		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	959-98-8	Endosulfan I	2.2E-04	J	2.3E-03	J	mg/kg	IR69-SS03-10A	6/17	0.002 - 0.013	2.3E-03	N/A	3.7E+01	N	5.6E+00	Csoil	NO	BSL
	33213-65-9	Endosulfan II	1.2E-03	J	1.9E-03	J	mg/kg	IR69-SS06-10A	2/17	0.0038 - 0.025	1.9E-03	N/A	3.7E+01	N	5.6E+00	Csoil	NO	BSL
	1031-07-8	Endosulfan sulfate	8.1E-04	J	4.3E-02	J	mg/kg	MR02-IR69-SS04-10A	13/17	0.0038 - 0.025	4.3E-02	N/A	3.7E+01	N	5.6E+00	Csoil	NO	BSL
	72-20-8	Endrin	8.7E-04	J	3.9E-03	J	mg/kg	IR69-SS05-10A	5/17	0.0038 - 0.025	3.9E-03	N/A	1.8E+00	N	8.1E-01	Csoil	NO	BSL
	7421-93-4	Endrin aldehyde	2.2E-03	J	2.5E-02		mg/kg	IR69-SS04-10A	4/17	0.0038 - 0.025	2.5E-02	N/A	1.8E+00	N	8.1E-01	Csoil	NO	BSL
	53494-70-5	Endrin ketone	2.5E-03	J	2.0E-02	J	mg/kg	MR02-IR69-SS01D-10A	10/17	0.0038 - 0.025	2.0E-02	N/A	1.8E+00	N	8.1E-01	Csoil	NO	BSL
	13194-48-4	Ethoprop	ND		ND		mg/kg		0/17	0.02 - 0.035	3.5E-02	N/A	N/A		N/A	N/A	NO	NTX
	115-90-2	Fensulfothion	ND		ND		mg/kg		0/17	0.2 - 0.35	3.5E-01	N/A	N/A		N/A	N/A	NO	NTX
	2104-64-5	Ethyl p-nitrophenyl phenylphosphorothioate	ND		ND		mg/kg		0/17	0.038 - 0.068	6.8E-02	N/A	6.1E-02	N	N/A	N/A	YES	DLASL
	55-38-9	Fenthion	ND		ND		mg/kg		0/17	0.038 - 0.068	6.8E-02	N/A	N/A		N/A	N/A	NO	NTX
	58-89-9	gamma-BHC (Lindane)	1.4E-03	J	8.4E-03		mg/kg	IR69-SS04-10A	4/17	0.002 - 0.013	8.4E-03	N/A	5.2E-01	C*	1.8E-03	Csoil	NO	BSL
	5103-74-2	gamma-Chlordane	4.9E-04	J	3.9E-03	J	mg/kg	MR02-IR69-SS04-10A	8/17	0.002 - 0.013	3.9E-03	N/A	1.6E+00	C*	6.8E-02	Csoil	NO	BSL
	76-44-8	Heptachlor	3.2E-04	J	1.5E-03	J	mg/kg	MR02-IR69-SS02-10A	10/17	0.002 - 0.013	1.5E-03	N/A	1.1E-01	C	6.6E-03	Csoil	NO	BSL
	1024-57-3	Heptachlor epoxide	1.6E-03	J	1.6E-03	J	mg/kg	MR02-IR69-SS06-10A	1/17	0.002 - 0.013	1.6E-03	N/A	5.3E-02	C*	8.2E-04	Csoil	NO	BSL
	121-75-5	Malathion	ND		ND		mg/kg		0/17	0.038 - 0.068	6.8E-02	N/A	1.2E+02	N	N/A	N/A	NO	DLBSL
	150-50-5	Merphos	ND		ND		mg/kg		0/17	0.057 - 0.1	1.0E-01	N/A	1.8E-01	N	N/A	N/A	NO	DLBSL
	72-43-5	Methoxychlor	4.9E-03	J	1.1E-02	J	mg/kg	IR69-SS04-10A	2/14	0.02 - 0.13	1.1E-02	N/A	3.1E+01	N	2.2E+01	Csoil	NO	BSL
	298-00-0	Methyl parathion	ND		ND		mg/kg		0/17	0.02 - 0.035	3.5E-02	N/A	1.5E+00	N	N/A	N/A	NO	DLBSL
	7786-34-7	Mevinphos	ND		ND		mg/kg		0/17	0.077 - 0.14	1.4E-01	N/A	N/A		N/A	N/A	NO	NTX
	6923-22-4	Monocrotophos	ND		ND		mg/kg		0/15	0.38 - 0.68	6.8E-01	N/A	N/A		N/A	N/A	NO	NTX
	300-76-5	Naled	ND		ND		mg/kg		0/15	0.2 - 0.35	3.5E-01	N/A	1.2E+01	N	N/A	N/A	NO	DLBSL
	56-38-2	Parathion	ND		ND		mg/kg		0/17	0.038 - 0.068	6.8E-02	N/A	3.7E+01	N	N/A	N/A	NO	DLBSL
	299-84-3	Ronnel	ND		ND		mg/kg		0/17	0.038 - 0.068	6.8E-02	N/A	3.1E+02	N	N/A	N/A	NO	DLBSL
	3689-24-5	Sulfotepp	ND		ND		mg/kg		0/17	0.02 - 0.035	3.5E-02	N/A	3.1E+00	N	N/A	N/A	NO	DLBSL
	22248-79-9	Tetrachlorvinphos	ND		ND		mg/kg		0/17	0.038 - 0.068	6.8E-02	N/A	N/A		N/A	N/A	NO	NTX
	297-97-2	Thionazin	ND		ND		mg/kg		0/17	0.038 - 0.068	6.8E-02	N/A	N/A		N/A	N/A	NO	NTX
	34643-46-4	Tokuthion (Prothiophos)	ND		ND		mg/kg		0/17	0.038 - 0.068	6.8E-02	N/A	N/A		N/A	N/A	NO	NTX
	8001-35-2	Toxaphene	ND		ND		mg/kg		0/17	0.095 - 0.63	6.3E-01	N/A	4.4E-01	C	4.6E-02	Csoil	YES	DLASL
	327-98-0	Trichloronate	ND		ND		mg/kg		0/17	0.038 - 0.068	6.8E-02	N/A	N/A		N/A	N/A	NO	NTX
	7429-90-5	**Aluminum**	**2.3E+02**		**2.1E+04**		**mg/kg**	**IR69-SB05-06-07-10A**	**18/18**	**22.8 - 54**	**2.1E+04**	**1.0E+04**	**7.7E+03**	**N**	**N/A**	**N/A**	**YES**	**ASL**
	7440-36-0	Antimony	1.2E-01	J	1.4E+00	J	mg/kg	IR69-SB03-04-05-10A	9/18	1.1 - 2.7	1.4E+00	3.6E-01	3.1E+00	N	N/A	N/A	NO	BSL
	7440-38-2	**Arsenic**	**2.4E-01**	**J**	**4.8E+00**		**mg/kg**	**IR69-SB04-06-07-10A**	**12/18**	**0.49 - 1.9**	**4.8E+00**	**2.1E+00**	**3.9E-01**	**C***	**5.8E+00**	**Csoil**	**YES**	**ASL**
	7440-39-3	Barium	1.6E+00	J	6.5E+01		mg/kg	IR69-SS05-10A	17/18	22.8 - 54	6.5E+01	1.7E+01	1.5E+03	N	5.8E+02	Csoil	NO	BSL
	7440-41-7	Beryllium	8.0E-02	J	2.9E-01	J	mg/kg	IR69-SB05-06-07-10A	8/18	0.57 - 1.3	2.9E-01	1.7E-01	1.6E+01	N	N/A	N/A	NO	BSL
	7440-43-9	Cadmium	7.0E-02	J	3.6E-01	J	mg/kg	IR69-SB05-06-07-10A	5/18	0.54 - 0.97	3.6E-01	2.3E-02	7.0E+00	N	3.0E+00	Csoil	NO	BSL
	7440-70-2	Calcium	3.9E+01	J	3.9E+03		mg/kg	IR69-SS05-10A	9/18	544 - 1300	3.9E+03	4.4E+02	N/A		N/A	N/A	NO	NUT
	7440-47-3	**Chromium**	**5.5E-01**	**J**	**3.0E+01**		**mg/kg**	**IR69-SB05-06-07-10A**	**14/18**	**1.1 - 2.7**	**3.0E+01**	**1.5E+01**	**2.9E-01**	**C**	**3.8E+00**	**Csoil**	**YES**	**ASL**
	7440-48-4	Cobalt	1.2E-01	J	1.3E+00		mg/kg	IR69-SB01-01-02-10A	7/18	0.57 - 13	1.3E+00	8.2E-01	2.3E+00	N	N/A	N/A	NO	BSL
	7440-50-8	Copper	3.1E-01	J	5.3E+00		mg/kg	IR69-SB05-06-07-10A	12/18	0.57 - 6.7	5.3E+00	2.6E+00	3.1E+02	N	7.0E+02	Csoil	NO	BSL
	7439-89-6	**Iron**	**1.7E+02**		**1.4E+04**		**mg/kg**	**IR69-SB05-06-07-10A**	**18/18**	**11.4 - 27**	**1.4E+04**	**5.4E+03**	**5.5E+03**	**N**	**1.5E+02**	**Csoil**	**YES**	**ASL**
	7439-92-1	Lead	2.3E+00		1.6E+01		mg/kg	IR69-SS05-10A	18/18	0.34 - 0.81	1.6E+01	8.5E+00	4.0E+02	NL	2.7E+02	Csoil	NO	BSL
	7439-95-4	Magnesium	3.2E+01	J	1.1E+03		mg/kg	IR69-SB01-01-02-10A	8/18	571 - 1300	1.1E+03	3.6E+02	N/A		N/A	N/A	NO	NUT
	7439-96-5	**Manganese**	**9.8E-01**	**J**	**3.5E+02**		**mg/kg**	**IR69-SS05-10A**	**18/18**	**1.1 - 4**	**3.5E+02**	**9.3E+00**	**1.8E+02**	**N**	**6.5E+01**	**Csoil**	**YES**	**ASL**
	7439-97-6	Mercury	2.0E-02	J	3.1E-01		mg/kg	IR69-SS05-10A	15/18	0.04 - 0.29	3.1E-01	7.1E-02	2.3E+00	N	1.0E+00	Csoil	NO	BSL
	7440-02-0	Nickel	3.5E-01	J	3.4E+00		mg/kg	IR69-SB01-01-02-10A	10/18	0.57 - 11	3.4E+00	2.3E+00	1.5E+02	N	1.3E+02	Csoil	NO	BSL
	7440-09-7	Potassium	4.8E+01	J	1.4E+03	J	mg/kg	IR69-SB05-06-07-10A	18/18	571 - 1300	1.4E+03	3.6E+02	N/A		N/A	N/A	NO	NUT
	7782-49-2	Selenium	1.1E-01	J	8.6E-01		mg/kg	IR69-SS01-10A	7/18	0.57 - 1.3	8.6E-01	5.1E-01	3.9E+01	N	2.1E+00	Csoil	NO	BSL
	7440-22-4	Silver	ND		ND		mg/kg		0/18	0.54 - 2.7	2.7E+00	1.3E-01	3.9E+01	N	3.4E+00	Csoil	NO	DLBSL
	7440-23-5	Sodium	4.2E+01	J	2.6E+02	J	mg/kg	IR69-SS05-10A	7/18	544 - 1300	2.6E+02	6.8E+01	N/A		N/A	N/A	NO	NUT

TABLE G 2.5

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	7440-28-0	Thallium	3.0E-02	J	5.0E-02	J	mg/kg	MR02-IR69-SS01-10A	2/18	0.49 - 1.9	5.0E-02	3.8E-01	7.8E-02	N	N/A	N/A	NO	BSL
	7440-62-2	**Vanadium**	**6.9E-01**	**J**	**3.9E+01**		**mg/kg**	**IR69-SB05-06-07-10A**	**18/18**	**2.3 - 13**	**3.9E+01**	**1.7E+01**	**3.9E+01**	**N**	**N/A**	**N/A**	**YES**	**ASL**
	7440-66-6	Zinc	2.3E+00		1.4E+01		mg/kg	MR02-IR69-SS01-10A	13/18	2.3 - 5.4	1.4E+01	6.6E+00	2.3E+03	N	1.2E+03	Csoil	NO	BSL

*Surface soil and subsurface soil combined
[1] Minimum/Maximum detected concentrations.
[2] Maximum concentration is used for screening. If ND, maximum detection limit used for screening.
[3] Background values are two times the arithmetic mean basewide background subsurface soil concentrations.
[4] Oak Ridge National Laboratory (ORNL). June 2011. Residential Regional Screening Levels for Chemical Contaminants at Superfund Sites(based on 10-6 for carcinogens. and HQ of 0.1 for noncarcinogens). Used RSL for residential soil. [Online]. Available: http://epa-prgs.ornl.gov/chemicals/index.shtml
RSL value for 1,3-Dichloropropene used as a surrogate for cis-1,3-Dichloropropene and trans-1,3-Dichloropropene.
RSL value for 2-Chlorophenol used as surrogate for 2-Nitrophenol.
RSL value for 2-Nitroaniline used as surrogate for 3-N'itroaniline.
RSL value for Acenaphthene used as surrogate for Acenaphthylene.
RSL value for Anthracene used as surrogate for Phenanthrene.
RSL value for Chlordane used as surrogate for alpha-Chlordane and gamma-Chlordane.
RSL value for Chromium(VI) used as surrogate for Chromium.
RSL value for Demeton used as surrogate for Demeton-O and Demeton-S
RSL value for Endosulfan used as surrogate for Endosulfan I, Endosulfan II, and Endosulfan sulfate.
RSL value for Endrin used as surrogate for Endrin aldehyde and Endrin ketone.
RSL value for Manganese (water) used as surrogate for Manganese.
RSL value for Mercury Chloride (and other Mercury salts) used as surrogate for Mercury.
RSL value for Methoxychlor used as surrogate for 4-Chlorophenyl-phenylether.
RSL value for n-Hexane used as surrogate for Methylcyclohexane.
RSL value for Nitrobenzene used as surrogate for 4-Nitrophenol.
RSL value for Pyrene used as surrogate for Benzo(g,h,i)perylene.
RSL value for technical-HCH used as surrogate for delta-BHC.
The soil value of 400 mg/kg for lead is from the Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities, USEPA, July 14, 1994.
[5] Rationale Codes

Selection Reason:	Above Screening Levels (ASL)
	Detection Limit Above Screening Level (DLASL), not quantitatively evaluated
Deletion Reason:	No Toxicity Information (NTX)
	Essential Nutrient (NUT)
	Below Screening Level (BSL)
	Detection Limit Below Screening Level (DLBSL)
	Below Background Level (BBK)

Generated by:M. White/ATL
Checked by: T.Carleton/DAY

ARAR/TBC - Applicable or relevant and appropriate requirement/to be considered
J - Estimated value
N/A - Not applicable/not available
ND - Not detected
NL - Noncarcinogenic lead residential soil RSL not adjusted by dividing by 10.
NJ = The analysis indicates the presence of an analyte that has been tentatively identified and the associated numerical value represents its approximate concentration.
C - Carcinogenic
N - Noncarcinogenic
C* - N screening level < 100x C screening level, therefore N screening value used as screening level
C** - N screening level < 10x C screening level, therefore N screening value/10 used as screening level
N - Noncarcinogenic
S - Concentration exceeds Csat, used Csat as screening value
C_{sat} - The contaminant concentration in soil at which the absorptive limits of the soil particles, the solubility limits of the soil pore water, and saturation of soil pore air have been reached
Csoil - Federal Remediation Branch Target Screening Values, calculated source concentration for soil which is protective of groundwater, January 2010
COPC - Chemical of potential concern
mg/kg - milligram per kilogram

TABLE G 2.6

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Air

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier		Maximum [1] Concentration Qualifier		Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening Toxicity Value [4]		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection [5]
Emissions from Soil*	71-55-6	1,1,1-Trichloroethane	ND		ND		µg/m^3		0/16	N/A - N/A	1.7E-01	N/A	5.2E+02	N	N/A	N/A	NO	DLBSL
	79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		µg/m^3		0/17	N/A - N/A	1.8E-02	N/A	4.2E-02	C	N/A	N/A	NO	DLBSL
	76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	ND		ND		µg/m^3		0/16	N/A - N/A	2.2E-01	N/A	3.1E+03	N	N/A	N/A	NO	DLBSL
	79-00-5	1,1,2-Trichloroethane	ND		ND		µg/m^3		0/17	N/A - N/A	3.9E-02	N/A	2.1E-02	c**	N/A	N/A	YES	DLASL
	75-34-3	1,1-Dichloroethane	ND		ND		µg/m^3		0/16	N/A - N/A	1.3E-01	N/A	1.5E+00	C	N/A	N/A	NO	DLBSL
	75-35-4	1,1-Dichloroethene	ND		ND		µg/m^3		0/16	N/A - N/A	2.4E-01	N/A	2.1E+01	N	N/A	N/A	NO	DLBSL
	120-82-1	1,2,4-Trichlorobenzene	3.0E-05	J	3.0E-05	J	µg/m^3	MR02-IR69-SS06-10A	1/17	N/A - N/A	3.0E-05	N/A	2.1E-01	N	N/A	N/A	NO	BSL
	96-12-8	1,2-Dibromo-3-chloropropane	ND		ND		µg/m^3		0/17	N/A - N/A	8.7E-03	N/A	1.6E-04	C	N/A	N/A	YES	DLASL
	106-93-4	1,2-Dibromoethane	ND		ND		µg/m^3		0/17	N/A - N/A	3.2E-02	N/A	4.1E-03	C	N/A	N/A	YES	DLASL
	95-50-1	1,2-Dichlorobenzene	ND		ND		µg/m^3		0/17	N/A - N/A	2.4E-02	N/A	2.1E+01	N	N/A	N/A	NO	DLBSL
	107-06-2	1,2-Dichloroethane	ND		ND		µg/m^3		0/16	N/A - N/A	6.1E-02	N/A	9.4E-02	C*	N/A	N/A	NO	DLBSL
	78-87-5	1,2-Dichloropropane	ND		ND		µg/m^3		0/16	N/A - N/A	7.9E-02	N/A	2.4E-01	C*	N/A	N/A	NO	DLBSL
	541-73-1	1,3-Dichlorobenzene	ND		ND		µg/m^3		0/17	N/A - N/A	2.7E-02	N/A	2.2E-01	C	N/A	N/A	NO	DLBSL
	106-46-7	1,4-Dichlorobenzene	ND		ND		µg/m^3		0/17	N/A - N/A	2.7E-02	N/A	2.2E-01	C	N/A	N/A	NO	DLBSL
	78-93-3	2-Butanone	1.7E-03	J	7.3E-03	J	µg/m^3	IR69-SS04-10A	3/16	N/A - N/A	7.3E-03	N/A	5.2E+02	N	N/A	N/A	NO	BSL
	591-78-6	2-Hexanone	ND		ND		µg/m^3		0/17	N/A - N/A	5.2E-02	N/A	3.1E+00	N	N/A	N/A	NO	DLBSL
	108-10-1	4-Methyl-2-pentanone	ND		ND		µg/m^3		0/17	N/A - N/A	6.6E-02	N/A	3.1E+02	N	N/A	N/A	NO	DLBSL
	67-64-1	Acetone	2.5E-03	J	5.1E-02		µg/m^3	IR69-SS05-10A	12/17	N/A - N/A	5.1E-02	N/A	3.2E+03	N	N/A	N/A	NO	BSL
	71-43-2	Benzene	ND		ND		µg/m^3		0/16	N/A - N/A	8.0E-02	N/A	3.1E-01	C	N/A	N/A	NO	DLBSL
	75-27-4	Bromodichloromethane	ND		ND		µg/m^3		0/16	N/A - N/A	7.0E-02	N/A	6.6E-02	C	N/A	N/A	YES	DLASL
	75-25-2	Bromoform	ND		ND		µg/m^3		0/17	N/A - N/A	2.0E-02	N/A	2.2E+00	C	N/A	N/A	NO	DLBSL
	74-83-9	Bromomethane	ND		ND		µg/m^3		0/16	N/A - N/A	2.0E-01	N/A	5.2E-01	N	N/A	N/A	NO	DLBSL
	75-15-0	Carbon disulfide	3.8E-04	J	3.8E-04	J	µg/m^3	IR69-SB03-04-05-10A	1/16	N/A - N/A	3.8E-04	N/A	7.3E+01	N	N/A	N/A	NO	BSL
	56-23-5	Carbon tetrachloride	ND		ND		µg/m^3		0/16	N/A - N/A	1.8E-01	N/A	4.1E-01	C	N/A	N/A	NO	DLBSL
	108-90-7	Chlorobenzene	ND		ND		µg/m^3		0/17	N/A - N/A	4.4E-02	N/A	5.2E+00	N	N/A	N/A	NO	DLBSL
	75-00-3	Chloroethane	ND		ND		µg/m^3		0/16	N/A - N/A	2.1E-01	N/A	1.0E+03	N	N/A	N/A	NO	DLBSL
	67-66-3	Chloroform	ND		ND		µg/m^3		0/16	N/A - N/A	1.1E-01	N/A	1.1E-01	C	N/A	N/A	NO	DLBSL
	74-87-3	Chloromethane	ND		ND		µg/m^3		0/16	N/A - N/A	2.3E-01	N/A	9.4E+00	N	N/A	N/A	NO	DLBSL
	156-59-2	cis-1,2-Dichloroethene	ND		ND		µg/m^3		0/16	N/A - N/A	1.1E-01	N/A	6.3E+00	N	N/A	N/A	NO	DLBSL
	10061-01-5	cis-1,3-Dichloropropene	ND		ND		µg/m^3		0/16	N/A - N/A	8.3E-02	N/A	6.1E-01	C*	N/A	N/A	NO	DLBSL
	110-82-7	Cyclohexane	3.5E-04	J	3.5E-04	J	µg/m^3	MR02-IR69-SS04-10A : MR02-IR69-SS05-10A	2/17	N/A - N/A	3.5E-04	N/A	6.3E+02	N	N/A	N/A	NO	BSL
	124-48-1	Dibromochloromethane	ND		ND		µg/m^3		0/17	N/A - N/A	3.5E-02	N/A	9.0E-02	C	N/A	N/A	NO	DLBSL
	75-71-8	Dichlorodifluoromethane (Freon-12)	ND		ND		µg/m^3		0/16	N/A - N/A	3.4E-01	N/A	1.0E+01	N	N/A	N/A	NO	DLBSL
	100-41-4	Ethylbenzene	4.7E-04	J	4.7E-04	J	µg/m^3	IR69-SS04-10A	1/17	N/A - N/A	4.7E-04	N/A	9.7E-01	C	N/A	N/A	NO	BSL
	98-82-8	Isopropylbenzene	ND		ND		µg/m^3		0/17	N/A - N/A	4.5E-02	N/A	4.2E+01	N	N/A	N/A	NO	DLBSL
	1330-20-7	m- and p-Xylene	1.5E-03	J	1.5E-03	J	µg/m^3	IR69-SS04-10A	1/17	N/A - N/A	1.5E-03	N/A	1.0E+01	N	N/A	N/A	NO	BSL
	79-20-9	Methyl acetate	2.5E-04	J	7.2E-02		µg/m^3	MR02-IR69-SS02-10A	14/17	N/A - N/A	7.2E-02	N/A	N/A		N/A	N/A	NO	NTX
	108-87-2	Methylcyclohexane	ND		ND		µg/m^3		0/17	N/A - N/A	1.5E-01	N/A	7.3E+01	N	N/A	N/A	NO	DLBSL
	75-09-2	Methylene chloride	ND		ND		µg/m^3		0/16	N/A - N/A	1.3E-01	N/A	5.2E+00	C	N/A	N/A	NO	DLBSL
	1634-04-4	Methyl-tert-butyl ether (MTBE)	ND		ND		µg/m^3		0/16	N/A - N/A	5.7E-02	N/A	9.4E+00	C	N/A	N/A	NO	DLBSL
	95-47-6	o-Xylene	ND		ND		µg/m^3		0/17	N/A - N/A	4.3E-02	N/A	1.0E+01	N	N/A	N/A	NO	DLBSL
	100-42-5	Styrene	ND		ND		µg/m^3		0/17	N/A - N/A	2.9E-02	N/A	1.0E+02	N	N/A	N/A	NO	DLBSL
	127-18-4	Tetrachloroethene	ND		ND		µg/m^3		0/17	N/A - N/A	1.2E-01	N/A	4.1E-01	C	N/A	N/A	NO	DLBSL
	108-88-3	Toluene	1.1E-02		1.1E-02		µg/m^3	IR69-SS04-10A	1/17	N/A - N/A	1.1E-02	N/A	5.2E+02	N	N/A	N/A	NO	BSL
	156-60-5	trans-1,2-Dichloroethene	ND		ND		µg/m^3		0/16	N/A - N/A	1.1E-01	N/A	6.3E+00	N	N/A	N/A	NO	DLBSL
	10061-02-6	trans-1,3-Dichloropropene	ND		ND		µg/m^3		0/17	N/A - N/A	8.3E-02	N/A	6.1E-01	C*	N/A	N/A	NO	DLBSL
	79-01-6	Trichloroethene	ND		ND		µg/m^3		0/16	N/A - N/A	1.3E-01	N/A	1.0E+00	C**	N/A	N/A	NO	DLBSL

TABLE G 2.6

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Air

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier		Maximum [1] Concentration Qualifier		Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	75-69-4	Trichlorofluoromethane(Freon-11)	ND		ND		µg/m^3		0/16	N/A - N/A	2.7E-01	N/A	7.3E+01	N	N/A	N/A	NO	DLBSL
	75-01-4	Vinyl chloride	ND		ND		µg/m^3		0/16	N/A - N/A	2.9E-01	N/A	1.6E-01	C	N/A	N/A	YES	DLASL
	1330-20-7	Xylene, total	2.0E-03	J	2.0E-03	J	µg/m^3	IR69-SS04-10A	1/17	N/A - N/A	2.0E-03	N/A	1.0E+01	N	N/A	N/A	NO	BSL
	92-52-4	1,1-Biphenyl	ND		ND		µg/m^3		0/17	N/A - N/A	2.4E-03	N/A	4.2E-02	N	N/A	N/A	NO	DLBSL
	108-60-1	2,2'-Oxybis(1-chloropropane)	ND		ND		µg/m^3		0/17	N/A - N/A	7.7E-03	N/A	2.4E-01	C	N/A	N/A	NO	DLBSL
	95-95-4	2,4,5-Trichlorophenol	ND		ND		µg/m^3		0/17	N/A - N/A	4.6E-07	N/A	N/A		N/A	N/A	NO	NTX
	88-06-2	2,4,6-Trichlorophenol	ND		ND		µg/m^3		0/17	N/A - N/A	4.6E-07	N/A	7.8E-01	C	N/A	N/A	NO	DLBSL
	120-83-2	2,4-Dichlorophenol	ND		ND		µg/m^3		0/17	N/A - N/A	4.6E-07	N/A	N/A		N/A	N/A	NO	NTX
	105-67-9	2,4-Dimethylphenol	ND		ND		µg/m^3		0/17	N/A - N/A	4.6E-07	N/A	N/A		N/A	N/A	NO	NTX
	51-28-5	2,4-Dinitrophenol	ND		ND		µg/m^3		0/17	N/A - N/A	4.6E-07	N/A	N/A		N/A	N/A	NO	NTX
	121-14-2	2,4-Dinitrotoluene	ND		ND		µg/m^3		0/18	N/A - N/A	4.3E-07	N/A	2.7E-02	C	N/A	N/A	NO	DLBSL
	606-20-2	2,6-Dinitrotoluene	ND		ND		µg/m^3		0/18	N/A - N/A	4.3E-07	N/A	N/A		N/A	N/A	NO	NTX
	91-58-7	2-Chloronaphthalene	ND		ND		µg/m^3		0/17	N/A - N/A	3.4E-03	N/A	N/A		N/A	N/A	NO	NTX
	95-57-8	2-Chlorophenol	ND		ND		µg/m^3		0/17	N/A - N/A	4.2E-03	N/A	N/A		N/A	N/A	NO	NTX
	91-57-6	2-Methylnaphthalene	1.7E-05	J	5.0E-05	J	µg/m^3	MR02-IR69-SS06-10A	9/17	N/A - N/A	5.0E-05	N/A	N/A		N/A	N/A	NO	NTX
	95-48-7	2-Methylphenol	ND		ND		µg/m^3		0/17	N/A - N/A	4.6E-07	N/A	6.3E+01	N	N/A	N/A	NO	DLBSL
	88-74-4	2-Nitroaniline	ND		ND		µg/m^3		0/17	N/A - N/A	4.6E-07	N/A	5.2E-03	N	N/A	N/A	NO	DLBSL
	88-75-5	2-Nitrophenol	ND		ND		µg/m^3		0/17	N/A - N/A	4.2E-03	N/A	N/A		N/A	N/A	NO	NTX
	91-94-1	3,3'-Dichlorobenzidine	ND		ND		µg/m^3		0/16	N/A - N/A	2.4E-07	N/A	7.2E-03	C	N/A	N/A	NO	DLBSL
	99-09-2	3-Nitroaniline	ND		ND		µg/m^3		0/17	N/A - N/A	4.6E-07	N/A	5.2E-03	N	N/A	N/A	NO	DLBSL
	534-52-1	4,6-Dinitro-2-methylphenol	ND		ND		µg/m^3		0/17	N/A - N/A	4.6E-07	N/A	N/A		N/A	N/A	NO	NTX
	101-55-3	4-Bromophenyl-phenylether	ND		ND		µg/m^3		0/17	N/A - N/A	2.4E-07	N/A	N/A		N/A	N/A	NO	NTX
	59-50-7	4-Chloro-3-methylphenol	ND		ND		µg/m^3		0/17	N/A - N/A	1.7E-03	N/A	N/A		N/A	N/A	NO	NTX
	106-47-8	4-Chloroaniline	ND		ND		µg/m^3		0/17	N/A - N/A	4.6E-07	N/A	N/A		N/A	N/A	NO	NTX
	7005-72-3	4-Chlorophenyl-phenylether	ND		ND		µg/m^3		0/17	N/A - N/A	2.4E-07	N/A	N/A		N/A	N/A	NO	NTX
	106-44-5	4-Methylphenol	ND		ND		µg/m^3		0/17	N/A - N/A	4.6E-07	N/A	6.3E+01	N	N/A	N/A	NO	DLBSL
	100-01-6	4-Nitroaniline	ND		ND		µg/m^3		0/17	N/A - N/A	4.6E-07	N/A	6.3E-01	N	N/A	N/A	NO	DLBSL
	100-02-7	4-Nitrophenol	ND		ND		µg/m^3		0/17	N/A - N/A	7.0E-03	N/A	6.1E-02	C	N/A	N/A	NO	DLBSL
	83-32-9	Acenaphthene	4.7E-06	J	2.7E-05	J	µg/m^3	IR69-SS06-10A	9/17	N/A - N/A	2.7E-05	N/A	N/A		N/A	N/A	NO	NTX
	208-96-8	Acenaphthylene	5.4E-06	J	6.4E-06	J	µg/m^3	MR02-IR69-SS04-10A : MR02-IR69-SS06-10A	3/17	N/A - N/A	6.4E-06	N/A	N/A		N/A	N/A	NO	NTX
	98-86-2	Acetophenone	ND		ND		µg/m^3		0/17	N/A - N/A	4.5E-03	N/A	N/A		N/A	N/A	NO	NTX
	120-12-7	Anthracene	1.1E-06	J	2.7E-06	J	µg/m^3	MR02-IR69-SS06-10A	8/17	N/A - N/A	2.7E-06	N/A	N/A		N/A	N/A	NO	NTX
	1912-24-9	Atrazine	ND		ND		µg/m^3		0/17	N/A - N/A	2.4E-07	N/A	N/A		N/A	N/A	NO	NTX
	100-52-7	Benzaldehyde	1.3E-03	J	6.2E-03	J	µg/m^3	MR02-IR69-SS06-10A	11/17	N/A - N/A	6.2E-03	N/A	N/A		N/A	N/A	NO	NTX
	56-55-3	Benzo(a)anthracene	6.0E-10	J	2.4E-09	J	µg/m^3	MR02-IR69-SS01D-10A	9/17	N/A - N/A	2.4E-09	N/A	8.7E-03	C	N/A	N/A	NO	BSL
	50-32-8	Benzo(a)pyrene	1.0E-09	J	5.4E-09	J	µg/m^3	MR02-IR69-SS04-10A	11/17	N/A - N/A	5.4E-09	N/A	8.7E-04	C	N/A	N/A	NO	BSL
	205-99-2	Benzo(b)fluoranthene	5.8E-10	J	4.6E-09	J	µg/m^3	MR02-IR69-SS06-10A	12/17	N/A - N/A	4.6E-09	N/A	8.7E-03	C	N/A	N/A	NO	BSL
	191-24-2	Benzo(g,h,i)perylene	2.2E-07	J	6.3E-07	J	µg/m^3	IR69-SS02-10A	5/17	N/A - N/A	6.3E-07	N/A	N/A		N/A	N/A	NO	NTX
	207-08-9	Benzo(k)fluoranthene	3.8E-10	J	2.9E-09	J	µg/m^3	MR02-IR69-SS04-10A	12/17	N/A - N/A	2.9E-09	N/A	8.7E-03	C	N/A	N/A	NO	BSL
	111-91-1	bis(2-Chloroethoxy)methane	ND		ND		µg/m^3		0/17	N/A - N/A	2.4E-07	N/A	N/A		N/A	N/A	NO	NTX
	111-44-4	bis(2-Chloroethyl)ether	ND		ND		µg/m^3		0/17	N/A - N/A	6.4E-03	N/A	7.4E-03	C	N/A	N/A	NO	DLBSL
	117-81-7	bis(2-Ethylhexyl)phthalate	1.5E-07	J	4.0E-07		µg/m^3	IR69-SB05-06-07-10A	3/17	N/A - N/A	4.0E-07	N/A	1.0E+00	C	N/A	N/A	NO	BSL
	85-68-7	Butylbenzylphthalate	ND		ND		µg/m^3		0/17	N/A - N/A	2.4E-07	N/A	N/A		N/A	N/A	NO	NTX
	105-60-2	Caprolactam	4.5E-08	J	1.1E-07	J	µg/m^3	IR69-SB05-06-07-10A	3/17	N/A - N/A	1.1E-07	N/A	N/A		N/A	N/A	NO	NTX
	86-74-8	Carbazole	ND		ND		µg/m^3		0/17	N/A - N/A	1.6E-03	N/A	N/A		N/A	N/A	NO	NTX
	218-01-9	Chrysene	9.6E-10	J	3.1E-09	J	µg/m^3	MR02-IR69-SS04-10A	10/17	N/A - N/A	3.1E-09	N/A	8.7E-02	C	N/A	N/A	NO	BSL
	53-70-3	Dibenz(a,h)anthracene	ND		ND		µg/m^3		0/17	N/A - N/A	1.2E-08	N/A	8.0E-04	C	N/A	N/A	NO	DLBSL
	132-64-9	Dibenzofuran	ND		ND		µg/m^3		0/17	N/A - N/A	1.4E-03	N/A	N/A		N/A	N/A	NO	NTX

TABLE G 2.6

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Air

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier		Maximum [1] Concentration Qualifier		Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	84-66-2	Diethylphthalate	ND		ND		µg/m^3		0/17	N/A - N/A	2.4E-07	N/A	N/A		N/A	N/A	NO	NTX
	60-51-5	Dimethoate	ND		ND		µg/m^3		0/16	N/A - N/A	1.0E-07	N/A	N/A		N/A	N/A	NO	NTX
	131-11-3	Dimethyl phthalate	ND		ND		µg/m^3		0/17	N/A - N/A	1.5E-03	N/A	N/A		N/A	N/A	NO	NTX
	84-74-2	Di-n-butylphthalate	ND		ND		µg/m^3		0/17	N/A - N/A	2.4E-07	N/A	N/A		N/A	N/A	NO	NTX
	117-84-0	Di-n-octylphthalate	ND		ND		µg/m^3		0/17	N/A - N/A	2.4E-07	N/A	N/A		N/A	N/A	NO	NTX
	52-85-7	Famphur	ND		ND		µg/m^3		0/17	N/A - N/A	1.0E-07	N/A	N/A		N/A	N/A	NO	NTX
	206-44-0	Fluoranthene	1.9E-09	J	4.3E-09	J	µg/m^3	IR69-SS01D-10A	9/17	N/A - N/A	4.3E-09	N/A	N/A		N/A	N/A	NO	NTX
	86-73-7	Fluorene	1.6E-06	J	3.5E-06	J	µg/m^3	MR02-IR69-SS01-10A	6/17	N/A - N/A	3.5E-06	N/A	N/A		N/A	N/A	NO	NTX
	118-74-1	Hexachlorobenzene	ND		ND		µg/m^3		0/17	N/A - N/A	2.4E-07	N/A	5.3E-03	C	N/A	N/A	NO	DLBSL
	87-68-3	Hexachlorobutadiene	ND		ND		µg/m^3		0/17	N/A - N/A	2.4E-07	N/A	1.1E-01	C	N/A	N/A	NO	DLBSL
	77-47-4	Hexachlorocyclopentadiene	ND		ND		µg/m^3		0/17	N/A - N/A	2.4E-07	N/A	2.1E-02	N	N/A	N/A	NO	DLBSL
	67-72-1	Hexachloroethane	ND		ND		µg/m^3		0/17	N/A - N/A	2.4E-07	N/A	6.1E-01	C	N/A	N/A	NO	DLBSL
	193-39-5	Indeno(1,2,3-cd)pyrene	5.5E-10	J	1.5E-09	J	µg/m^3	IR69-SS02-10A : MR02-IR69-SS06-10A	8/17	N/A - N/A	1.5E-09	N/A	8.7E-03	C	N/A	N/A	NO	BSL
	78-59-1	Isophorone	ND		ND		µg/m^3		0/17	N/A - N/A	2.4E-07	N/A	2.1E+02	N	N/A	N/A	NO	DLBSL
	91-20-3	Naphthalene	3.0E-05	J	5.6E-05	J	µg/m^3	IR69-SS03-10A	6/17	N/A - N/A	5.6E-05	N/A	7.2E-02	C*	N/A	N/A	NO	BSL
	621-64-7	n-Nitroso-di-n-propylamine	ND		ND		µg/m^3		0/17	N/A - N/A	2.4E-07	N/A	1.2E-03	C	N/A	N/A	NO	DLBSL
	86-30-6	n-Nitrosodiphenylamine	ND		ND		µg/m^3		0/17	N/A - N/A	2.4E-07	N/A	9.4E-01	C	N/A	N/A	NO	DLBSL
	98-95-3	Nitrobenzene	ND		ND		µg/m^3		0/18	N/A - N/A	6.5E-03	N/A	6.1E-02	C	N/A	N/A	NO	DLBSL
	87-86-5	Pentachlorophenol	ND		ND		µg/m^3		0/17	N/A - N/A	4.6E-07	N/A	4.8E-01	C	N/A	N/A	NO	DLBSL
	85-01-8	Phenanthrene	2.7E-06	J	9.5E-06	J	µg/m^3	MR02-IR69-SS06-10A	12/17	N/A - N/A	9.5E-06	N/A	N/A		N/A	N/A	NO	NTX
	108-95-2	Phenol	ND		ND		µg/m^3		0/17	N/A - N/A	4.6E-07	N/A	2.1E+01	N	N/A	N/A	NO	DLBSL
	298-02-2	Phorate	ND		ND		µg/m^3		0/17	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	129-00-0	Pyrene	4.2E-07	J	1.5E-06	J	µg/m^3	IR69-SS01D-10A : MR02-IR69-SS04-10A	10/17	N/A - N/A	1.5E-06	N/A	N/A		N/A	N/A	NO	NTX
	72-54-8	4,4'-DDD	3.2E-10	J	2.6E-09	NJ	µg/m^3	IR69-SS01D-10A	10/17	N/A - N/A	2.6E-09	N/A	3.5E-02	C	N/A	N/A	NO	BSL
	72-55-9	4,4'-DDE	9.6E-10	NJ	8.1E-08	NJ	µg/m^3	IR69-SS01D-10A	12/17	N/A - N/A	8.1E-08	N/A	2.5E-02	C	N/A	N/A	NO	BSL
	50-29-3	4,4'-DDT	1.2E-09	J	4.1E-08	J	µg/m^3	IR69-SS01D-10A	11/12	N/A - N/A	4.1E-08	N/A	2.5E-02	C	N/A	N/A	NO	BSL
	309-00-2	Aldrin	1.6E-10	J	1.5E-09	J	µg/m^3	IR69-SS02-10A : IR69-SS06-10A	7/17	N/A - N/A	1.5E-09	N/A	5.0E-04	C	N/A	N/A	NO	BSL
	319-84-6	alpha-BHC	4.3E-10	J	2.4E-09	J	µg/m^3	MR02-IR69-SS01D-10A	5/17	N/A - N/A	2.4E-09	N/A	1.4E-03	C	N/A	N/A	NO	BSL
	5103-71-9	alpha-Chlordane	2.4E-10	J	7.4E-09	J	µg/m^3	MR02-IR69-SS02-10A	12/17	N/A - N/A	7.4E-09	N/A	2.4E-02	C*	N/A	N/A	NO	BSL
	12674-11-2	Aroclor-1016	ND		ND		µg/m^3		0/17	N/A - N/A	1.3E-07	N/A	1.2E-01	C	N/A	N/A	NO	DLBSL
	11104-28-2	Aroclor-1221	ND		ND		µg/m^3		0/17	N/A - N/A	2.5E-03	N/A	4.3E-03	C	N/A	N/A	NO	DLBSL
	11141-16-5	Aroclor-1232	ND		ND		µg/m^3		0/17	N/A - N/A	1.3E-03	N/A	4.3E-03	C	N/A	N/A	NO	DLBSL
	53469-21-9	Aroclor-1242	ND		ND		µg/m^3		0/17	N/A - N/A	9.6E-08	N/A	4.3E-03	C	N/A	N/A	NO	DLBSL
	12672-29-6	Aroclor-1248	ND		ND		µg/m^3		0/17	N/A - N/A	9.6E-08	N/A	4.3E-03	C	N/A	N/A	NO	DLBSL
	11097-69-1	Aroclor-1254	ND		ND		µg/m^3		0/17	N/A - N/A	9.6E-08	N/A	4.3E-03	C	N/A	N/A	NO	DLBSL
	11096-82-5	Aroclor-1260	ND		ND		µg/m^3		0/17	N/A - N/A	9.6E-08	N/A	4.3E-03	C	N/A	N/A	NO	DLBSL
	86-50-0	Azinphos methyl	ND		ND		µg/m^3		0/17	N/A - N/A	5.0E-08	N/A	1.0E+00	N	N/A	N/A	NO	DLBSL
	319-85-7	beta-BHC	3.3E-10	J	1.5E-09	J	µg/m^3	MR02-IR69-SS02-10A	3/17	N/A - N/A	1.5E-09	N/A	4.6E-03	C	N/A	N/A	NO	BSL
	35400-43-2	Bolstar	ND		ND		µg/m^3		0/17	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	2921-88-2	Chlorpyrifos	ND		ND		µg/m^3		0/17	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	56-72-4	Coumaphos	ND		ND		µg/m^3		0/17	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	319-86-8	delta-BHC	4.0E-10	J	1.5E-09	J	µg/m^3	MR02-IR69-SS02-10A	4/17	N/A - N/A	1.5E-09	N/A	4.8E-03	C	N/A	N/A	NO	BSL
	8065-48-3	Demeton-O	ND		ND		µg/m^3		0/17	N/A - N/A	1.3E-07	N/A	N/A		N/A	N/A	NO	NTX
	8065-48-3	Demeton-S	ND		ND		µg/m^3		0/14	N/A - N/A	1.3E-07	N/A	N/A		N/A	N/A	NO	NTX
	333-41-5	Diazinon	ND		ND		µg/m^3		0/17	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	62-73-7	Dichlorvos	ND		ND		µg/m^3		0/17	N/A - N/A	1.0E-07	N/A	2.9E-02	C*	N/A	N/A	NO	DLBSL

TABLE G 2.6

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Air

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier		Maximum [1] Concentration Qualifier		Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	60-57-1	Dieldrin	ND		ND		µg/m^3		0/17	N/A - N/A	1.8E-08	N/A	5.3E-04	C	N/A	N/A	NO	DLBSL
	298-04-4	Disulfoton	ND		ND		µg/m^3		0/17	N/A - N/A	1.0E-07	N/A	N/A		N/A	N/A	NO	NTX
	959-98-8	Endosulfan I	1.6E-10	J	1.7E-09	J	µg/m^3	IR69-SS03-10A	6/17	N/A - N/A	1.7E-09	N/A	N/A		N/A	N/A	NO	NTX
	33213-65-9	Endosulfan II	8.8E-10	J	1.4E-09	J	µg/m^3	IR69-SS06-10A	2/17	N/A - N/A	1.4E-09	N/A	N/A		N/A	N/A	NO	NTX
	1031-07-8	Endosulfan sulfate	6.0E-10	J	3.2E-08	J	µg/m^3	MR02-IR69-SS04-10A	13/17	N/A - N/A	3.2E-08	N/A	N/A		N/A	N/A	NO	NTX
	72-20-8	Endrin	6.4E-10	J	2.9E-09	J	µg/m^3	IR69-SS05-10A	5/17	N/A - N/A	2.9E-09	N/A	N/A		N/A	N/A	NO	NTX
	7421-93-4	Endrin aldehyde	1.6E-09	J	1.8E-08		µg/m^3	IR69-SS04-10A	4/17	N/A - N/A	1.8E-08	N/A	N/A		N/A	N/A	NO	NTX
	53494-70-5	Endrin ketone	1.8E-09	J	1.5E-08	J	µg/m^3	MR02-IR69-SS01D-10A	10/17	N/A - N/A	1.5E-08	N/A	N/A		N/A	N/A	NO	NTX
	13194-48-4	Ethoprop	ND		ND		µg/m^3		0/17	N/A - N/A	2.6E-08	N/A	N/A		N/A	N/A	NO	NTX
	115-90-2	Fensulfothion	ND		ND		µg/m^3		0/17	N/A - N/A	2.6E-07	N/A	N/A		N/A	N/A	NO	NTX
	2104-64-5	Ethyl p-nitrophenyl phenylphosphorothioate	ND		ND		µg/m^3		0/17	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	55-38-9	Fenthion	ND		ND		µg/m^3		0/17	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	58-89-9	gamma-BHC (Lindane)	1.0E-09	J	6.2E-09		µg/m^3	IR69-SS04-10A	4/17	N/A - N/A	6.2E-09	N/A	7.8E-03	C	N/A	N/A	NO	BSL
	5103-74-2	gamma-Chlordane	3.6E-10	J	2.9E-09	J	µg/m^3	MR02-IR69-SS04-10A	8/17	N/A - N/A	2.9E-09	N/A	2.4E-02	C*	N/A	N/A	NO	BSL
	76-44-8	Heptachlor	2.4E-10	J	1.1E-09	J	µg/m^3	MR02-IR69-SS02-10A	10/17	N/A - N/A	1.1E-09	N/A	1.9E-03	C	N/A	N/A	NO	BSL
	1024-57-3	Heptachlor epoxide	1.2E-09	J	1.2E-09	J	µg/m^3	MR02-IR69-SS06-10A	1/17	N/A - N/A	1.2E-09	N/A	9.4E-04	C	N/A	N/A	NO	BSL
	121-75-5	Malathion	ND		ND		µg/m^3		0/17	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	150-50-5	Merphos	ND		ND		µg/m^3		0/17	N/A - N/A	7.4E-08	N/A	N/A		N/A	N/A	NO	NTX
	72-43-5	Methoxychlor	3.6E-09	J	8.1E-09	J	µg/m^3	IR69-SS04-10A	2/14	N/A - N/A	8.1E-09	N/A	N/A		N/A	N/A	NO	NTX
	298-00-0	Methyl parathion	ND		ND		µg/m^3		0/17	N/A - N/A	2.6E-08	N/A	N/A		N/A	N/A	NO	NTX
	7786-34-7	Mevinphos	ND		ND		µg/m^3		0/17	N/A - N/A	1.0E-07	N/A	N/A		N/A	N/A	NO	NTX
	6923-22-4	Monocrotophos	ND		ND		µg/m^3		0/15	N/A - N/A	5.0E-07	N/A	N/A		N/A	N/A	NO	NTX
	300-76-5	Naled	ND		ND		µg/m^3		0/15	N/A - N/A	2.6E-07	N/A	N/A		N/A	N/A	NO	NTX
	56-38-2	Parathion	ND		ND		µg/m^3		0/17	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	299-84-3	Ronnel	ND		ND		µg/m^3		0/17	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	3689-24-5	Sulfotepp	ND		ND		µg/m^3		0/17	N/A - N/A	2.6E-08	N/A	N/A		N/A	N/A	NO	NTX
	22248-79-9	Tetrachlorvinphos	ND		ND		µg/m^3		0/17	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	297-97-2	Thionazin	ND		ND		µg/m^3		0/17	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	34643-46-4	Tokuthion (Prothiophos)	ND		ND		µg/m^3		0/17	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	8001-35-2	Toxaphene	ND		ND		µg/m^3		0/17	N/A - N/A	4.6E-07	N/A	7.6E-03	C	N/A	N/A	NO	DLBSL
	327-98-0	Trichloronate	ND		ND		µg/m^3		0/17	N/A - N/A	5.0E-08	N/A	N/A		N/A	N/A	NO	NTX
	7429-90-5	Aluminum	1.7E-04		1.5E-02		µg/m^3	IR69-SB05-06-07-10A	18/18	N/A - N/A	1.5E-02	N/A	5.2E-01	N	N/A	N/A	NO	BSL
	7440-36-0	Antimony	8.8E-08	J	1.0E-06	J	µg/m^3	IR69-SB03-04-05-10A	9/18	N/A - N/A	1.0E-06	N/A	N/A		N/A	N/A	NO	NTX
	7440-38-2	Arsenic	1.8E-07	J	3.5E-06		µg/m^3	IR69-SB04-06-07-10A	12/18	N/A - N/A	3.5E-06	N/A	5.7E-04	C*	N/A	N/A	NO	BSL
	7440-39-3	Barium	1.2E-06	J	4.7E-05		µg/m^3	IR69-SS05-10A	17/18	N/A - N/A	4.7E-05	N/A	5.2E-02	N	N/A	N/A	NO	BSL
	7440-41-7	Beryllium	5.9E-08	J	2.1E-07	J	µg/m^3	IR69-SB05-06-07-10A	8/18	N/A - N/A	2.1E-07	N/A	1.0E-03	C*	N/A	N/A	NO	BSL
	7440-43-9	Cadmium	5.1E-08	J	2.6E-07	J	µg/m^3	IR69-SB05-06-07-10A	5/18	N/A - N/A	2.6E-07	N/A	1.4E-03	C*	N/A	N/A	NO	BSL
	7440-70-2	Calcium	2.9E-05	J	2.8E-03		µg/m^3	IR69-SS05-10A	9/18	N/A - N/A	2.8E-03	N/A	N/A		N/A	N/A	NO	NUT
	7440-47-3	**Chromium**	**4.0E-07**	**J**	**2.2E-05**		**µg/m^3**	**IR69-SB05-06-07-10A**	**14/18**	**N/A - N/A**	**2.2E-05**	**N/A**	**1.1E-05**	**C**	**N/A**	**N/A**	**YES**	**ASL**
	7440-48-4	Cobalt	8.8E-08	J	9.6E-07		µg/m^3	IR69-SB01-01-02-10A	7/18	N/A - N/A	9.6E-07	N/A	2.7E-04	C*	N/A	N/A	NO	BSL
	7440-50-8	Copper	2.3E-07	J	3.9E-06		µg/m^3	IR69-SB05-06-07-10A	12/18	N/A - N/A	3.9E-06	N/A	N/A		N/A	N/A	NO	NTX
	7439-89-6	Iron	1.3E-04		1.0E-02		µg/m^3	IR69-SB05-06-07-10A	18/18	N/A - N/A	1.0E-02	N/A	N/A		N/A	N/A	NO	NTX
	7439-92-1	Lead	1.7E-06		1.2E-05		µg/m^3	IR69-SS05-10A	18/18	N/A - N/A	1.2E-05	N/A	N/A		N/A	N/A	NO	NTX
	7439-95-4	Magnesium	2.4E-05	J	7.9E-04		µg/m^3	IR69-SB01-01-02-10A	8/18	N/A - N/A	7.9E-04	N/A	N/A		N/A	N/A	NO	NUT
	7439-96-5	Manganese	7.2E-07	J	2.6E-04		µg/m^3	IR69-SS05-10A	18/18	N/A - N/A	2.6E-04	N/A	5.2E-03	N	N/A	N/A	NO	BSL
	7439-97-6	Mercury	1.5E-08	J	2.3E-07		µg/m^3	IR69-SS05-10A	15/18	N/A - N/A	2.3E-07	N/A	3.1E-03	N	N/A	N/A	NO	BSL
	7440-02-0	Nickel	2.6E-07	J	2.5E-06		µg/m^3	IR69-SB01-01-02-10A	10/18	N/A - N/A	2.5E-06	N/A	9.4E-03	C*	N/A	N/A	NO	BSL
	7440-09-7	Potassium	3.5E-05	J	1.0E-03	J	µg/m^3	IR69-SB05-06-07-10A	18/18	N/A - N/A	1.0E-03	N/A	N/A		N/A	N/A	NO	NUT
	7782-49-2	Selenium	8.1E-08	J	6.3E-07		µg/m^3	IR69-SS01-10A	7/18	N/A - N/A	6.3E-07	N/A	2.1E+00	N	N/A	N/A	NO	BSL

TABLE G 2.6

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Air

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier		Maximum [1] Concentration Qualifier		Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	7440-22-4	Silver	ND		ND		µg/m^3		0/18	N/A - N/A	2.0E-06	N/A	N/A	N/A	N/A	NO	NTX
	7440-23-5	Sodium	3.1E-05	J	1.9E-04	J	µg/m^3	IR69-SS05-10A	7/18	N/A - N/A	1.9E-04	N/A	N/A	N/A	N/A	NO	NUT
	7440-28-0	Thallium	2.2E-08	J	3.7E-08	J	µg/m^3	MR02-IR69-SS01-10A	2/18	N/A - N/A	3.7E-08	N/A	N/A	N/A	N/A	NO	NTX
	7440-62-2	Vanadium	5.1E-07	J	2.9E-05		µg/m^3	IR69-SB05-06-07-10A	18/18	N/A - N/A	2.9E-05	N/A	N/A	N/A	N/A	NO	NTX
	7440-66-6	Zinc	1.7E-06		1.1E-05		µg/m^3	MR02-IR69-SS01-10A	13/18	N/A - N/A	1.1E-05	N/A	N/A	N/A	N/A	NO	NTX

[1] Minimum/Maximum calculated air concentrations from surface soil concentrations. Air concentrations calculated as C_{air}= C_{soil}*1000*(1/PEF + 1/VF).
PEF = 1.36E+09 m^3/kg. VF calculated for volatile constituents only, on Table 2.2A. PEF and VF from USEPA's Soil Screening Guidance. (USEPA, July 19
[2] Maximum concentration is used for screening. If ND, maximum detection limit used for screening.
[3] Background values not available.
[4] Oak Ridge National Laboratory (ORNL). June 2011. Regional Screening Levels for Chemical Contaminants at Superfund Sites. [Online].
and HQ of 0.1 for noncarcinogens). Used RSL for residential air. [Online]. Available: http://epa-prgs.ornl.gov/chemicals/index.shtml
RSL value for 1,3-Dichloropropene used as a surrogate for cis-1,3-Dichloropropene and trans-1,3-Dichloropropene.
RSL value for 2-Chlorophenol used as surrogate for 2-Nitrophenol.
RSL value for 2-Nitroaniline used as surrogate for 3-N'itroaniline.
RSL value for Acenaphthene used as surrogate for Acenaphthylene.
RSL value for Anthracene used as surrogate for Phenanthrene.
RSL value for Chlordane used as surrogate for alpha-Chlordane and gamma-Chlordane.
RSL value for Chromium(VI) used as surrogate for Chromium.
RSL value for Demeton used as surrogate for Demeton-O and Demeton-S
RSL value for Endosulfan used as surrogate for Endosulfan I, Endosulfan II, and Endosulfan sulfate.
RSL value for Endrin used as surrogate for Endrin aldehyde and Endrin ketone.
RSL value for Manganese (water) used as surrogate for Manganese.
RSL value for Mercury Chloride (and other Mercury salts) used as surrogate for Mercury.
RSL value for Methoxychlor used as surrogate for 4-Chlorophenyl-phenylether.
RSL value for n-Hexane used as surrogate for Methylcyclohexane.
RSL value for Nitrobenzene used as surrogate for 4-Nitrophenol.
RSL value for Pyrene used as surrogate for Benzo(g,h,i)perylene.
RSL value for technical-HCH used as surrogate for delta-BHC.
The soil value of 400 mg/kg for lead is from the Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities, USEPA, July 14, 1994.
[5] Rationale Codes

Selection Reason:	Above Screening Levels (ASL)
	Detection Limit Above Screening Level (DLASL), not quantitatively evaluated
Deletion Reason:	No Toxicity Information (NTX)
	Essential Nutrient (NUT)
	Below Screening Level (BSL)
	Detection Limit Below Screening Level (DLBSL)
	Below Background Level (BBK)

Generated by:M. White/ATL
Checked by: T.Carleton/DAY

ARAR/TBC - Applicable or relevant and appropriate requirement/to be considered
J - Estimated value
N/A - Not applicable/not available
ND - Not detected
C - Carcinogenic
N - Noncarcinogenic
C* - N screening level < 100x C screening level, therefore N screening value used as screening level
C** - N screening level < 10x C screening level, therefore N screening value/10 used as screening level
N - Noncarcinogenic
COPC - Chemical of potential concern
µg/m3 - microgram per meter cubed

TABLE G 2.7

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier		Maximum [1] Concentration Qualifier		Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
Groundwater at	71-55-6	1,1,1-Trichloroethane	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	9.1E+02	N	2.0E+02	MCL, N2CLGW	NO	DLBSL
Surficial Aquifer	**79-34-5**	**1,1,2,2-Tetrachloroethane**	**1.7E-01**	**J**	**9.8E+00**		**µg/L**	**IR69-GW02-10A**	**4/6**	**0.5 - 3.1**	**9.8E+00**	**N/A**	**6.7E-02**	**C**	**2.0E-01**	**NC2LGW**	**YES**	**ASL**
Tap Water and	76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	5.9E+03	N	2.0E+05	NC2LGW	NO	DLBSL
Water in	**79-00-5**	**1,1,2-Trichloroethane**	**5.0E-01**	**J**	**7.8E+00**		**µg/L**	**IR69-GW02-10A**	**3/6**	**0.5 - 3.1**	**7.8E+00**	**N/A**	**4.2E-02**	**C****	**5.0E+00**	**MCL**	**YES**	**ASL**
Excavation Pit	75-34-3	1,1-Dichloroethane	4.3E-02	J	4.3E-02	J	µg/L	IR69-GW03-10A	1/6	0.5 - 3.1	4.3E-02	N/A	2.4E+00	C	7.0E+00	MCL	NO	BSL
															6.0E+00	NC2LGW		
	75-35-4	1,1-Dichloroethene	2.1E-01	J	5.3E-01	J	µg/L	IR69-GW03D-10A	2/6	0.5 - 3.1	5.3E-01	N/A	3.4E+01	N	7.0E+00	NC2LGW	NO	BSL
	120-82-1	1,2,4-Trichlorobenzene	1.3E-01	J	1.3E-01	J	µg/L	IR69-GW15-10A	1/6	0.5 - 3.1	1.3E-01	N/A	4.1E-01	C**	7.0E+01	MCL, N2CLGW	NO	BSL
	96-12-8	1,2-Dibromo-3-chloropropane	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	3.2E-04	C	2.0E-01	MCL	YES	DLASL
															4.0E-02	NC2LGW		
	106-93-4	1,2-Dibromoethane	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	6.5E-03	C	5.0E-02	MCL	YES	DLASL
															2.0E-02	NC2LGW		
	95-50-1	1,2-Dichlorobenzene	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	3.7E+01	N	6.0E+02	MCL	NO	DLBSL
															2.0E+01	NC2LGW		
	107-06-2	**1,2-Dichloroethane**	**4.8E-01**	**J**	**1.3E+01**		**µg/L**	**IR69-GW15-10A**	**4/6**	**0.5 - 3.1**	**1.3E+01**	**N/A**	**1.5E-01**	**C***	**5.0E+00**	**MCL**	**YES**	**ASL**
															4.0E-01	NC2LGW		
	78-87-5	1,2-Dichloropropane	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	3.9E-01	C*	5.0E+00	MCL	YES	DLASL
															6.0E-01	NC2LGW		
	541-73-1	**1,3-Dichlorobenzene**	**1.4E-01**	**J**	**5.5E-01**		**µg/L**	**IR69-GW15-10A**	**2/6**	**0.5 - 3.1**	**5.5E-01**	**N/A**	**4.3E-01**	**C**	**2.0E+02**	**NC2LGW**	**YES**	**ASL**
	106-46-7	**1,4-Dichlorobenzene**	**3.3E+00**		**3.3E+00**		**µg/L**	**IR69-GW15-10A**	**1/6**	**0.5 - 3.1**	**3.3E+00**	**N/A**	**4.3E-01**	**C**	**7.5E+01**	**MCL**	**YES**	**ASL**
															6.0E+00	NC2LGW		
	78-93-3	2-Butanone	ND		ND		µg/L		0/2	2.5 - 16	1.6E+01	N/A	7.1E+02	N	4.0E+03	NC2LGW	NO	DLBSL
	591-78-6	2-Hexanone	ND		ND		µg/L		0/6	2.5 - 16	1.6E+01	N/A	4.7E+00	N	4.0E+02	NC2LGW	YES	DLASL
	108-10-1	4-Methyl-2-pentanone	ND		ND		µg/L		0/6	2.5 - 16	1.6E+01	N/A	2.0E+02	N	N/A	N/A	NO	DLBSL
	67-64-1	Acetone	ND		ND		µg/L		0/3	2.5 - 16	1.6E+01	N/A	2.2E+03	N	6.0E+03	NC2LGW	NO	DLBSL
	71-43-2	**Benzene**	**5.8E-01**		**5.8E-01**		**µg/L**	**IR69-GW03-10A**	**1/6**	**0.5 - 3.1**	**5.8E-01**	**N/A**	**4.1E-01**	**C**	**5.0E+00**	**MCL**	**YES**	**ASL**
															1.0E+00	NC2LGW		
	75-27-4	Bromodichloromethane	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	1.2E-01	C	8.0E+01	MCL	YES	DLASL
															6.0E-02	NC2LGW		
	75-25-2	Bromoform	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	8.5E+00	C*	8.0E+01	MCL	NO	DLBSL
															4.0E+00	NC2LGW		
	74-83-9	Bromomethane	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	8.7E-01	N	N/A	N/A	YES	DLASL
	75-15-0	Carbon disulfide	4.1E-02	J	1.4E-01	J	µg/L	IR69-GW15-10A	2/6	0.5 - 3.1	1.4E-01	N/A	1.0E+02	N	7.0E+02	NC2LGW	NO	BSL
	56-23-5	Carbon tetrachloride	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	4.4E-01	C	5.0E+00	MCL	YES	DLASL
															3.0E-01	NC2LGW		
	108-90-7	Chlorobenzene	1.3E+00		7.5E+00		µg/L	IR69-GW03D-10A	2/6	0.5 - 3.1	7.5E+00	N/A	9.1E+00	N	1.0E+02	MCL	NO	BSL
															5.0E+01	NC2LGW		
	75-00-3	Chloroethane	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	2.1E+03	N	3.0E+03	NC2LGW	NO	DLBSL
	67-66-3	**Chloroform**	**1.3E+00**		**1.3E+00**		**µg/L**	**IR69-GW04-10A**	**1/6**	**0.5 - 3.1**	**1.3E+00**	**N/A**	**1.9E-01**	**C**	**8.0E+01**	**MCL**	**YES**	**ASL**
															7.0E+01	**NC2LGW**		
	74-87-3	Chloromethane	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	1.9E+01	N	3.0E+00	NC2LGW	NO	DLBSL
	156-59-2	**cis-1,2-Dichloroethene**	**2.1E+00**		**1.8E+02**		**µg/L**	**IR69-GW03-10A**	**5/6**	**0.5 - 3.1**	**1.8E+02**	**N/A**	**7.3E+00**	**N**	**7.0E+01**	**MCL, N2CLGW**	**YES**	**ASL**
	10061-01-5	cis-1,3-Dichloropropene	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	4.3E-01	C*	4.0E-01	NC2LGW	YES	DLASL
	110-82-7	Cyclohexane	2.7E-01	J	2.7E-01	J	µg/L	IR69-GW10-10A	1/6	0.5 - 3.1	2.7E-01	N/A	1.3E+03	N	N/A	N/A	NO	BSL
	124-48-1	Dibromochloromethane	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	1.5E-01	C	8.0E+01	MCL	YES	DLASL
															4.0E-01	NC2LGW		
	75-71-8	Dichlorodifluoromethane (Freon-12)	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	2.0E+01	N	1.0E+03	NC2LGW	NO	DLBSL
	100-41-4	Ethylbenzene	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	1.5E+00	C	7.0E+02	MCL	YES	DLASL

TABLE G 2.7

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
												6.0E+02	NC2LGW		
	98-82-8	Isopropylbenzene	ND	ND	µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	6.8E+01 N	5.0E+00	MCL	NO	DLBSL
												7.0E+01	NC2LGW		
	1330-20-7	m- and p-Xylene	ND	ND	µg/L		0/6	1 - 6.3	6.3E+00	N/A	2.0E+01 N	5.0E+02	NC2LGW	NO	DLBSL
	79-20-9	Methyl acetate	ND	ND	µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	3.7E+03 N	N/A	N/A	NO	DLBSL
	108-87-2	Methylcyclohexane	ND	ND	µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	8.8E+01 N	N/A	N/A	NO	DLBSL
	75-09-2	Methylene chloride	ND	ND	µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	4.8E+00 C	5.0E+00	NC2LGW	NO	DLBSL
	1634-04-4	Methyl-tert-butyl ether (MTBE)	ND	ND	µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	1.2E+01 C	2.0E+01	NC2LGW	NO	DLBSL
	95-47-6	o-Xylene	ND	ND	µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	2.0E+01 N	5.0E+02	NC2LGW	NO	DLBSL
	100-42-5	Styrene	ND	ND	µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	1.6E+02 N	1.0E+02	MCL	NO	DLBSL
												7.0E+01	NC2LGW		
	127-18-4	**Tetrachloroethene**	**1.9E-01 J**	**1.9E-01 J**	**µg/L**	**IR69-GW02-10A**	**1/6**	**0.5 - 3.1**	**1.9E-01**	**N/A**	**1.1E-01 C**	**5.0E+00**	**MCL**	**YES**	**ASL**
												7.0E-01	**NC2LGW**		
	108-88-3	Toluene	7.3E-01	8.3E+00	µg/L	IR69-GW04-10A	2/6	0.5 - 3.1	8.3E+00	N/A	2.3E+02 N	1.0E+03	MCL	NO	BSL
												6.0E+02	NC2LGW		
	156-60-5	**trans-1,2-Dichloroethene**	**5.6E-01**	**2.3E+01**	**µg/L**	**IR69-GW02-10A**	**5/6**	**0.5 - 3.1**	**2.3E+01**	**N/A**	**1.1E+01 N**	**1.0E+02**	**MCL, N2CLGW**	**YES**	**ASL**
	10061-02-6	trans-1,3-Dichloropropene	ND	ND	µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	4.3E-01 C*	4.0E-01	NC2LGW	YES	DLASL
	79-01-6	**Trichloroethene**	**3.0E-01 J**	**3.5E+00**	**µg/L**	**IR69-GW03D-10A**	**5/6**	**0.5 - 3.1**	**3.5E+00**	**N/A**	**2.0E+00 C**	**5.0E+00**	**MCL**	**YES**	**ASL**
												3.0E+00	**NC2LGW**		
	75-69-4	Trichlorofluoromethane(Freon-11)	ND	ND	µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	1.3E+02 N	2.0E+03	NC2LGW	NO	DLBSL
	75-01-4	**Vinyl chloride**	**2.1E-01 J**	**2.0E+01**	**µg/L**	**IR69-GW02-10A**	**4/6**	**0.5 - 3.1**	**2.0E+01**	**N/A**	**1.6E-02 C**	**5.0E+00**	**MCL**	**YES**	**ASL**
												3.0E-02	**NC2LGW**		
	1330-20-7	Xylene, total	ND	ND	µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	2.0E+01 N	2.0E+00	MCL	NO	DLBSL
												5.0E+02	NC2LGW		
	92-52-4	1,1-Biphenyl	ND	ND	µg/L		0/6	5 - 5.4	5.4E+00	N/A	8.3E-02 N	4.0E+02	NC2LGW	YES	DLASL
	108-60-1	2,2'-Oxybis(1-chloropropane)	ND	ND	µg/L		0/6	5 - 5.4	5.4E+00	N/A	3.2E-01 C	N/A	N/A	YES	DLASL
	95-95-4	2,4,5-Trichlorophenol	ND	ND	µg/L		0/6	10 - 11	1.1E+01	N/A	3.7E+02 N	N/A	N/A	NO	DLBSL
	88-06-2	2,4,6-Trichlorophenol	ND	ND	µg/L		0/6	10 - 11	1.1E+01	N/A	3.7E+00 C**	N/A	N/A	YES	DLASL
	120-83-2	2,4-Dichlorophenol	ND	ND	µg/L		0/6	10 - 11	1.1E+01	N/A	1.1E+01 N	N/A	N/A	YES	DLASL
	105-67-9	2,4-Dimethylphenol	ND	ND	µg/L		0/6	10 - 11	1.1E+01	N/A	7.3E+01 N	N/A	N/A	NO	DLBSL
	51-28-5	2,4-Dinitrophenol	ND	ND	µg/L		0/6	10 - 11	1.1E+01	N/A	7.3E+00 N	N/A	N/A	YES	DLASL
	121-14-2	2,4-Dinitrotoluene	ND	ND	µg/L		0/6	5 - 5.4	5.4E+00	N/A	2.2E-01 C	N/A	N/A	YES	DLASL
	606-20-2	2,6-Dinitrotoluene	ND	ND	µg/L		0/6	5 - 5.4	5.4E+00	N/A	3.7E+00 N	N/A	N/A	YES	DLASL
	91-58-7	2-Chloronaphthalene	ND	ND	µg/L		0/6	5 - 5.4	5.4E+00	N/A	2.9E+02 N	N/A	N/A	NO	DLBSL
	95-57-8	2-Chlorophenol	ND	ND	µg/L		0/6	10 - 11	1.1E+01	N/A	1.8E+01 N	4.0E-01	NC2LGW	NO	DLBSL
	91-57-6	2-Methylnaphthalene	1.6E-02 J	1.3E-01 J	µg/L	IR69-GW03-10A	3/6	0.2 - 0.22	1.3E-01	N/A	1.5E+01 N	3.0E+01	NC2LGW	NO	BSL
	95-48-7	2-Methylphenol	ND	ND	µg/L		0/6	10 - 11	1.1E+01	N/A	1.8E+02 N	N/A	N/A	NO	DLBSL
	88-74-4	2-Nitroaniline	ND	ND	µg/L		0/6	10 - 11	1.1E+01	N/A	3.7E+01 N	N/A	N/A	NO	DLBSL
	88-75-5	2-Nitrophenol	ND	ND	µg/L		0/6	10 - 11	1.1E+01	N/A	1.8E+01 N	N/A	N/A	NO	DLBSL
	91-94-1	3,3'-Dichlorobenzidine	ND	ND	µg/L		0/6	5 - 5.4	5.4E+00	N/A	1.5E-01 C	N/A	N/A	YES	DLASL
	99-09-2	3-Nitroaniline	ND	ND	µg/L		0/6	10 - 11	1.1E+01	N/A	3.7E+01 N	N/A	N/A	NO	DLBSL
	534-52-1	4,6-Dinitro-2-methylphenol	ND	ND	µg/L		0/6	10 - 11	1.1E+01	N/A	2.9E-01 N	N/A	N/A	YES	DLASL
	101-55-3	4-Bromophenyl-phenylether	ND	ND	µg/L		0/6	5 - 5.4	5.4E+00	N/A	N/A	N/A	N/A	NO	NTX
	59-50-7	4-Chloro-3-methylphenol	ND	ND	µg/L		0/6	10 - 11	1.1E+01	N/A	3.7E+02 N	N/A	N/A	NO	DLBSL
	106-47-8	4-Chloroaniline	ND	ND	µg/L		0/6	10 - 11	1.1E+01	N/A	3.4E-01 C	N/A	N/A	YES	DLASL
	7005-72-3	4-Chlorophenyl-phenylether	ND	ND	µg/L		0/6	5 - 5.4	5.4E+00	N/A	1.8E+01 N	N/A	N/A	NO	DLBSL
	106-44-5	4-Methylphenol	ND	ND	µg/L		0/6	10 - 11	1.1E+01	N/A	1.8E+01 N	4.0E+01	NC2LGW	NO	DLBSL
	100-01-6	4-Nitroaniline	ND	ND	µg/L		0/6	10 - 11	1.1E+01	N/A	3.4E+00 C*	N/A	N/A	YES	DLASL
	100-02-7	4-Nitrophenol	ND	ND	µg/L		0/6	10 - 11	1.1E+01	N/A	1.2E-01 C	N/A	N/A	YES	DLASL

TABLE G 2.7

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier		Maximum [1] Concentration Qualifier		Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	83-32-9	Acenaphthene	ND		ND		µg/L		0/6	0.2 - 0.22	2.2E-01	N/A	2.2E+02	N	8.0E+01	NC2LGW	NO	DLBSL
	208-96-8	Acenaphthylene	1.0E-02	J	1.0E-02	J	µg/L	IR69-GW03D-10A	1/6	0.2 - 0.22	1.0E-02	N/A	2.2E+02	N	2.0E+02	NC2LGW	NO	BSL
	98-86-2	Acetophenone	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	3.7E+02	N	N/A	N/A	NO	DLBSL
	120-12-7	Anthracene	ND		ND		µg/L		0/6	0.2 - 0.22	2.2E-01	N/A	1.1E+03	N	2.0E+03	NC2LGW	NO	DLBSL
	1912-24-9	Atrazine	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	2.9E-01	C	3.0E+00	MCL, N2CLGW	YES	DLASL
	100-52-7	Benzaldehyde	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	3.7E+02	N	N/A	N/A	NO	DLBSL
	56-55-3	Benzo(a)anthracene	ND		ND		µg/L		0/6	0.2 - 0.22	2.2E-01	N/A	2.9E-02	C	5.0E-02	NC2LGW	YES	DLASL
	50-32-8	Benzo(a)pyrene	ND		ND		µg/L		0/6	0.2 - 0.22	2.2E-01	N/A	2.9E-03	C	2.0E-01	MCL	YES	DLASL
															5.0E-03	NC2LGW		
	205-99-2	Benzo(b)fluoranthene	ND		ND		µg/L		0/6	0.2 - 0.22	2.2E-01	N/A	2.9E-02	C	5.0E-02	NC2LGW	YES	DLASL
	191-24-2	Benzo(g,h,i)perylene	ND		ND		µg/L		0/6	0.2 - 0.22	2.2E-01	N/A	1.1E+02	N	2.0E+02	NC2LGW	NO	DLBSL
	207-08-9	Benzo(k)fluoranthene	ND		ND		µg/L		0/6	0.2 - 0.22	2.2E-01	N/A	2.9E-01	C	5.0E-01	NC2LGW	NO	DLBSL
	111-91-1	bis(2-Chloroethoxy)methane	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	1.1E+01	N	N/A	N/A	NO	DLBSL
	111-44-4	bis(2-Chloroethyl)ether	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	1.2E-02	C	3.0E-02	NC2LGW	YES	DLASL
	117-81-7	bis(2-Ethylhexyl)phthalate	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	4.8E+00	C	6.0E+00	MCL	YES	DLASL
															3.0E+00	NC2LGW		
	85-68-7	Butylbenzylphthalate	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	3.5E+01	C	1.0E+03	NC2LGW	NO	DLBSL
	105-60-2	Caprolactam	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	1.8E+03	N	4.0E+03	NC2LGW	NO	DLBSL
	86-74-8	Carbazole	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	N/A		N/A	N/A	NO	NTX
	218-01-9	Chrysene	ND		ND		µg/L		0/6	0.2 - 0.22	2.2E-01	N/A	2.9E+00	C	5.0E+00	NC2LGW	NO	DLBSL
	53-70-3	Dibenz(a,h)anthracene	ND		ND		µg/L		0/6	0.2 - 0.22	2.2E-01	N/A	2.9E-03	C	5.0E-03	NC2LGW	YES	DLASL
	132-64-9	Dibenzofuran	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	3.7E+00	N	N/A	N/A	YES	DLASL
	84-66-2	Diethylphthalate	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	2.9E+03	N	6.0E+03	NC2LGW	NO	DLBSL
	60-51-5	Dimethoate	ND		ND		µg/L		0/6	1.9 - 2	2.0E+00	N/A	7.3E-01	N	N/A	N/A	YES	DLASL
	131-11-3	Dimethyl phthalate	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	N/A		N/A	N/A	NO	NTX
	84-74-2	Di-n-butylphthalate	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	3.7E+02	N	7.0E+02	NC2LGW	NO	DLBSL
	117-84-0	Di-n-octylphthalate	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	N/A		1.0E+02	NC2LGW	NO	NTX
	52-85-7	Famphur	ND		ND		µg/L		0/6	1.9 - 2	2.0E+00	N/A	N/A		N/A	N/A	NO	NTX
	206-44-0	Fluoranthene	1.1E-02	J	1.3E-02	J	µg/L	IR69-GW15-10A	2/6	0.2 - 0.22	1.3E-02	N/A	1.5E+02	N	3.0E+02	NC2LGW	NO	BSL
	86-73-7	Fluorene	ND		ND		µg/L		0/6	0.2 - 0.22	2.2E-01	N/A	1.5E+02	N	3.0E+02	NC2LGW	NO	DLBSL
	118-74-1	Hexachlorobenzene	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	4.2E-02	C	1.0E+00	MCL	YES	DLASL
															2.0E-02	NC2LGW		
	87-68-3	Hexachlorobutadiene	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	8.6E-01	C*	4.0E-01	NC2LGW	YES	DLASL
	77-47-4	Hexachlorocyclopentadiene	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	2.2E+01	N	5.0E+01	N/A	NO	DLBSL
	67-72-1	Hexachloroethane	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	3.7E+00	C**	N/A	N/A	YES	DLASL
	193-39-5	Indeno(1,2,3-cd)pyrene	ND		ND		µg/L		0/6	0.2 - 0.22	2.2E-01	N/A	2.9E-02	C	5.0E-02	NC2LGW	YES	DLASL
	78-59-1	Isophorone	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	7.1E+01	C	4.0E+01	NC2LGW	NO	DLBSL
	91-20-3	Naphthalene	ND		ND		µg/L		0/6	0.2 - 0.22	2.2E-01	N/A	1.4E-01	C*	6.0E+00	NC2LGW	YES	DLASL
	621-64-7	n-Nitroso-di-n-propylamine	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	9.6E-03	C	N/A	N/A	YES	DLASL
	86-30-6	n-Nitrosodiphenylamine	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	1.4E+01	C	7.0E-04	NC2LGW	NO	DLBSL
	98-95-3	Nitrobenzene	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	1.2E-01	C	N/A	N/A	YES	DLASL
	87-86-5	Pentachlorophenol	ND		ND		µg/L		0/6	10 - 11	1.1E+01	N/A	1.7E-01	C	1.0E+00	MCL	YES	DLASL
															3.0E-01	NC2LGW		
	85-01-8	Phenanthrene	ND		ND		µg/L		0/6	0.2 - 0.22	2.2E-01	N/A	1.1E+03	N	2.0E+02	NC2LGW	NO	DLBSL
	108-95-2	Phenol	ND		ND		µg/L		0/6	10 - 11	1.1E+01	N/A	1.1E+03	N	3.0E+01	NC2LGW	NO	DLBSL
	298-02-2	Phorate	ND		ND		µg/L		0/6	0.94 - 1	1.0E+00	N/A	7.3E-01	N	1.0E+00	NC2LGW	YES	DLASL
	129-00-0	Pyrene	1.5E-02	J	1.8E-02	J	µg/L	IR69-GW15-10A	2/6	0.2 - 0.22	1.8E-02	N/A	1.1E+02	N	2.0E+03	NC2LGW	NO	BSL
	72-54-8	4,4'-DDD	ND		ND		µg/L		0/6	0.1 - 0.11	1.1E-01	N/A	2.8E-01	C	1.0E-01	NC2LGW	NO	DLBSL
	72-55-9	4,4'-DDE	ND		ND		µg/L		0/6	0.1 - 0.11	1.1E-01	N/A	2.0E-01	C	N/A	N/A	NO	DLBSL

TABLE G 2.7

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier		Maximum [1] Concentration Qualifier		Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	50-29-3	4,4'-DDT	5.2E-03	J	5.2E-03	J	µg/L	IR69-GW03-10A	1/6	0.1 - 0.11	5.2E-03	N/A	2.0E-01	C*	1.0E-01	NC2LGW	NO	BSL
	309-00-2	Aldrin	ND		ND		µg/L		0/6	0.05 - 0.054	5.4E-02	N/A	4.0E-03	C	N/A	N/A	YES	DLASL
	319-84-6	**alpha-BHC**	**7.7E-02**		**7.7E-02**		**µg/L**	**IR69-GW03-10A**	**1/6**	**0.05 - 0.054**	**7.7E-02**	**N/A**	**1.1E-02**	**C**	**2.0E-02**	**NC2LGW**	**YES**	**ASL**
	5103-71-9	alpha-Chlordane	ND		ND		µg/L		0/6	0.05 - 0.054	5.4E-02	N/A	1.9E-01	C*	1.0E-01	NC2LGW	NO	DLBSL
	12674-11-2	Aroclor-1016	ND		ND		µg/L		0/6	0.93 - 1	1.0E+00	N/A	2.6E-01	C**	N/A	N/A	YES	DLASL
	11104-28-2	Aroclor-1221	ND		ND		µg/L		0/6	1.3 - 1.4	1.4E+00	N/A	6.8E-03	C	N/A	N/A	YES	DLASL
	11141-16-5	Aroclor-1232	ND		ND		µg/L		0/6	0.93 - 1	1.0E+00	N/A	6.8E-03	C	N/A	N/A	YES	DLASL
	53469-21-9	Aroclor-1242	ND		ND		µg/L		0/6	0.63 - 0.68	6.8E-01	N/A	3.4E-02	C	N/A	N/A	YES	DLASL
	12672-29-6	Aroclor-1248	ND		ND		µg/L		0/6	0.63 - 0.68	6.8E-01	N/A	3.4E-02	C	N/A	N/A	YES	DLASL
	11097-69-1	Aroclor-1254	ND		ND		µg/L		0/6	0.63 - 0.68	6.8E-01	N/A	3.4E-02	C*	5.0E-01	MCL	YES	DLASL
	11096-82-5	**Aroclor-1260**	**1.2E+00**		**1.2E+00**		**µg/L**	**IR69-GW15-10A**	**1/6**	**0.93 - 1**	**1.2E+00**	**N/A**	**3.4E-02**	**C**	**5.0E-01**	**MCL**	**YES**	**ASL**
	86-50-0	Azinphos methyl	ND		ND		µg/L		0/6	0.94 - 1	1.0E+00	N/A	1.1E+01	N	N/A	N/A	NO	DLBSL
	319-85-7	**beta-BHC**	**1.2E-02**	**J**	**1.9E-01**	**J**	**µg/L**	**IR69-GW03-10A**	**2/6**	**0.05 - 0.054**	**1.9E-01**	**N/A**	**3.7E-02**	**C**	**N/A**	**N/A**	**YES**	**ASL**
	35400-43-2	Bolstar	ND		ND		µg/L		0/6	0.94 - 1	1.0E+00	N/A	N/A		N/A	N/A	NO	NTX
	2921-88-2	Chlorpyrifos	ND		ND		µg/L		0/6	0.94 - 1	1.0E+00	N/A	1.1E+01	N	N/A	N/A	NO	DLBSL
	56-72-4	Coumaphos	ND		ND		µg/L		0/6	0.94 - 1	1.0E+00	N/A	N/A		N/A	N/A	NO	NTX
	319-86-8	**delta-BHC**	**1.2E-02**	**J**	**1.5E+00**		**µg/L**	**IR69-GW03-10A**	**2/6**	**0.05 - 0.25**	**1.5E+00**	**N/A**	**3.7E-02**	**C**	**2.0E-02**	**NC2LGW**	**YES**	**ASL**
	8065-48-3	Demeton-O	ND		ND		µg/L		0/6	2.4 - 2.5	2.5E+00	N/A	1.5E-01	N	N/A	N/A	YES	DLASL
	8065-48-3	Demeton-S	ND		ND		µg/L		0/4	2.4 - 2.4	2.4E+00	N/A	1.5E-01	N	N/A	N/A	YES	DLASL
	333-41-5	Diazinon	ND		ND		µg/L		0/6	0.94 - 1	1.0E+00	N/A	2.6E+00	N	N/A	N/A	NO	DLBSL
	62-73-7	Dichlorvos	ND		ND		µg/L		0/6	1.9 - 2	2.0E+00	N/A	2.3E-01	C*	N/A	N/A	YES	DLASL
	60-57-1	Dieldrin	ND		ND		µg/L		0/6	0.1 - 0.11	1.1E-01	N/A	4.2E-03	C	2.0E-03	NC2LGW	YES	DLASL
	298-04-4	Disulfoton	ND		ND		µg/L		0/6	1.9 - 2	2.0E+00	N/A	1.5E-01	N	3.0E-01	NC2LGW	YES	DLASL
	959-98-8	Endosulfan I	ND		ND		µg/L		0/6	0.05 - 0.054	5.4E-02	N/A	2.2E+01	N	4.0E+01	NC2LGW	NO	DLBSL
	33213-65-9	Endosulfan II	ND		ND		µg/L		0/6	0.1 - 0.11	1.1E-01	N/A	2.2E+01	N	4.0E+01	NC2LGW	NO	DLBSL
	1031-07-8	Endosulfan sulfate	ND		ND		µg/L		0/6	0.1 - 0.11	1.1E-01	N/A	2.2E+01	N	4.0E+01	NC2LGW	NO	DLBSL
	72-20-8	Endrin	2.9E-02	J	2.9E-02	J	µg/L	IR69-GW15-10A	1/6	0.1 - 0.11	2.9E-02	N/A	1.1E+00	N	2.0E+00	MCL, N2CLGW	NO	BSL
	7421-93-4	Endrin aldehyde	ND		ND		µg/L		0/6	0.1 - 0.11	1.1E-01	N/A	1.1E+00	N	2.0E+00	MCL, N2CLGW	NO	DLBSL
	53494-70-5	Endrin ketone	ND		ND		µg/L		0/6	0.1 - 0.11	1.1E-01	N/A	1.1E+00	N	2.0E+00	MCL, N2CLGW	NO	DLBSL
	13194-48-4	Ethoprop	ND		ND		µg/L		0/6	0.47 - 0.5	5.0E-01	N/A	N/A		N/A	N/A	NO	NTX
	115-90-2	Fensulfothion	ND		ND		µg/L		0/6	4.7 - 5	5.0E+00	N/A	N/A		N/A	N/A	NO	NTX
	2104-64-5	Ethyl p-nitrophenyl phenylphosphorothioate	ND		ND		µg/L		0/6	0.94 - 1	1.0E+00	N/A	3.7E-02	N	N/A	N/A	YES	DLASL
	55-38-9	Fenthion	ND		ND		µg/L		0/6	0.94 - 1	1.0E+00	N/A	N/A		N/A	N/A	NO	NTX
	58-89-9	gamma-BHC (Lindane)	ND		ND		µg/L		0/6	0.05 - 0.054	5.4E-02	N/A	6.1E-02	C	2.0E-01	MCL	NO	DLBSL
															3.0E-02	NC2LGW		
	5103-74-2	gamma-Chlordane	3.3E-02	J	6.0E-02	J	µg/L	IR69-GW15-10A	2/6	0.05 - 0.054	6.0E-02	N/A	1.9E-01	C*	1.0E-01	NC2LGW	NO	BSL
	76-44-8	Heptachlor	ND		ND		µg/L		0/6	0.05 - 0.054	5.4E-02	N/A	1.5E-02	C	4.0E-01	MCL	YES	DLASL
															8.0E-03	NC2LGW		
	1024-57-3	**Heptachlor epoxide**	**7.9E-02**	**J**	**7.9E-02**	**J**	**µg/L**	**IR69-GW15-10A**	**1/6**	**0.05 - 0.054**	**7.9E-02**	**N/A**	**7.4E-03**	**C***	**2.0E-01**	**MCL**	**YES**	**ASL**
															4.0E-03	**NC2LGW**		
	121-75-5	Malathion	ND		ND		µg/L		0/6	0.94 - 1	1.0E+00	N/A	7.3E+01	N	N/A	N/A	NO	DLBSL
	150-50-5	Merphos	ND		ND		µg/L		0/6	1.4 - 1.5	1.5E+00	N/A	1.1E-01	N	N/A	N/A	YES	DLASL
	72-43-5	Methoxychlor	3.2E-01	J	3.2E-01	J	µg/L	IR69-GW04-10A	1/6	0.5 - 0.54	3.2E-01	N/A	1.8E+01	N	4.0E+01	MCL, N2CLGW	NO	BSL
	298-00-0	Methyl parathion	ND		ND		µg/L		0/6	0.47 - 0.5	5.0E-01	N/A	9.1E-01	N	N/A	N/A	NO	DLBSL
	7786-34-7	Mevinphos	ND		ND		µg/L		0/6	1.9 - 2	2.0E+00	N/A	N/A		N/A	N/A	NO	NTX
	6923-22-4	Monocrotophos	ND		ND		µg/L		0/6	9.4 - 10	1.0E+01	N/A	N/A		N/A	N/A	NO	NTX
	300-76-5	Naled	ND		ND		µg/L		0/6	4.7 - 5	5.0E+00	N/A	7.3E+00	N	N/A	N/A	NO	DLBSL
	56-38-2	Parathion	ND		ND		µg/L		0/6	0.94 - 1	1.0E+00	N/A	2.2E+01	N	N/A	N/A	NO	DLBSL
	299-84-3	Ronnel	ND		ND		µg/L		0/6	0.94 - 1	1.0E+00	N/A	1.8E+02	N	N/A	N/A	NO	DLBSL

TABLE G 2.7

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	3689-24-5	Sulfotepp	ND		ND		µg/L		0/6	0.47 - 0.5	5.0E-01	N/A	1.8E+00	N	N/A	N/A	NO	DLBSL
	22248-79-9	Tetrachlorvinphos	ND		ND		µg/L		0/6	0.94 - 1	1.0E+00	N/A	N/A		N/A	N/A	NO	NTX
	297-97-2	Thionazin	ND		ND		µg/L		0/6	0.94 - 1	1.0E+00	N/A	N/A		N/A	N/A	NO	NTX
	34643-46-4	Tokuthion (Prothiophos)	ND		ND		µg/L		0/6	0.94 - 1	1.0E+00	N/A	N/A		N/A	N/A	NO	NTX
	8001-35-2	Toxaphene	ND		ND		µg/L		0/6	2.5 - 2.7	2.7E+00	N/A	6.1E-02	C	3.0E+00	MCL	YES	DLASL
															3.0E-02	NC2LGW		
	327-98-0	Trichloronate	ND		ND		µg/L		0/6	0.94 - 1	1.0E+00	N/A	N/A		N/A	N/A	NO	NTX
	7429-90-5	Aluminum	5.2E+02		1.8E+03		µg/L	IR69-GW09-10A	6/6	200 - 200	1.8E+03	1.9E+03	3.7E+03	N	N/A	N/A	NO	BSL
	7440-36-0	Antimony	ND		ND		µg/L		0/6	10 - 10	1.0E+01	3.3E+00	1.5E+00	N	6.0E+00	MCL	YES	DLASL
	7440-38-2	Arsenic	2.9E+00	J	2.9E+00	J	µg/L	IR69-GW15-10A	1/6	10 - 10	2.9E+00	5.8E+00	4.5E-02	C	1.0E+01	MCL, N2CLGW	NO	BBK
	7440-39-3	Barium	1.7E+01	J	9.7E+01	J	µg/L	IR69-GW15-10A	6/6	200 - 200	9.7E+01	8.6E+01	7.3E+02	N	2.0E+03	MCL	NO	BSL
															7.0E+02	NC2LGW		
	7440-41-7	Beryllium	ND		ND		µg/L		0/6	5 - 5	5.0E+00	3.1E-01	7.3E+00	N	N/A	N/A	NO	DLBSL
	7440-43-9	Cadmium	ND		ND		µg/L		0/6	5 - 5	5.0E+00	3.6E-01	1.8E+00	N	5.0E+00	MCL	YES	DLASL
															2.0E+00	NC2LGW		
	7440-70-2	Calcium	9.6E+02	J	6.5E+04		µg/L	IR69-GW15-10A	6/6	5000 - 5000	6.5E+04	6.9E+04	N/A		N/A	N/A	NO	NUT
	7440-47-3	Chromium	1.3E+00	J	3.1E+00	J	µg/L	IR69-GW09-10A	6/6	10 - 10	3.1E+00	3.1E+00	4.3E-02	C	1.0E+02	MCL	NO	BBK
															1.0E+01	N2CLGW		
	7440-48-4	Cobalt	7.8E-01	J	2.8E+00	J	µg/L	IR69-GW04-10A	4/6	5 - 5	2.8E+00	3.4E+00	1.1E+00	N	N/A	N/A	NO	BBK
	7440-50-8	Copper	ND		ND		µg/L		0/6	5 - 5	5.0E+00	2.8E+00	1.5E+02	N	1.3E+03	MCL	NO	DLBSL
															1.0E+03	NC2LGW		
	7439-89-6	**Iron**	**1.7E+03**		**2.9E+04**		**µg/L**	**IR69-GW15-10A**	**6/6**	**100 - 100**	**2.9E+04**	**6.0E+03**	**2.6E+03**	**N**	**3.0E+02**	**NC2LGW**	**YES**	**ASL**
	7439-92-1	Lead	1.8E+00	J	2.5E+00	J	µg/L	IR69-GW04-10A : IR69-GW15-10A	4/6	3 - 3	2.5E+00	2.8E+00	N/A		1.5E+01	MCL, N2CLGW	NO	BSL
	7439-95-4	Magnesium	ND		ND		µg/L		0/6	5000 - 5000	5.0E+03	6.4E+03	N/A		N/A	N/A	NO	NUT
	7439-96-5	**Manganese**	**6.2E+00**	**J**	**8.0E+02**		**µg/L**	**IR69-GW15-10A**	**6/6**	**10 - 10**	**8.0E+02**	**2.1E+02**	**8.8E+01**	**N**	**5.0E+01**	**NC2LGW**	**YES**	**ASL**
	7439-97-6	Mercury	ND		ND		µg/L		0/6	0.2 - 0.2	2.0E-01	1.0E-01	1.1E+00	N	2.0E+00	MCL	NO	DLBSL
															1.0E+00	NC2LGW		
	7440-02-0	Nickel	1.4E+00	J	4.2E+00	J	µg/L	IR69-GW04-10A	3/6	5 - 5	4.2E+00	8.0E+00	7.3E+01	N	1.0E+02	NC2LGW	NO	BSL
	7440-09-7	Potassium	1.5E+02	J	7.8E+02	J	µg/L	IR69-GW09-10A	4/6	5000 - 5000	7.8E+02	3.3E+03	N/A		N/A	N/A	NO	NUT
	7782-49-2	Selenium	3.8E+00	J	3.9E+00	J	µg/L	IR69-GW09-10A	2/6	5 - 5	3.9E+00	3.1E+00	1.8E+01	N	5.0E+01	MCL	NO	BSL
															2.0E+01	NC2LGW		
	7440-22-4	Silver	ND		ND		µg/L		0/6	5 - 5	5.0E+00	7.7E-01	1.8E+01	N	2.0E+01	NC2LGW	NO	DLBSL
	7440-23-5	Sodium	6.1E+03		2.4E+04		µg/L	IR69-GW15-10A	6/6	5000 - 5000	2.4E+04	2.3E+04	N/A		N/A	N/A	NO	NUT
	7440-28-0	Thallium	ND		ND		µg/L		0/6	10 - 10	1.0E+01	3.8E+00	3.7E-02	N	2.0E+00	MCL	YES	DLASL
	7440-62-2	**Vanadium**	**2.1E+00**	**J**	**2.6E+01**		**µg/L**	**IR69-GW02-10A**	**6/6**	**20 - 20**	**2.6E+01**	**4.7E+00**	**1.8E+01**	**N**	**N/A**	**N/A**	**YES**	**ASL**
	7440-66-6	**Zinc**	**3.3E+00**	**J**	**6.8E+03**		**µg/L**	**IR69-GW04-10A**	**4/6**	**20 - 20**	**6.8E+03**	**4.2E+01**	**1.1E+03**	**N**	**1.0E+03**	**NC2LGW**	**YES**	**ASL**

TABLE G 2.7

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection

[1] Minimum/Maximum detected concentrations.
[2] Maximum concentration is used for screening. If ND, maximum detection limit used for screening.
[3] Background values are two times the mean shallow groundwater basewide background concentrations.
[4] Oak Ridge National Laboratory (ORNL). June 2011. Regional Screening Levels for Chemical Contaminants at Superfund Sites.
Tap Water RSLs (based on $1C^{-6}$ for carcinogens and HQ of 0.1 for noncarcinogens). [Online]. Available: http://epa-prgs.ornl.gov/chemicals/index.sh
RSL value for 1,3-Dichloropropene used as a surrogate for cis-1,3-Dichloropropene and trans-1,3-Dichloropropene.
RSL value for 2-Chlorophenol used as surrogate for 2-Nitrophenol.
RSL value for 2-Nitroaniline used as surrogate for 3-N'itroaniline.
RSL value for Acenaphthene used as surrogate for Acenaphthylene.
RSL value for Anthracene used as surrogate for Phenanthrene.
RSL value for Chlordane used as surrogate for alpha-Chlordane and gamma-Chlordane.
RSL value for Chromium(VI) used as surrogate for Chromium.
RSL value for Demeton used as surrogate for Demeton-O and Demeton-S
RSL value for Endosulfan used as surrogate for Endosulfan I, Endosulfan II, and Endosulfan sulfate.
RSL value for Endrin used as surrogate for Endrin aldehyde and Endrin ketone.
RSL value for Manganese (water) used as surrogate for Manganese.
RSL value for Mercury Chloride (and other Mercury salts) used as surrogate for Mercury.
RSL value for Methoxychlor used as surrogate for 4-Chlorophenyl-phenylether.
RSL value for n-Hexane used as surrogate for Methylcyclohexane.
RSL value for Nitrobenzene used as surrogate for 4-Nitrophenol.
RSL value for Pyrene used as surrogate for Benzo(g,h,i)perylene.
RSL value for technical-HCH used as surrogate for delta-BHC.
The soil value of 400 mg/kg for lead is from the Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities, USEPA, July 14, 1994.
[5] Rationale Codes

Selection Reason:	Above Screening Levels (ASL)
	Detection Limit Above Screening Levels (DLASL), not evaluated quantitatively
Deletion Reason:	No Toxicity Information (NTX)
	Essential Nutrient (NUT)
	Below Screening Level (BSL)
	Detection Limit Below Screening Level (DLBSL)
	Below Background Level (BBK)

Generated by:M. White/ATL
Checked by: T.Carleton/DAY

COPC - Chemical of potential concern
ARAR/TBC - Applicable or relevant and appropriate requirement/to be considered
N/A - Not applicable/not available
ND - Not detected
C - Carcinogenic
C* - Carcinogenic (where nc RSL<100 x ca RSL)
C**- Carcinogenic (where nc RSL < 10 X ca RSL, therefore, nc RSL used)
J - Estimated value
MCL - Drinking water Maximum Contaminant Level (MCL) (USEPA, 2010).
N - Noncarcinogenic
NA - Not available
µg/L - Microgram per liter
NC2LGWL - North Carolina Classifications and Groundwater Quality Standards, amended January 2010.

TABLE G 2.8

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
Groundwater at	71-55-6	1,1,1-Trichloroethane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	9.1E+02	N	2.0E+02	MCL, N2CLGW	NO	DLBSL
Castle-Hayne	79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	6.7E-02	C	2.0E-01	NC2LGW	YES	DLASL
Aquifer	76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	5.9E+03	N	2.0E+05	NC2LGW	NO	DLBSL
Tap Water	79-00-5	1,1,2-Trichloroethane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	4.2E-02	C**	5.0E+00	MCL	YES	DLASL
	75-34-3	1,1-Dichloroethane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	2.4E+00	C	7.0E+00	MCL	NO	DLBSL
															6.0E+00	NC2LGW		
	75-35-4	1,1-Dichloroethene	1.2E-01	J	1.1E+01		µg/L	IR69-GW15IW-10A	4/13	0.5 - 1.3	1.1E+01	N/A	3.4E+01	N	7.0E+00	NC2LGW	NO	BSL
	120-82-1	**1,2,4-Trichlorobenzene**	**8.5E+00**		**8.5E+00**		**µg/L**	**IR69-GW15IW-10A**	**1/13**	**0.5 - 1.3**	**8.5E+00**	**N/A**	**4.1E-01**	**C****	**7.0E+01**	**MCL, N2CLGW**	**YES**	**ASL**
	96-12-8	1,2-Dibromo-3-chloropropane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	3.2E-04	C	2.0E-01	MCL	YES	DLASL
															4.0E-02	NC2LGW		
	106-93-4	1,2-Dibromoethane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	6.5E-03	C	5.0E-02	MCL	YES	DLASL
															2.0E-02	NC2LGW		
	95-50-1	1,2-Dichlorobenzene	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	3.7E+01	N	6.0E+02	MCL	NO	DLBSL
															2.0E+01	NC2LGW		
	107-06-2	**1,2-Dichloroethane**	**1.2E-01**	**J**	**1.9E+01**		**µg/L**	**IR69-GW15IW-10A**	**5/13**	**0.5 - 1.3**	**1.9E+01**	**N/A**	**1.5E-01**	**C***	**5.0E+00**	**MCL**	**YES**	**ASL**
															4.0E-01	**NC2LGW**		
	78-87-5	1,2-Dichloropropane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	3.9E-01	C*	5.0E+00	MCL	YES	DLASL
															6.0E-01	NC2LGW		
	541-73-1	**1,3-Dichlorobenzene**	**1.0E+00**	**J**	**1.8E+00**		**µg/L**	**IR69-GW15DW-10A**	**2/13**	**0.5 - 1.3**	**1.8E+00**	**N/A**	**4.3E-01**	**C**	**2.0E+02**	**NC2LGW**	**YES**	**ASL**
	106-46-7	**1,4-Dichlorobenzene**	**1.0E+00**		**1.0E+00**		**µg/L**	**IR69-GW15DW-10A**	**1/13**	**0.5 - 1.3**	**1.0E+00**	**N/A**	**4.3E-01**	**C**	**7.5E+01**	**MCL**	**YES**	**ASL**
															6.0E+00	**NC2LGW**		
	78-93-3	2-Butanone	3.1E-01	J	3.1E-01	J	µg/L	IR69-GW13IW-10A	1/1	2.5 - 2.5	3.1E-01	N/A	7.1E+02	N	4.0E+03	NC2LGW	NO	BSL
	591-78-6	2-Hexanone	ND		ND		µg/L		0/13	2.5 - 6.3	6.3E+00	N/A	4.7E+00	N	4.0E+02	NC2LGW	YES	DLASL
	108-10-1	4-Methyl-2-pentanone	ND		ND		µg/L		0/13	2.5 - 6.3	6.3E+00	N/A	2.0E+02	N	N/A	N/A	NO	DLBSL
	67-64-1	Acetone	1.3E+01	J	1.3E+01	J	µg/L	IR69-GW28IW-10A	1/1	2.5 - 2.5	1.3E+01	N/A	2.2E+03	N	6.0E+03	NC2LGW	NO	BSL
	71-43-2	**Benzene**	**3.2E-02**	**J**	**1.2E+00**		**µg/L**	**IR69-GW19UW-10A**	**3/13**	**0.5 - 1.3**	**1.2E+00**	**N/A**	**4.1E-01**	**C**	**5.0E+00**	**MCL**	**YES**	**ASL**
															1.0E+00	**NC2LGW**		
	75-27-4	Bromodichloromethane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	1.2E-01	C	8.0E+01	MCL	YES	DLASL
															6.0E-02	NC2LGW		
	75-25-2	Bromoform	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	8.5E+00	C*	8.0E+01	MCL	NO	DLBSL
															4.0E+00	NC2LGW		
	74-83-9	Bromomethane	ND		ND		µg/L		0/12	0.5 - 1.3	1.3E+00	N/A	8.7E-01	N	N/A	N/A	YES	DLASL
	75-15-0	Carbon disulfide	3.0E-02	J	1.5E-01	J	µg/L	IR69-GW04DW-10A	7/13	0.5 - 1.3	1.5E-01	N/A	1.0E+02	N	7.0E+02	NC2LGW	NO	BSL
	56-23-5	Carbon tetrachloride	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	4.4E-01	C	5.0E+00	MCL	YES	DLASL
															3.0E-01	NC2LGW		
	108-90-7	Chlorobenzene	5.9E-01		5.9E-01		µg/L	IR69-GW19UW-10A	1/13	0.5 - 1.3	5.9E-01	N/A	9.1E+00	N	1.0E+02	MCL	NO	BSL
															5.0E+01	NC2LGW		
	75-00-3	Chloroethane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	2.1E+03	N	3.0E+03	NC2LGW	NO	DLBSL
	67-66-3	**Chloroform**	**1.4E+00**		**7.8E+00**		**µg/L**	**IR69-GW28IW-10A**	**4/13**	**0.5 - 1.3**	**7.8E+00**	**N/A**	**1.9E-01**	**C**	**8.0E+01**	**MCL**	**YES**	**ASL**
															7.0E+01	**NC2LGW**		
	74-87-3	Chloromethane	2.8E-01	J	2.8E-01	J	µg/L	IR69-GW04DW-10A	1/13	0.5 - 1.3	2.8E-01	N/A	1.9E+01	N	3.0E+00	NC2LGW	NO	BSL
	156-59-2	**cis-1,2-Dichloroethene**	**7.6E+00**		**5.1E+04**		**µg/L**	**IR69-GW15IW-10A**	**11/13**	**0.5 - 830**	**5.1E+04**	**N/A**	**7.3E+00**	**N**	**7.0E+01**	**MCL, N2CLGW**	**YES**	**ASL**
	10061-01-5	cis-1,3-Dichloropropene	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	4.3E-01	C*	4.0E-01	NC2LGW	YES	DLASL
	110-82-7	Cyclohexane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	1.3E+03	N	N/A	N/A	NO	DLBSL
	124-48-1	Dibromochloromethane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	1.5E-01	C	8.0E+01	MCL	YES	DLASL
															4.0E-01	NC2LGW		
	75-71-8	Dichlorodifluoromethane (Freon-12)	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	2.0E+01	N	1.0E+03	NC2LGW	NO	DLBSL
	100-41-4	Ethylbenzene	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	1.5E+00	C	7.0E+02	MCL	NO	DLBSL

TABLE G 2.8

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
															6.0E+02	NC2LGW		
	98-82-8	Isopropylbenzene	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	6.8E+01	N	5.0E+00	MCL	NO	DLBSL
															7.0E+01	NC2LGW		
	1330-20-7	m- and p-Xylene	ND		ND		µg/L		0/13	1 - 2.5	2.5E+00	N/A	2.0E+01	N	5.0E+02	NC2LGW	NO	DLBSL
	79-20-9	Methyl acetate	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	3.7E+03	N	N/A	N/A	NO	DLBSL
	108-87-2	Methylcyclohexane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	8.8E+01	N	N/A	N/A	NO	DLBSL
	75-09-2	Methylene chloride	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	4.8E+00	C	5.0E+00	NC2LGW	NO	DLBSL
	1634-04-4	Methyl-tert-butyl ether (MTBE)	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	1.2E+01	C	2.0E+01	NC2LGW	NO	DLBSL
	95-47-6	o-Xylene	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	2.0E+01	N	5.0E+02	NC2LGW	NO	DLBSL
	100-42-5	Styrene	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	1.6E+02	N	1.0E+02	MCL	NO	DLBSL
															7.0E+01	NC2LGW		
	127-18-4	Tetrachloroethene	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	1.1E-01	C	5.0E+00	MCL	YES	DLASL
															7.0E-01	NC2LGW		
	108-88-3	Toluene	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	2.3E+02	N	1.0E+03	MCL	NO	DLBSL
															6.0E+02	NC2LGW		
	156-60-5	**trans-1,2-Dichloroethene**	**8.2E-02**	**J**	**7.5E+02**		**µg/L**	**IR69-GW15IW-10A**	**10/13**	**0.5 - 830**	**7.5E+02**	**N/A**	**1.1E+01**	**N**	**1.0E+02**	**MCL, N2CLGW**	**YES**	**ASL**
	10061-02-6	trans-1,3-Dichloropropene	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	4.3E-01	C*	4.0E-01	NC2LGW	YES	DLASL
	79-01-6	**Trichloroethene**	**1.2E-01**	**J**	**1.0E+02**	**J**	**µg/L**	**IR69-GW15IW-10A**	**7/13**	**0.5 - 8.3**	**1.0E+02**	**N/A**	**2.0E+00**	**C**	**5.0E+00**	**MCL**	**YES**	**ASL**
															3.0E+00	**NC2LGW**		
	75-69-4	Trichlorofluoromethane(Freon-11)	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	1.3E+02	N	2.0E+03	NC2LGW	NO	DLBSL
	75-01-4	**Vinyl chloride**	**1.1E-01**	**J**	**5.5E+03**		**µg/L**	**IR69-GW15IW-10A**	**10/13**	**0.5 - 830**	**5.5E+03**	**N/A**	**1.6E-02**	**C**	**5.0E+00**	**MCL**	**YES**	**ASL**
															3.0E-02	**NC2LGW**		
	1330-20-7	Xylene, total	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	2.0E+01	N	2.0E+00	MCL	NO	DLBSL
															5.0E+02	NC2LGW		
	92-52-4	1,1-Biphenyl	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	8.3E-02	N	4.0E+02	NC2LGW	YES	DLASL
	108-60-1	2,2'-Oxybis(1-chloropropane)	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	3.2E-01	C	N/A	N/A	YES	DLASL
	95-95-4	2,4,5-Trichlorophenol	ND		ND		µg/L		0/13	10 - 11	1.1E+01	N/A	3.7E+02	N	N/A	N/A	NO	DLBSL
	88-06-2	2,4,6-Trichlorophenol	ND		ND		µg/L		0/13	10 - 11	1.1E+01	N/A	3.7E+00	C**	N/A	N/A	YES	DLASL
	120-83-2	2,4-Dichlorophenol	ND		ND		µg/L		0/13	10 - 11	1.1E+01	N/A	1.1E+01	N	N/A	N/A	YES	DLASL
	105-67-9	2,4-Dimethylphenol	ND		ND		µg/L		0/13	10 - 11	1.1E+01	N/A	7.3E+01	N	N/A	N/A	NO	DLBSL
	51-28-5	2,4-Dinitrophenol	ND		ND		µg/L		0/13	10 - 11	1.1E+01	N/A	7.3E+00	N	N/A	N/A	YES	DLASL
	121-14-2	2,4-Dinitrotoluene	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	2.2E-01	C	N/A	N/A	YES	DLASL
	606-20-2	2,6-Dinitrotoluene	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	3.7E+00	N	N/A	N/A	YES	DLASL
	91-58-7	2-Chloronaphthalene	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	2.9E+02	N	N/A	N/A	NO	DLBSL
	95-57-8	2-Chlorophenol	ND		ND		µg/L		0/13	10 - 11	1.1E+01	N/A	1.8E+01	N	4.0E-01	NC2LGW	NO	DLBSL
	91-57-6	2-Methylnaphthalene	1.8E-02	J	1.8E-02	J	µg/L	IR69-GW04DW-10A	1/13	0.2 - 0.21	1.8E-02	N/A	1.5E+01	N	3.0E+01	NC2LGW	NO	BSL
	95-48-7	2-Methylphenol	ND		ND		µg/L		0/13	10 - 11	1.1E+01	N/A	1.8E+02	N	N/A	N/A	NO	DLBSL
	88-74-4	2-Nitroaniline	ND		ND		µg/L		0/13	10 - 11	1.1E+01	N/A	3.7E+01	N	N/A	N/A	NO	DLBSL
	88-75-5	2-Nitrophenol	ND		ND		µg/L		0/13	10 - 11	1.1E+01	N/A	1.8E+01	N	N/A	N/A	NO	DLBSL
	91-94-1	3,3'-Dichlorobenzidine	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	1.5E-01	C	N/A	N/A	YES	DLASL
	99-09-2	3-Nitroaniline	ND		ND		µg/L		0/13	10 - 11	1.1E+01	N/A	3.7E+01	N	N/A	N/A	NO	DLBSL
	534-52-1	4,6-Dinitro-2-methylphenol	ND		ND		µg/L		0/13	10 - 11	1.1E+01	N/A	2.9E-01	N	N/A	N/A	YES	DLASL
	101-55-3	4-Bromophenyl-phenylether	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	N/A		N/A	N/A	NO	NTX
	59-50-7	4-Chloro-3-methylphenol	ND		ND		µg/L		0/13	10 - 11	1.1E+01	N/A	3.7E+02	N	N/A	N/A	NO	DLBSL
	106-47-8	4-Chloroaniline	ND		ND		µg/L		0/13	10 - 11	1.1E+01	N/A	3.4E-01	C	N/A	N/A	YES	DLASL
	7005-72-3	4-Chlorophenyl-phenylether	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	1.8E+01	N	N/A	N/A	NO	DLBSL
	106-44-5	4-Methylphenol	ND		ND		µg/L		0/13	10 - 11	1.1E+01	N/A	1.8E+01	N	4.0E+01	NC2LGW	NO	DLBSL
	100-01-6	4-Nitroaniline	ND		ND		µg/L		0/13	10 - 11	1.1E+01	N/A	3.4E+00	C*	N/A	N/A	YES	DLASL
	100-02-7	4-Nitrophenol	ND		ND		µg/L		0/13	10 - 11	1.1E+01	N/A	1.2E-01	C	N/A	N/A	YES	DLASL

TABLE G 2.8

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier		Maximum [1] Concentration Qualifier		Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	83-32-9	Acenaphthene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	2.2E+02	N	8.0E+01	NC2LGW	NO	DLBSL
	208-96-8	Acenaphthylene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	2.2E+02	N	2.0E+02	NC2LGW	NO	DLBSL
	98-86-2	Acetophenone	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	3.7E+02	N	N/A	N/A	NO	DLBSL
	120-12-7	Anthracene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	1.1E+03	N	2.0E+03	NC2LGW	NO	DLBSL
	1912-24-9	Atrazine	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	2.9E-01	C	3.0E+00	MCL, N2CLGW	YES	DLASL
	100-52-7	Benzaldehyde	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	3.7E+02	N	N/A	N/A	NO	DLBSL
	56-55-3	Benzo(a)anthracene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	2.9E-02	C	5.0E-02	NC2LGW	YES	DLASL
	50-32-8	Benzo(a)pyrene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	2.9E-03	C	2.0E-01	MCL	YES	DLASL
															5.0E-03	NC2LGW		
	205-99-2	Benzo(b)fluoranthene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	2.9E-02	C	5.0E-02	NC2LGW	YES	DLASL
	191-24-2	Benzo(g,h,i)perylene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	1.1E+02	N	2.0E+02	NC2LGW	NO	DLBSL
	207-08-9	Benzo(k)fluoranthene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	2.9E-01	C	5.0E-01	NC2LGW	NO	DLBSL
	111-91-1	bis(2-Chloroethoxy)methane	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	1.1E+01	N	N/A	N/A	NO	DLBSL
	111-44-4	bis(2-Chloroethyl)ether	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	1.2E-02	C	3.0E-02	NC2LGW	YES	DLASL
	117-81-7	bis(2-Ethylhexyl)phthalate	2.2E+00	J	2.2E+00	J	µg/L	IR69-GW04DW-10A	1/13	5 - 5.3	2.2E+00	N/A	4.8E+00	C	6.0E+00	MCL	NO	BSL
															3.0E+00	NC2LGW		
	85-68-7	Butylbenzylphthalate	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	3.5E+01	C	1.0E+03	NC2LGW	NO	DLBSL
	105-60-2	Caprolactam	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	1.8E+03	N	4.0E+03	NC2LGW	NO	DLBSL
	86-74-8	Carbazole	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	N/A		N/A	N/A	NO	NTX
	218-01-9	Chrysene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	2.9E+00	C	5.0E+00	NC2LGW	NO	DLBSL
	53-70-3	Dibenz(a,h)anthracene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	2.9E-03	C	5.0E-03	NC2LGW	YES	DLASL
	132-64-9	Dibenzofuran	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	3.7E+00	N	N/A	N/A	YES	DLASL
	84-66-2	Diethylphthalate	6.3E-01	J	6.3E-01	J	µg/L	IR69-GW04DW-10A	1/13	5 - 5.3	6.3E-01	N/A	2.9E+03	N	6.0E+03	NC2LGW	NO	BSL
	60-51-5	Dimethoate	ND		ND		µg/L		0/13	1.9 - 2	2.0E+00	N/A	7.3E-01	N	N/A	N/A	YES	DLASL
	131-11-3	Dimethyl phthalate	5.8E-01	J	1.7E+00	J	µg/L	IR69-GW04IW-10A	2/13	5 - 5.3	1.7E+00	N/A	N/A		N/A	N/A	NO	NTX
	84-74-2	Di-n-butylphthalate	2.0E+00	J	3.9E+00	J	µg/L	IR69-GW04IW-10A	2/13	5 - 5.3	3.9E+00	N/A	3.7E+02	N	7.0E+02	NC2LGW	NO	BSL
	117-84-0	Di-n-octylphthalate	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	N/A		1.0E+02	NC2LGW	NO	NTX
	52-85-7	Famphur	ND		ND		µg/L		0/13	1.9 - 2	2.0E+00	N/A	N/A		N/A	N/A	NO	NTX
	206-44-0	Fluoranthene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	1.5E+02	N	3.0E+02	NC2LGW	NO	DLBSL
	86-73-7	Fluorene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	1.5E+02	N	3.0E+02	NC2LGW	NO	DLBSL
	118-74-1	Hexachlorobenzene	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	4.2E-02	C	1.0E+00	MCL	YES	DLASL
															2.0E-02	NC2LGW		
	87-68-3	Hexachlorobutadiene	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	8.6E-01	C*	4.0E-01	NC2LGW	YES	DLASL
	77-47-4	Hexachlorocyclopentadiene	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	2.2E+01	N	5.0E+01	N/A	NO	DLBSL
	67-72-1	Hexachloroethane	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	3.7E+00	C**	N/A	N/A	YES	DLASL
	193-39-5	Indeno(1,2,3-cd)pyrene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	2.9E-02	C	5.0E-02	NC2LGW	YES	DLASL
	78-59-1	Isophorone	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	7.1E+01	C	4.0E+01	NC2LGW	NO	DLBSL
	91-20-3	Naphthalene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	1.4E-01	C*	6.0E+00	NC2LGW	YES	DLASL
	621-64-7	n-Nitroso-di-n-propylamine	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	9.6E-03	C	N/A	N/A	YES	DLASL
	86-30-6	n-Nitrosodiphenylamine	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	1.4E+01	C	7.0E-04	NC2LGW	NO	DLBSL
	98-95-3	Nitrobenzene	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	1.2E-01	C	N/A	N/A	YES	DLASL
	87-86-5	Pentachlorophenol	ND		ND		µg/L		0/13	10 - 11	1.1E+01	N/A	1.7E-01	C	1.0E+00	MCL	YES	DLASL
															3.0E-01	NC2LGW		
	85-01-8	Phenanthrene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	1.1E+03	N	2.0E+02	NC2LGW	NO	DLBSL
	108-95-2	Phenol	ND		ND		µg/L		0/13	10 - 11	1.1E+01	N/A	1.1E+03	N	3.0E+01	NC2LGW	NO	DLBSL
	298-02-2	Phorate	ND		ND		µg/L		0/13	0.94 - 1	1.0E+00	N/A	7.3E-01	N	1.0E+00	NC2LGW	YES	DLASL
	129-00-0	Pyrene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	1.1E+02	N	2.0E+03	NC2LGW	NO	DLBSL
	72-54-8	4,4'-DDD	ND		ND		µg/L		0/13	0.1 - 0.1	1.0E-01	N/A	2.8E-01	C	1.0E-01	NC2LGW	NO	DLBSL
	72-55-9	4,4'-DDE	7.1E-03	J	7.1E-03	J	µg/L	IR69-GW15DW-10A	1/13	0.1 - 0.1	7.1E-03	N/A	2.0E-01	C	N/A	N/A	NO	BSL

TABLE G 2.8

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier		Maximum [1] Concentration Qualifier		Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	50-29-3	4,4'-DDT	5.6E-02	J	5.6E-02	J	µg/L	IR69-GW15DW-10A	1/13	0.1 - 0.1	5.6E-02	N/A	2.0E-01	C*	1.0E-01	NC2LGW	NO	BSL
	309-00-2	Aldrin	ND		ND		µg/L		0/13	0.05 - 0.05	5.0E-02	N/A	4.0E-03	C	N/A	N/A	YES	DLASL
	319-84-6	alpha-BHC	ND		ND		µg/L		0/13	0.05 - 0.05	5.0E-02	N/A	1.1E-02	C	2.0E-02	NC2LGW	YES	DLASL
	5103-71-9	alpha-Chlordane	6.7E-03	J	3.8E-02	J	µg/L	IR69-GW15IW-10A	2/13	0.05 - 0.05	3.8E-02	N/A	1.9E-01	C*	1.0E-01	NC2LGW	NO	BSL
	12674-11-2	Aroclor-1016	ND		ND		µg/L		0/13	0.93 - 0.93	9.3E-01	N/A	2.6E-01	C**	N/A	N/A	YES	DLASL
	11104-28-2	Aroclor-1221	ND		ND		µg/L		0/13	1.3 - 1.3	1.3E+00	N/A	6.8E-03	C	N/A	N/A	YES	DLASL
	11141-16-5	Aroclor-1232	ND		ND		µg/L		0/13	0.93 - 0.93	9.3E-01	N/A	6.8E-03	C	N/A	N/A	YES	DLASL
	53469-21-9	Aroclor-1242	ND		ND		µg/L		0/13	0.63 - 0.63	6.3E-01	N/A	3.4E-02	C	N/A	N/A	YES	DLASL
	12672-29-6	Aroclor-1248	ND		ND		µg/L		0/13	0.63 - 0.63	6.3E-01	N/A	3.4E-02	C	N/A	N/A	YES	DLASL
	11097-69-1	Aroclor-1254	ND		ND		µg/L		0/13	0.63 - 0.63	6.3E-01	N/A	3.4E-02	C*	5.0E-01	MCL	YES	DLASL
	11096-82-5	**Aroclor-1260**	**3.4E-01**	**J**	**3.4E-01**	**J**	**µg/L**	**IR69-GW15IW-10A**	**1/13**	**0.93 - 0.93**	**3.4E-01**	**N/A**	**3.4E-02**	**C**	**5.0E-01**	**MCL**	**YES**	**ASL**
	86-50-0	Azinphos methyl	ND		ND		µg/L		0/13	0.94 - 1	1.0E+00	N/A	1.1E+01	N	N/A	N/A	NO	DLBSL
	319-85-7	beta-BHC	ND		ND		µg/L		0/13	0.05 - 0.05	5.0E-02	N/A	3.7E-02	C	N/A	N/A	YES	DLASL
	35400-43-2	Bolstar	ND		ND		µg/L		0/13	0.94 - 1	1.0E+00	N/A	N/A		N/A	N/A	NO	NTX
	2921-88-2	Chlorpyrifos	ND		ND		µg/L		0/13	0.94 - 1	1.0E+00	N/A	1.1E+01	N	N/A	N/A	NO	DLBSL
	56-72-4	Coumaphos	ND		ND		µg/L		0/13	0.94 - 1	1.0E+00	N/A	N/A		N/A	N/A	NO	NTX
	319-86-8	delta-BHC	2.0E-02	J	2.0E-02	J	µg/L	IR69-GW04DW-10A	1/13	0.05 - 0.05	2.0E-02	N/A	3.7E-02	C	2.0E-02	NC2LGW	NO	BSL
	8065-48-3	Demeton-O	ND		ND		µg/L		0/13	2.4 - 2.5	2.5E+00	N/A	1.5E-01	N	N/A	N/A	YES	DLASL
	8065-48-3	Demeton-S	ND		ND		µg/L		0/13	2.4 - 2.5	2.5E+00	N/A	1.5E-01	N	N/A	N/A	YES	DLASL
	333-41-5	Diazinon	ND		ND		µg/L		0/13	0.94 - 1	1.0E+00	N/A	2.6E+00	N	N/A	N/A	NO	DLBSL
	62-73-7	Dichlorvos	ND		ND		µg/L		0/13	1.9 - 2	2.0E+00	N/A	2.3E-01	C*	N/A	N/A	YES	DLASL
	60-57-1	**Dieldrin**	**2.6E-02**	**J**	**2.6E-02**	**J**	**µg/L**	**IR69-GW15DW-10A**	**1/13**	**0.1 - 0.1**	**2.6E-02**	**N/A**	**4.2E-03**	**C**	**2.0E-03**	**NC2LGW**	**YES**	**ASL**
	298-04-4	Disulfoton	ND		ND		µg/L		0/13	1.9 - 2	2.0E+00	N/A	1.5E-01	N	3.0E-01	NC2LGW	YES	DLASL
	959-98-8	Endosulfan I	3.6E-02	J	3.6E-02	J	µg/L	IR69-GW15IW-10A	1/13	0.05 - 0.05	3.6E-02	N/A	2.2E+01	N	4.0E+01	NC2LGW	NO	BSL
	33213-65-9	Endosulfan II	7.3E-03	J	7.3E-03	J	µg/L	IR69-GW15DW-10A	1/13	0.1 - 0.1	7.3E-03	N/A	2.2E+01	N	4.0E+01	NC2LGW	NO	BSL
	1031-07-8	Endosulfan sulfate	1.2E-02	J	1.2E-02	J	µg/L	IR69-GW15DW-10A	1/13	0.1 - 0.1	1.2E-02	N/A	2.2E+01	N	4.0E+01	NC2LGW	NO	BSL
	72-20-8	Endrin	1.6E-01		1.9E-01		µg/L	IR69-GW15DW-10A	2/13	0.1 - 0.1	1.9E-01	N/A	1.1E+00	N	2.0E+00	MCL, N2CLGW	NO	BSL
	7421-93-4	Endrin aldehyde	1.4E-02	J	1.4E-02	J	µg/L	IR69-GW15DW-10A	1/13	0.1 - 0.1	1.4E-02	N/A	1.1E+00	N	2.0E+00	MCL, N2CLGW	NO	BSL
	53494-70-5	Endrin ketone	ND		ND		µg/L		0/13	0.1 - 0.1	1.0E-01	N/A	1.1E+00	N	2.0E+00	MCL, N2CLGW	NO	DLBSL
	13194-48-4	Ethoprop	ND		ND		µg/L		0/13	0.47 - 0.5	5.0E-01	N/A	N/A		N/A	N/A	NO	NTX
	115-90-2	Fensulfothion	ND		ND		µg/L		0/13	4.7 - 5	5.0E+00	N/A	N/A		N/A	N/A	NO	NTX
	2104-64-5	Ethyl p-nitrophenyl phenylphosphorothioate	ND		ND		µg/L		0/13	0.94 - 1	1.0E+00	N/A	3.7E-02	N	N/A	N/A	YES	DLASL
	55-38-9	Fenthion	ND		ND		µg/L		0/13	0.94 - 1	1.0E+00	N/A	N/A		N/A	N/A	NO	NTX
	58-89-9	gamma-BHC (Lindane)	ND		ND		µg/L		0/13	0.05 - 0.05	5.0E-02	N/A	6.1E-02	C	2.0E-01	MCL	NO	DLBSL
															3.0E-02	NC2LGW		
	5103-74-2	gamma-Chlordane	9.4E-02		1.8E-01		µg/L	IR69-GW15IW-10A	2/13	0.05 - 0.05	1.8E-01	N/A	1.9E-01	C*	1.0E-01	NC2LGW	NO	BSL
	76-44-8	Heptachlor	ND		ND		µg/L		0/13	0.05 - 0.05	5.0E-02	N/A	1.5E-02	C	4.0E-01	MCL	YES	DLASL
															8.0E-03	NC2LGW		
	1024-57-3	**Heptachlor epoxide**	**3.1E-02**	**J**	**1.2E-01**	**J**	**µg/L**	**IR69-GW15IW-10A**	**2/13**	**0.05 - 0.05**	**1.2E-01**	**N/A**	**7.4E-03**	**C***	**2.0E-01**	**MCL**	**YES**	**ASL**
															4.0E-03	**NC2LGW**		
	121-75-5	Malathion	ND		ND		µg/L		0/13	0.94 - 1	1.0E+00	N/A	7.3E+01	N	N/A	N/A	NO	DLBSL
	150-50-5	Merphos	ND		ND		µg/L		0/13	1.4 - 1.5	1.5E+00	N/A	1.1E-01	N	N/A	N/A	YES	DLASL
	72-43-5	Methoxychlor	ND		ND		µg/L		0/13	0.5 - 0.5	5.0E-01	N/A	1.8E+01	N	4.0E+01	MCL, N2CLGW	NO	DLBSL
	298-00-0	Methyl parathion	ND		ND		µg/L		0/13	0.47 - 0.5	5.0E-01	N/A	9.1E-01	N	N/A	N/A	NO	DLBSL
	7786-34-7	Mevinphos	ND		ND		µg/L		0/13	1.9 - 2	2.0E+00	N/A	N/A		N/A	N/A	NO	NTX
	6923-22-4	Monocrotophos	ND		ND		µg/L		0/13	9.4 - 10	1.0E+01	N/A	N/A		N/A	N/A	NO	NTX
	300-76-5	Naled	ND		ND		µg/L		0/13	4.7 - 5	5.0E+00	N/A	7.3E+00	N	N/A	N/A	NO	DLBSL
	56-38-2	Parathion	ND		ND		µg/L		0/13	0.94 - 1	1.0E+00	N/A	2.2E+01	N	N/A	N/A	NO	DLBSL
	299-84-3	Ronnel	ND		ND		µg/L		0/13	0.94 - 1	1.0E+00	N/A	1.8E+02	N	N/A	N/A	NO	DLBSL

TABLE G 2.8

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier		Maximum [1] Concentration Qualifier		Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	3689-24-5	Sulfotepp	ND		ND		µg/L		0/13	0.47 - 0.5	5.0E-01	N/A	1.8E+00	N	N/A	N/A	NO	DLBSL
	22248-79-9	Tetrachlorvinphos	ND		ND		µg/L		0/13	0.94 - 1	1.0E+00	N/A	N/A		N/A	N/A	NO	NTX
	297-97-2	Thionazin	ND		ND		µg/L		0/13	0.94 - 1	1.0E+00	N/A	N/A		N/A	N/A	NO	NTX
	34643-46-4	Tokuthion (Prothiophos)	ND		ND		µg/L		0/13	0.94 - 1	1.0E+00	N/A	N/A		N/A	N/A	NO	NTX
	8001-35-2	Toxaphene	ND		ND		µg/L		0/13	2.5 - 2.5	2.5E+00	N/A	6.1E-02	C	3.0E+00	MCL	YES	DLASL
															3.0E-02	NC2LGW		
	327-98-0	Trichloronate	ND		ND		µg/L		0/13	0.94 - 1	1.0E+00	N/A	N/A		N/A	N/A	NO	NTX
	7429-90-5	Aluminum	1.7E+02	J	2.4E+03		µg/L	IR69-GW04DW-10A	7/13	200 - 200	2.4E+03	1.9E+03	3.7E+03	N	N/A	N/A	NO	BSL
	7440-36-0	Antimony	ND		ND		µg/L		0/13	10 - 10	1.0E+01	3.3E+00	1.5E+00	N	6.0E+00	MCL	YES	DLASL
	7440-38-2	Arsenic	ND		ND		µg/L		0/13	10 - 10	1.0E+01	5.8E+00	4.5E-02	C	1.0E+01	MCL, N2CLGW	YES	DLASL
	7440-39-3	Barium	4.2E+00	J	5.6E+01	J	µg/L	IR69-GW15IW-10A	13/13	200 - 200	5.6E+01	8.6E+01	7.3E+02	N	2.0E+03	MCL	NO	BSL
															7.0E+02	NC2LGW		
	7440-41-7	Beryllium	ND		ND		µg/L		0/13	5 - 5	5.0E+00	3.1E-01	7.3E+00	N	N/A	N/A	NO	DLBSL
	7440-43-9	Cadmium	ND		ND		µg/L		0/13	5 - 5	5.0E+00	3.6E-01	1.8E+00	N	5.0E+00	MCL	YES	DLASL
															2.0E+00	NC2LGW		
	7440-70-2	Calcium	2.5E+04		1.2E+05		µg/L	IR69-GW15DW-10A	13/13	5000 - 5000	1.2E+05	6.9E+04	N/A		N/A	N/A	NO	NUT
	7440-47-3	**Chromium**	**1.0E+00**	**J**	**2.2E+01**		**µg/L**	**IR69-GW11DW-10A**	**7/13**	**10 - 10**	**2.2E+01**	**3.1E+00**	**4.3E-02**	**C**	**1.0E+02**	**MCL**	**YES**	**ASL**
															1.0E+01	**N2CLGW**		
	7440-48-4	Cobalt	ND		ND		µg/L		0/13	5 - 5	5.0E+00	3.4E+00	1.1E+00	N	N/A	N/A	YES	DLASL
	7440-50-8	Copper	1.8E+00	J	3.5E+00	J	µg/L	IR69-GW15DW-10A	3/13	5 - 5	3.5E+00	2.8E+00	1.5E+02	N	1.3E+03	MCL	NO	BSL
															1.0E+03	NC2LGW		
	7439-89-6	**Iron**	**3.1E+02**		**1.5E+04**		**µg/L**	**IR69-GW19UW-10A**	**13/13**	**100 - 100**	**1.5E+04**	**6.0E+03**	**2.6E+03**	**N**	**3.0E+02**	**NC2LGW**	**YES**	**ASL**
	7439-92-1	Lead	2.1E+00	J	4.4E+00		µg/L	IR69-GW04IW-10A	9/13	3 - 3	4.4E+00	2.8E+00	N/A		1.5E+01	MCL, N2CLGW	NO	BSL
	7439-95-4	Magnesium	1.7E+03	J	5.3E+03		µg/L	IR69-GW15DW-10A	6/13	5000 - 5000	5.3E+03	6.4E+03	N/A		N/A	N/A	NO	NUT
	7439-96-5	Manganese	3.4E+01		2.1E+02		µg/L	IR69-GW15IW-10A	13/13	10 - 10	2.1E+02	2.1E+02	8.8E+01	N	5.0E+01	NC2LGW	NO	BBK
	7439-97-6	Mercury	ND		ND		µg/L		0/13	0.2 - 0.2	2.0E-01	1.0E-01	1.1E+00	N	2.0E+00	MCL	NO	DLBSL
															1.0E+00	NC2LGW		
	7440-02-0	Nickel	1.3E+00	J	2.6E+00	J	µg/L	IR69-GW15DW-10A	4/13	5 - 5	2.6E+00	8.0E+00	7.3E+01	N	1.0E+02	NC2LGW	NO	BSL
	7440-09-7	Potassium	1.1E+03	J	4.3E+03	J	µg/L	IR69-GW04DW-10A	11/13	5000 - 5000	4.3E+03	3.3E+03	N/A		N/A	N/A	NO	NUT
	7782-49-2	Selenium	4.4E+00	J	8.0E+00		µg/L	IR69-GW28IW-10A	4/13	5 - 5	8.0E+00	3.1E+00	1.8E+01	N	5.0E+01	MCL	NO	BSL
															2.0E+01	NC2LGW		
	7440-22-4	Silver	ND		ND		µg/L		0/13	5 - 5	5.0E+00	7.7E-01	1.8E+01	N	2.0E+01	NC2LGW	NO	DLBSL
	7440-23-5	Sodium	1.2E+04		2.0E+05		µg/L	IR69-GW28IW-10A	13/13	5000 - 5000	2.0E+05	2.3E+04	N/A		N/A	N/A	NO	NUT
	7440-28-0	**Thallium**	**5.6E+00**	**J**	**5.6E+00**	**J**	**µg/L**	**IR69-GW28IW-10A**	**1/13**	**10 - 10**	**5.6E+00**	**3.8E+00**	**3.7E-02**	**N**	**2.0E+00**	**MCL**	**YES**	**ASL**
	7440-62-2	Vanadium	8.5E-01	J	7.6E+00	J	µg/L	IR69-GW11DW-10A	6/13	20 - 20	7.6E+00	4.7E+00	1.8E+01	N	N/A	N/A	NO	BSL
	7440-66-6	Zinc	2.6E+01		2.9E+01		µg/L	IR69-GW04DW-10A	5/13	20 - 20	2.9E+01	4.2E+01	1.1E+03	N	1.0E+03	NC2LGW	NO	BSL

[1] Minimum/Maximum detected concentrations.
[2] Maximum concentration is used for screening. If ND, maximum detection limit used for screening.
[3] Background values are two times the mean shallow groundwater basewide background concentrations.
[4] Oak Ridge National Laboratory (ORNL). June 2011. Regional Screening Levels for Chemical Contaminants at Superfund Sites.
Tap Water RSLs (based on 10^{-6} for carcinogens and HQ of 0.1 for noncarcinogens). [Online]. Available: http://epa-prgs.ornl.gov/chemicals/index.sh
RSL value for 1,3-Dichloropropene used as a surrogate for cis-1,3-Dichloropropene and trans-1,3-Dichloropropene.
RSL value for 2-Chlorophenol used as surrogate for 2-Nitrophenol.
RSL value for 2-Nitroaniline used as surrogate for 3-N'itroaniline.
RSL value for Acenaphthene used as surrogate for Acenaphthylene.
RSL value for Anthracene used as surrogate for Phenanthrene.
RSL value for Chlordane used as surrogate for alpha-Chlordane and gamma-Chlordane.
RSL value for Chromium(VI) used as surrogate for Chromium.
RSL value for Demeton used as surrogate for Demeton-O and Demeton-S
RSL value for Endosulfan used as surrogate for Endosulfan I, Endosulfan II, and Endosulfan sulfate.
RSL value for Endrin used as surrogate for Endrin aldehyde and Endrin ketone.
RSL value for Manganese (water) used as surrogate for Manganese.
RSL value for Mercury Chloride (and other Mercury salts) used as surrogate for Mercury.

COPC - Chemical of potential concern
ARAR/TBC - Applicable or relevant and appropriate requirement/to be considered
N/A - Not applicable/not available
ND - Not detected
C - Carcinogenic
C* - Carcinogenic (where nc RSL<100 x ca RSL)
C**- Carcinogenic (where nc RSL < 10 X ca RSL, therefore, nc RSL used)
J - Estimated value
MCL - Drinking water Maximum Contaminant Level (MCL) (USEPA, 2010).
N - Noncarcinogenic
NA - Not available
µg/L - Microgram per liter
NC2LGW - North Carolina Classifications and Groundwater Quality Standards, amended January 2010.

TABLE G 2.8

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening [2]	Background Value [3]	Screening Toxicity Value [4]	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection [5]

RSL value for Methoxychlor used as surrogate for 4-Chlorophenyl-phenylether.
RSL value for n-Hexane used as surrogate for Methylcyclohexane.
RSL value for Nitrobenzene used as surrogate for 4-Nitrophenol.
RSL value for Pyrene used as surrogate for Benzo(g,h,i)perylene.
RSL value for technical-HCH used as surrogate for delta-BHC.
The soil value of 400 mg/kg for lead is from the Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities, USEPA, July 14, 1994.

[5] Rationale Codes

Selection Reason:	Above Screening Levels (ASL)
	Detection Limit Above Screening Levels (DLASL), not evaluated quantitatively
Deletion Reason:	No Toxicity Information (NTX)
	Essential Nutrient (NUT)
	Below Screening Level (BSL)
	Detection Limit Below Screening Level (DLBSL)
	Below Background Level (BBK)

Generated by:M. White/ATL
Checked by: T.Carleton/DAY

TABLE G 2.9

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Air

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening Toxicity Value	[4]	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
Groundwater at	71-55-6	1,1,1-Trichloroethane	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	9.1E+02	N	2.0E+02	MCL, N2CLGW	NO	DLBSL
Surficial Aquifer	**79-34-5**	**1,1,2,2-Tetrachloroethane**	**1.7E-01**	**J**	**9.8E+00**		**µg/L**	**IR69-GW02-10A**	**4/6**	**0.5 - 3.1**	**9.8E+00**	**N/A**	**6.7E-02**	**C**	**2.0E-01**	**NC2LGW**	**YES**	**ASL**
Water Vapors at	76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	5.9E+03	N	2.0E+05	NC2LGW	NO	DLBSL
Showerhead and	**79-00-5**	**1,1,2-Trichloroethane**	**5.0E-01**	**J**	**7.8E+00**		**µg/L**	**IR69-GW02-10A**	**3/6**	**0.5 - 3.1**	**7.8E+00**	**N/A**	**4.2E-02**	**C****	**5.0E+00**	**MCL**	**YES**	**ASL**
Excavation Pit	75-34-3	1,1-Dichloroethane	4.3E-02	J	4.3E-02	J	µg/L	IR69-GW03-10A	1/6	0.5 - 3.1	4.3E-02	N/A	2.4E+00	C	7.0E+00	MCL	NO	BSL
															6.0E+00	NC2LGW		
	75-35-4	1,1-Dichloroethene	2.1E-01	J	5.3E-01	J	µg/L	IR69-GW03D-10A	2/6	0.5 - 3.1	5.3E-01	N/A	3.4E+01	N	7.0E+00	NC2LGW	NO	BSL
	120-82-1	1,2,4-Trichlorobenzene	1.3E-01	J	1.3E-01	J	µg/L	IR69-GW15-10A	1/6	0.5 - 3.1	1.3E-01	N/A	4.1E-01	C**	7.0E+01	MCL, N2CLGW	NO	BSL
	96-12-8	1,2-Dibromo-3-chloropropane	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	3.2E-04	C	2.0E-01	MCL	YES	DLASL
															4.0E-02	NC2LGW		
	106-93-4	1,2-Dibromoethane	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	6.5E-03	C	5.0E-02	MCL	YES	DLASL
															2.0E-02	NC2LGW		
	95-50-1	1,2-Dichlorobenzene	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	3.7E+01	N	6.0E+02	MCL	NO	DLBSL
															2.0E+01	NC2LGW		
	107-06-2	**1,2-Dichloroethane**	**4.8E-01**	**J**	**1.3E+01**		**µg/L**	**IR69-GW15-10A**	**4/6**	**0.5 - 3.1**	**1.3E+01**	**N/A**	**1.5E-01**	**C***	**5.0E+00**	**MCL**	**YES**	**ASL**
															4.0E-01	NC2LGW		
	78-87-5	1,2-Dichloropropane	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	3.9E-01	C*	5.0E+00	MCL	YES	DLASL
															6.0E-01	NC2LGW		
	541-73-1	**1,3-Dichlorobenzene**	**1.4E-01**	**J**	**5.5E-01**		**µg/L**	**IR69-GW15-10A**	**2/6**	**0.5 - 3.1**	**5.5E-01**	**N/A**	**4.3E-01**	**C**	**2.0E+02**	**NC2LGW**	**YES**	**ASL**
	106-46-7	**1,4-Dichlorobenzene**	**3.3E+00**		**3.3E+00**		**µg/L**	**IR69-GW15-10A**	**1/6**	**0.5 - 3.1**	**3.3E+00**	**N/A**	**4.3E-01**	**C**	**7.5E+01**	**MCL**	**YES**	**ASL**
															6.0E+00	NC2LGW		
	78-93-3	2-Butanone	ND		ND		µg/L		0/2	2.5 - 16	1.6E+01	N/A	7.1E+02	N	4.0E+03	NC2LGW	NO	DLBSL
	591-78-6	2-Hexanone	ND		ND		µg/L		0/6	2.5 - 16	1.6E+01	N/A	4.7E+00	N	4.0E+02	NC2LGW	YES	DLASL
	108-10-1	4-Methyl-2-pentanone	ND		ND		µg/L		0/6	2.5 - 16	1.6E+01	N/A	2.0E+02	N	N/A	N/A	NO	DLBSL
	67-64-1	Acetone	ND		ND		µg/L		0/3	2.5 - 16	1.6E+01	N/A	2.2E+03	N	6.0E+03	NC2LGW	NO	DLBSL
	71-43-2	**Benzene**	**5.8E-01**		**5.8E-01**		**µg/L**	**IR69-GW03-10A**	**1/6**	**0.5 - 3.1**	**5.8E-01**	**N/A**	**4.1E-01**	**C**	**5.0E+00**	**MCL**	**YES**	**ASL**
															1.0E+00	NC2LGW		
	75-27-4	Bromodichloromethane	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	1.2E-01	C	8.0E+01	MCL	YES	DLASL
															6.0E-02	NC2LGW		
	74-83-9	Bromomethane	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	8.7E-01	N	N/A	N/A	YES	DLASL
	75-15-0	Carbon disulfide	4.1E-02	J	1.4E-01	J	µg/L	IR69-GW15-10A	2/6	0.5 - 3.1	1.4E-01	N/A	1.0E+02	N	7.0E+02	NC2LGW	NO	BSL
	56-23-5	Carbon tetrachloride	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	4.4E-01	C	5.0E+00	MCL	YES	DLASL
															3.0E-01	NC2LGW		
	108-90-7	Chlorobenzene	1.3E+00		7.5E+00		µg/L	IR69-GW03D-10A	2/6	0.5 - 3.1	7.5E+00	N/A	9.1E+00	N	1.0E+02	MCL	NO	BSL
															5.0E+01	NC2LGW		
	75-00-3	Chloroethane	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	2.1E+03	N	3.0E+03	NC2LGW	NO	DLBSL
	67-66-3	**Chloroform**	**1.3E+00**		**1.3E+00**		**µg/L**	**IR69-GW04-10A**	**1/6**	**0.5 - 3.1**	**1.3E+00**	**N/A**	**1.9E-01**	**C**	**8.0E+01**	**MCL**	**YES**	**ASL**
															7.0E+01	**NC2LGW**		
	74-87-3	Chloromethane	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	1.9E+01	N	3.0E+00	NC2LGW	NO	DLBSL
	156-59-2	**cis-1,2-Dichloroethene**	**2.1E+00**		**1.8E+02**		**µg/L**	**IR69-GW03-10A**	**5/6**	**0.5 - 3.1**	**1.8E+02**	**N/A**	**7.3E+00**	**N**	**7.0E+01**	**MCL, N2CLGW**	**YES**	**ASL**
	10061-01-5	cis-1,3-Dichloropropene	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	4.3E-01	C*	4.0E-01	NC2LGW	YES	DLASL
	110-82-7	Cyclohexane	2.7E-01	J	2.7E-01	J	µg/L	IR69-GW10-10A	1/6	0.5 - 3.1	2.7E-01	N/A	1.3E+03	N	N/A	N/A	NO	BSL
	124-48-1	Dibromochloromethane	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	1.5E-01	C	8.0E+01	MCL	YES	DLASL
															4.0E-01	NC2LGW		
	75-71-8	Dichlorodifluoromethane (Freon-12)	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	2.0E+01	N	1.0E+03	NC2LGW	NO	DLBSL
	100-41-4	Ethylbenzene	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	1.5E+00	C	7.0E+02	MCL	YES	DLASL
															6.0E+02	NC2LGW		
	98-82-8	Isopropylbenzene	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	6.8E+01	N	5.0E+00	MCL	NO	DLBSL
															7.0E+01	NC2LGW		
	1330-20-7	m- and p-Xylene	ND		ND		µg/L		0/6	1 - 6.3	6.3E+00	N/A	2.0E+01	N	5.0E+02	NC2LGW	NO	DLBSL
	79-20-9	Methyl acetate	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	3.7E+03	N	N/A	N/A	NO	DLBSL
	108-87-2	Methylcyclohexane	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	8.8E+01	N	N/A	N/A	NO	DLBSL
	75-09-2	Methylene chloride	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	4.8E+00	C	5.0E+00	NC2LGW	NO	DLBSL
	1634-04-4	Methyl-tert-butyl ether (MTBE)	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	1.2E+01	C	2.0E+01	NC2LGW	NO	DLBSL
	95-47-6	o-Xylene	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	2.0E+01	N	5.0E+02	NC2LGW	NO	DLBSL
	100-42-5	Styrene	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	1.6E+02	N	1.0E+02	MCL	NO	DLBSL
															7.0E+01	NC2LGW		
	127-18-4	**Tetrachloroethene**	**1.9E-01**	**J**	**1.9E-01**	**J**	**µg/L**	**IR69-GW02-10A**	**1/6**	**0.5 - 3.1**	**1.9E-01**	**N/A**	**1.1E-01**	**C**	**5.0E+00**	**MCL**	**YES**	**ASL**
															7.0E-01	**NC2LGW**		
	108-88-3	Toluene	7.3E-01		8.3E+00		µg/L	IR69-GW04-10A	2/6	0.5 - 3.1	8.3E+00	N/A	2.3E+02	N	1.0E+03	MCL	NO	BSL
															6.0E+02	NC2LGW		
	156-60-5	**trans-1,2-Dichloroethene**	**5.6E-01**		**2.3E+01**		**µg/L**	**IR69-GW02-10A**	**5/6**	**0.5 - 3.1**	**2.3E+01**	**N/A**	**1.1E+01**	**N**	**1.0E+02**	**MCL, N2CLGW**	**YES**	**ASL**
	10061-02-6	trans-1,3-Dichloropropene	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	4.3E-01	C*	4.0E-01	NC2LGW	YES	DLASL
	79-01-6	**Trichloroethene**	**3.0E-01**	**J**	**3.5E+00**		**µg/L**	**IR69-GW03D-10A**	**5/6**	**0.5 - 3.1**	**3.5E+00**	**N/A**	**2.0E+00**	**C**	**5.0E+00**	**MCL**	**YES**	**ASL**

TABLE G 2.9

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Air

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
															3.0E+00	**NC2LGW**		
	75-69-4	Trichlorofluoromethane(Freon-11)	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	1.3E+02	N	2.0E+03	NC2LGW	NO	DLBSL
	75-01-4	**Vinyl chloride**	**2.1E-01**	**J**	**2.0E+01**		**µg/L**	**IR69-GW02-10A**	**4/6**	**0.5 - 3.1**	**2.0E+01**	**N/A**	**1.6E-02**	**C**	**5.0E+00**	**MCL**	**YES**	**ASL**
															3.0E-02	**NC2LGW**		
	1330-20-7	Xylene, total	ND		ND		µg/L		0/6	0.5 - 3.1	3.1E+00	N/A	2.0E+01	N	2.0E+00	MCL	NO	DLBSL
															5.0E+02	NC2LGW		
	92-52-4	1,1-Biphenyl	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	8.3E-02	N	4.0E+02	NC2LGW	YES	DLASL
	108-60-1	2,2'-Oxybis(1-chloropropane)	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	3.2E-01	C	N/A	N/A	YES	DLASL
	91-58-7	2-Chloronaphthalene	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	2.9E+02	N	N/A	N/A	NO	DLBSL
	95-57-8	2-Chlorophenol	ND		ND		µg/L		0/6	10 - 11	1.1E+01	N/A	1.8E+01	N	4.0E-01	NC2LGW	NO	DLBSL
	91-57-6	2-Methylnaphthalene	1.6E-02	J	1.3E-01	J	µg/L	IR69-GW03-10A	3/6	0.2 - 0.22	1.3E-01	N/A	1.5E+01	N	3.0E+01	NC2LGW	NO	BSL
	88-75-5	2-Nitrophenol	ND		ND		µg/L		0/6	10 - 11	1.1E+01	N/A	1.8E+01	N	N/A	N/A	NO	DLBSL
	99-09-2	3-Nitroaniline	ND		ND		µg/L		0/6	10 - 11	1.1E+01	N/A	3.7E+01	N	N/A	N/A	NO	DLBSL
	59-50-7	4-Chloro-3-methylphenol	ND		ND		µg/L		0/6	10 - 11	1.1E+01	N/A	3.7E+02	N	N/A	N/A	NO	DLBSL
	106-47-8	4-Chloroaniline	ND		ND		µg/L		0/6	10 - 11	1.1E+01	N/A	3.4E-01	C	N/A	N/A	YES	DLASL
	7005-72-3	4-Chlorophenyl-phenylether	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	1.8E+01	N	N/A	N/A	NO	DLBSL
	100-02-7	4-Nitrophenol	ND		ND		µg/L		0/6	10 - 11	1.1E+01	N/A	1.2E-01	C	N/A	N/A	YES	DLASL
	83-32-9	Acenaphthene	ND		ND		µg/L		0/6	0.2 - 0.22	2.2E-01	N/A	2.2E+02	N	8.0E+01	NC2LGW	NO	DLBSL
	208-96-8	Acenaphthylene	1.0E-02	J	1.0E-02	J	µg/L	IR69-GW03D-10A	1/6	0.2 - 0.22	1.0E-02	N/A	2.2E+02	N	2.0E+02	NC2LGW	NO	BSL
	98-86-2	Acetophenone	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	3.7E+02	N	N/A	N/A	NO	DLBSL
	120-12-7	Anthracene	ND		ND		µg/L		0/6	0.2 - 0.22	2.2E-01	N/A	1.1E+03	N	2.0E+03	NC2LGW	NO	DLBSL
	100-52-7	Benzaldehyde	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	3.7E+02	N	N/A	N/A	NO	DLBSL
	191-24-2	Benzo(g,h,i)perylene	ND		ND		µg/L		0/6	0.2 - 0.22	2.2E-01	N/A	1.1E+02	N	2.0E+02	NC2LGW	NO	DLBSL
	111-44-4	bis(2-Chloroethyl)ether	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	1.2E-02	C	3.0E-02	NC2LGW	YES	DLASL
	86-74-8	Carbazole	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	N/A		N/A	N/A	NO	NTX
	132-64-9	Dibenzofuran	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	3.7E+00	N	N/A	N/A	YES	DLASL
	131-11-3	Dimethyl phthalate	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	N/A		N/A	N/A	NO	NTX
	117-84-0	Di-n-octylphthalate	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	4.8E+00	C	1.0E+02	NC2LGW	YES	DLASL
	86-73-7	Fluorene	ND		ND		µg/L		0/6	0.2 - 0.22	2.2E-01	N/A	1.5E+02	N	3.0E+02	NC2LGW	NO	DLBSL
	91-20-3	Naphthalene	ND		ND		µg/L		0/6	0.2 - 0.22	2.2E-01	N/A	1.4E-01	C*	6.0E+00	NC2LGW	YES	DLASL
	98-95-3	Nitrobenzene	ND		ND		µg/L		0/6	5 - 5.4	5.4E+00	N/A	1.2E-01	C	N/A	N/A	YES	DLASL
	85-01-8	Phenanthrene	ND		ND		µg/L		0/6	0.2 - 0.22	2.2E-01	N/A	1.1E+03	N	2.0E+02	NC2LGW	NO	DLBSL
	129-00-0	Pyrene	1.5E-02	J	1.8E-02	J	µg/L	IR69-GW15-10A	2/6	0.2 - 0.22	1.8E-02	N/A	1.1E+02	N	2.0E+03	NC2LGW	NO	BSL
	11104-28-2	Aroclor-1221	ND		ND		µg/L		0/6	1.3 - 1.4	1.4E+00	N/A	6.8E-03	C	N/A	N/A	YES	DLASL
	11141-16-5	Aroclor-1232	ND		ND		µg/L		0/6	0.93 - 1	1.0E+00	N/A	6.8E-03	C	N/A	N/A	YES	DLASL

[1] Minimum/Maximum detected concentrations.
[2] Maximum concentration is used for screening. If ND, maximum detection limit used for screening.
[3] Background values are two times the mean shallow groundwater basewide background concentrations.
[4] Oak Ridge National Laboratory (ORNL). June 2011. Regional Screening Levels for Chemical Contaminants at Superfund Sites.
Tap Water RSLs (based on $1C^{-6}$ for carcinogens and HQ of 0.1 for noncarcinogens). [Online]. Available: http://epa-prgs.ornl.gov/chemicals/index.sh
RSL value for 1,3-Dichloropropene used as a surrogate for cis-1,3-Dichloropropene and trans-1,3-Dichloropropene.
RSL value for 2-Chlorophenol used as surrogate for 2-Nitrophenol.
RSL value for 2-Nitroaniline used as surrogate for 3-N'itroaniline.
RSL value for Acenaphthene used as surrogate for Acenaphthylene.
RSL value for Anthracene used as surrogate for Phenanthrene.
RSL value for Methoxychlor used as surrogate for 4-Chlorophenyl-phenylether.
RSL value for n-Hexane used as surrogate for Methylcyclohexane.
RSL value for Nitrobenzene used as surrogate for 4-Nitrophenol.
RSL value for xlyene, mixture used as surrogate for m&pXylene.
RSL value for n-hexane used as surrogate for methylcyclohexane.
RSL value for 2-nitroaniline used as surrogate for 3-nitroaniline.
[5] Rationale Codes

Selection Reason:	Above Screening Levels (ASL)
	Detection Limit Above Screening Levels (DLASL), not evaluated quantitatively
Deletion Reason:	No Toxicity Information (NTX)
	Essential Nutrient (NUT)
	Below Screening Level (BSL)
	Detection Limit Below Screening Level (DLBSL)
	Below Background Level (BBK)

Generated by:M. White/ATL
Checked by: T.Carleton/DAY

COPC - Chemical of potential concern
ARAR/TBC - Applicable or relevant and appropriate requirement/to be considered
N/A - Not applicable/not available
ND - Not detected
C - Carcinogenic
C* - Carcinogenic (where nc RSL<100 x ca RSL)
C**- Carcinogenic (where nc RSL < 10 X ca RSL, therefore, nc RSL used)
J - Estimated value
MCL - Drinking water Maximum Contaminant Level (MCL) (USEPA, 2010).
N - Noncarcinogenic
NA - Not available
µg/L - Microgram per liter
NC2LGWL - North Carolina Classifications and Groundwater Quality Standards, amended January 2010.

TABLE G 2.10

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Air

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
Groundwater at	71-55-6	1,1,1-Trichloroethane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	9.1E+02	N	2.0E+02	MCL, N2CLGW	NO	DLBSL
Castle-Hayne	79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	6.7E-02	C	2.0E-01	NC2LGW	YES	DLASL
Aquifer	76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	5.9E+03	N	2.0E+05	NC2LGW	NO	DLBSL
Water Vapors	79-00-5	1,1,2-Trichloroethane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	4.2E-02	C**	5.0E+00	MCL	YES	DLASL
at Showerhead	75-34-3	1,1-Dichloroethane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	2.4E+00	C	7.0E+00	MCL	NO	DLBSL
															6.0E+00	NC2LGW		
	75-35-4	1,1-Dichloroethene	1.2E-01	J	1.1E+01		µg/L	IR69-GW15IW-10A	4/13	0.5 - 1.3	1.1E+01	N/A	3.4E+01	N	7.0E+00	NC2LGW	NO	BSL
	120-82-1	**1,2,4-Trichlorobenzene**	**8.5E+00**		**8.5E+00**		**µg/L**	**IR69-GW15IW-10A**	**1/13**	**0.5 - 1.3**	**8.5E+00**	**N/A**	**4.1E-01**	**C****	**7.0E+01**	**MCL, N2CLGW**	**YES**	**ASL**
	96-12-8	1,2-Dibromo-3-chloropropane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	3.2E-04	C	2.0E-01	MCL	YES	DLASL
															4.0E-02	NC2LGW		
	106-93-4	1,2-Dibromoethane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	6.5E-03	C	5.0E-02	MCL	YES	DLASL
															2.0E-02	NC2LGW		
	95-50-1	1,2-Dichlorobenzene	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	3.7E+01	N	6.0E+02	MCL	NO	DLBSL
															2.0E+01	NC2LGW		
	107-06-2	**1,2-Dichloroethane**	**1.2E-01**	**J**	**1.9E+01**		**µg/L**	**IR69-GW15IW-10A**	**5/13**	**0.5 - 1.3**	**1.9E+01**	**N/A**	**1.5E-01**	**C***	**5.0E+00**	**MCL**	**YES**	**ASL**
															4.0E-01	**NC2LGW**		
	78-87-5	1,2-Dichloropropane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	3.9E-01	C*	5.0E+00	MCL	YES	DLASL
															6.0E-01	NC2LGW		
	541-73-1	**1,3-Dichlorobenzene**	**1.0E+00**	**J**	**1.8E+00**		**µg/L**	**IR69-GW15DW-10A**	**2/13**	**0.5 - 1.3**	**1.8E+00**	**N/A**	**4.3E-01**	**C**	**2.0E+02**	**NC2LGW**	**YES**	**ASL**
	106-46-7	**1,4-Dichlorobenzene**	**1.0E+00**		**1.0E+00**		**µg/L**	**IR69-GW15DW-10A**	**1/13**	**0.5 - 1.3**	**1.0E+00**	**N/A**	**4.3E-01**	**C**	**7.5E+01**	**MCL**	**YES**	**ASL**
															6.0E+00	**NC2LGW**		
	78-93-3	2-Butanone	3.1E-01	J	3.1E-01	J	µg/L	IR69-GW13IW-10A	1/1	2.5 - 2.5	3.1E-01	N/A	7.1E+02	N	4.0E+03	NC2LGW	NO	BSL
	591-78-6	2-Hexanone	ND		ND		µg/L		0/13	2.5 - 6.3	6.3E+00	N/A	4.7E+00	N	4.0E+02	NC2LGW	YES	DLASL
	108-10-1	4-Methyl-2-pentanone	ND		ND		µg/L		0/13	2.5 - 6.3	6.3E+00	N/A	2.0E+02	N	N/A	N/A	NO	DLBSL
	67-64-1	Acetone	1.3E+01	J	1.3E+01	J	µg/L	IR69-GW28IW-10A	1/1	2.5 - 2.5	1.3E+01	N/A	2.2E+03	N	6.0E+03	NC2LGW	NO	BSL
	71-43-2	**Benzene**	**3.2E-02**	**J**	**1.2E+00**		**µg/L**	**IR69-GW19UW-10A**	**3/13**	**0.5 - 1.3**	**1.2E+00**	**N/A**	**4.1E-01**	**C**	**5.0E+00**	**MCL**	**YES**	**ASL**
															1.0E+00	**NC2LGW**		
	75-27-4	Bromodichloromethane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	1.2E-01	C	8.0E+01	MCL	YES	DLASL
															6.0E-02	NC2LGW		
	74-83-9	Bromomethane	ND		ND		µg/L		0/12	0.5 - 1.3	1.3E+00	N/A	8.7E-01	N	N/A	N/A	YES	DLASL
	75-15-0	Carbon disulfide	3.0E-02	J	1.5E-01	J	µg/L	IR69-GW04DW-10A	7/13	0.5 - 1.3	1.5E-01	N/A	1.0E+02	N	7.0E+02	NC2LGW	NO	BSL
	56-23-5	Carbon tetrachloride	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	4.4E-01	C	5.0E+00	MCL	YES	DLASL
															3.0E-01	NC2LGW		
	108-90-7	Chlorobenzene	5.9E-01		5.9E-01		µg/L	IR69-GW19UW-10A	1/13	0.5 - 1.3	5.9E-01	N/A	9.1E+00	N	1.0E+02	MCL	NO	BSL
															5.0E+01	NC2LGW		
	75-00-3	Chloroethane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	2.1E+03	N	3.0E+03	NC2LGW	NO	DLBSL
	67-66-3	**Chloroform**	**1.4E+00**		**7.8E+00**		**µg/L**	**IR69-GW28IW-10A**	**4/13**	**0.5 - 1.3**	**7.8E+00**	**N/A**	**1.9E-01**	**C**	**8.0E+01**	**MCL**	**YES**	**ASL**
															7.0E+01	**NC2LGW**		
	74-87-3	Chloromethane	2.8E-01	J	2.8E-01	J	µg/L	IR69-GW04DW-10A	1/13	0.5 - 1.3	2.8E-01	N/A	1.9E+01	N	3.0E+00	NC2LGW	NO	BSL
	156-59-2	**cis-1,2-Dichloroethene**	**7.6E+00**		**5.1E+04**		**µg/L**	**IR69-GW15IW-10A**	**11/13**	**0.5 - 830**	**5.1E+04**	**N/A**	**7.3E+00**	**N**	**7.0E+01**	**MCL, N2CLGW**	**YES**	**ASL**
	10061-01-5	cis-1,3-Dichloropropene	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	4.3E-01	C*	4.0E-01	NC2LGW	YES	DLASL
	110-82-7	Cyclohexane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	1.3E+03	N	N/A	N/A	NO	DLBSL
	124-48-1	Dibromochloromethane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	1.5E-01	C	8.0E+01	MCL	YES	DLASL
															4.0E-01	NC2LGW		
	75-71-8	Dichlorodifluoromethane (Freon-12)	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	2.0E+01	N	1.0E+03	NC2LGW	NO	DLBSL
	100-41-4	Ethylbenzene	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	1.5E+00	C	7.0E+02	MCL	NO	DLBSL
															6.0E+02	NC2LGW		

TABLE G 2.10

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Air

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	98-82-8	Isopropylbenzene	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	6.8E+01	N	5.0E+00	MCL	NO	DLBSL
															7.0E+01	NC2LGW		
	1330-20-7	m- and p-Xylene	ND		ND		µg/L		0/13	1 - 2.5	2.5E+00	N/A	2.0E+01	N	5.0E+02	NC2LGW	NO	DLBSL
	79-20-9	Methyl acetate	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	3.7E+03	N	N/A	N/A	NO	DLBSL
	108-87-2	Methylcyclohexane	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	8.8E+01	N	N/A	N/A	NO	DLBSL
	75-09-2	Methylene chloride	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	4.8E+00	C	5.0E+00	NC2LGW	NO	DLBSL
	1634-04-4	Methyl-tert-butyl ether (MTBE)	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	1.2E+01	C	2.0E+01	NC2LGW	NO	DLBSL
	95-47-6	o-Xylene	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	2.0E+01	N	5.0E+02	NC2LGW	NO	DLBSL
	100-42-5	Styrene	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	1.6E+02	N	1.0E+02	MCL	NO	DLBSL
															7.0E+01	NC2LGW		
	127-18-4	Tetrachloroethene	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	1.1E-01	C	5.0E+00	MCL	YES	DLASL
															7.0E-01	NC2LGW		
	108-88-3	Toluene	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	2.3E+02	N	1.0E+03	MCL	NO	DLBSL
															6.0E+02	NC2LGW		
	156-60-5	**trans-1,2-Dichloroethene**	**8.2E-02**	**J**	**7.5E+02**		**µg/L**	**IR69-GW15IW-10A**	**10/13**	**0.5 - 830**	**7.5E+02**	**N/A**	**1.1E+01**	**N**	**1.0E+02**	**MCL, N2CLGW**	**YES**	**ASL**
	10061-02-6	trans-1,3-Dichloropropene	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	4.3E-01	C*	4.0E-01	NC2LGW	YES	DLASL
	79-01-6	**Trichloroethene**	**1.2E-01**	**J**	**1.0E+02**	**J**	**µg/L**	**IR69-GW15IW-10A**	**7/13**	**0.5 - 8.3**	**1.0E+02**	**N/A**	**2.0E+00**	**C**	**5.0E+00**	**MCL**	**YES**	**ASL**
															3.0E+00	**NC2LGW**		
	75-69-4	Trichlorofluoromethane(Freon-11)	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	1.3E+02	N	2.0E+03	NC2LGW	NO	DLBSL
	75-01-4	**Vinyl chloride**	**1.1E-01**	**J**	**5.5E+03**		**µg/L**	**IR69-GW15IW-10A**	**10/13**	**0.5 - 830**	**5.5E+03**	**N/A**	**1.6E-02**	**C**	**5.0E+00**	**MCL**	**YES**	**ASL**
															3.0E-02	**NC2LGW**		
	1330-20-7	Xylene, total	ND		ND		µg/L		0/13	0.5 - 1.3	1.3E+00	N/A	2.0E+01	N	2.0E+00	MCL	NO	DLBSL
															5.0E+02	NC2LGW		
	92-52-4	1,1-Biphenyl	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	8.3E-02	N	4.0E+02	NC2LGW	YES	DLASL
	108-60-1	2,2'-Oxybis(1-chloropropane)	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	3.2E-01	C	N/A	N/A	YES	DLASL
	91-58-7	2-Chloronaphthalene	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	2.9E+02	N	N/A	N/A	NO	DLBSL
	95-57-8	2-Chlorophenol	ND		ND		µg/L		0/13	10 - 11	1.1E+01	N/A	1.8E+01	N	4.0E-01	NC2LGW	NO	DLBSL
	91-57-6	2-Methylnaphthalene	1.8E-02	J	1.8E-02	J	µg/L	IR69-GW04DW-10A	1/13	0.2 - 0.21	1.8E-02	N/A	1.5E+01	N	3.0E+01	NC2LGW	NO	BSL
	88-75-5	2-Nitrophenol	ND		ND		µg/L		0/13	10 - 11	1.1E+01	N/A	1.8E+01	N	N/A	N/A	NO	DLBSL
	99-09-2	3-Nitroaniline	ND		ND		µg/L		0/13	10 - 11	1.1E+01	N/A	3.7E+01	N	N/A	N/A	NO	DLBSL
	59-50-7	4-Chloro-3-methylphenol	ND		ND		µg/L		0/13	10 - 11	1.1E+01	N/A	3.7E+02	N	N/A	N/A	NO	DLBSL
	7005-72-3	4-Chlorophenyl-phenylether	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	1.8E+01	N	N/A	N/A	NO	DLBSL
	100-02-7	4-Nitrophenol	ND		ND		µg/L		0/13	10 - 11	1.1E+01	N/A	1.2E-01	C	N/A	N/A	YES	DLASL
	83-32-9	Acenaphthene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	2.2E+02	N	8.0E+01	NC2LGW	NO	DLBSL
	208-96-8	Acenaphthylene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	2.2E+02	N	2.0E+02	NC2LGW	NO	DLBSL
	98-86-2	Acetophenone	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	3.7E+02	N	N/A	N/A	NO	DLBSL
	120-12-7	Anthracene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	1.1E+03	N	2.0E+03	NC2LGW	NO	DLBSL
	100-52-7	Benzaldehyde	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	3.7E+02	N	N/A	N/A	NO	DLBSL
	191-24-2	Benzo(g,h,i)perylene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	1.1E+02	N	2.0E+02	NC2LGW	NO	DLBSL
	111-44-4	bis(2-Chloroethyl)ether	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	1.2E-02	C	3.0E-02	NC2LGW	YES	DLASL
	86-74-8	Carbazole	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	N/A		N/A	N/A	NO	NTX
	132-64-9	Dibenzofuran	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	3.7E+00	N	N/A	N/A	YES	DLASL
	131-11-3	Dimethyl phthalate	5.8E-01	J	1.7E+00	J	µg/L	IR69-GW04IW-10A	2/13	5 - 5.3	1.7E+00	N/A	N/A		N/A	N/A	NO	NTX
	117-84-0	Di-n-octylphthalate	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	4.8E+00	C	1.0E+02	NC2LGW	YES	DLASL
	86-73-7	Fluorene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	1.5E+02	N	3.0E+02	NC2LGW	NO	DLBSL
	91-20-3	Naphthalene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	1.4E-01	C*	6.0E+00	NC2LGW	YES	DLASL
	98-95-3	Nitrobenzene	ND		ND		µg/L		0/13	5 - 5.3	5.3E+00	N/A	1.2E-01	C	N/A	N/A	YES	DLASL
	85-01-8	Phenanthrene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	1.1E+03	N	2.0E+02	NC2LGW	NO	DLBSL
	129-00-0	Pyrene	ND		ND		µg/L		0/13	0.2 - 0.21	2.1E-01	N/A	1.1E+02	N	2.0E+03	NC2LGW	NO	DLBSL

TABLE G 2.10

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Air

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	11104-28-2	Aroclor-1221	ND	ND	µg/L		0/13	1.3 - 1.3	1.3E+00	N/A	6.8E-03 C	N/A	N/A	YES	DLASL
	11141-16-5	Aroclor-1232	ND	ND	µg/L		0/13	0.93 - 0.93	9.3E-01	N/A	6.8E-03 C	N/A	N/A	YES	DLASL

[1] Minimum/Maximum detected concentrations.
[2] Maximum concentration is used for screening. If ND, maximum detection limit used for screening.
[3] Background values are two times the mean shallow groundwater basewide background concentrations.
[4] Oak Ridge National Laboratory (ORNL). June 2011. Regional Screening Levels for Chemical Contaminants at Superfund Sites.
Tap Water RSLs (based on $1C^{-6}$ for carcinogens and HQ of 0.1 for noncarcinogens). [Online]. Available: http://epa-prgs.ornl.gov/chemicals/index.sh
RSL value for 1,3-Dichloropropene used as a surrogate for cis-1,3-Dichloropropene and trans-1,3-Dichloropropene.
RSL value for 2-Chlorophenol used as surrogate for 2-Nitrophenol.
RSL value for 2-Nitroaniline used as surrogate for 3-N'itroaniliine.
RSL value for Acenaphthene used as surrogate for Acenaphthylene.
RSL value for Anthracene used as surrogate for Phenanthrene.
RSL value for Methoxychlor used as surrogate for 4-Chlorophenyl-phenylether.
RSL value for n-Hexane used as surrogate for Methylcyclohexane.
RSL value for Nitrobenzene used as surrogate for 4-Nitrophenol.
RSL value for xlyene, mixture used as surrogate for m&pXylene.
RSL value for n-hexane used as surrogate for methylcyclohexane.
RSL value for 2-nitroaniline used as surrogate for 3-nitroaniline.
[5] Rationale Codes

Selection Reason:	Above Screening Levels (ASL)
	Detection Limit Above Screening Levels (DLASL), not evaluated quantitatively
Deletion Reason:	No Toxicity Information (NTX)
	Essential Nutrient (NUT)
	Below Screening Level (BSL)
	Detection Limit Below Screening Level (DLBSL)
	Below Background Level (BBK)

Generated by:M. White/ATL
Checked by: T.Carleton/DAY

COPC - Chemical of potential concern
ARAR/TBC - Applicable or relevant and appropriate requirement/to be considered
N/A - Not applicable/not available
ND - Not detected
C - Carcinogenic
C* - Carcinogenic (where nc RSL<100 x ca RSL)
C**- Carcinogenic (where nc RSL < 10 X ca RSL, therefore, nc RSL used)
J - Estimated value
MCL - Drinking water Maximum Contaminant Level (MCL) (USEPA, 2010).
N - Noncarcinogenic
NA - Not available
µg/L - Microgram per liter
NC2LGWL - North Carolina Classifications and Groundwater Quality Standards, amended January 2010.

TABLE G 2.11

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Air (Industrial Building)

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening Toxicity Value [4]		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
Groundwater at	79-34-5	1,1,2,2-Tetrachloroethane	1.7E-01	J	9.8E+00		µg/L	IR69-GW02-10A	4/6	0.5 - 3.1	9.8E+00	N/A	2.8E+01	C	N/A	N/A	NO	BSL
Surficial Aquifer	**79-00-5**	**1,1,2-Trichloroethane**	**5.0E-01**	**J**	**7.8E+00**		**µg/L**	**IR69-GW02-10A**	**3/6**	**0.5 - 3.1**	**7.8E+00**	**N/A**	**4.9E+00**	**N**	**5.0E+00**	**MCL**	**YES**	**ASL**
Into Indoor Air	75-34-3	1,1-Dichloroethane	4.3E-02	J	4.3E-02	J	µg/L	IR69-GW03-10A	1/6	0.5 - 3.1	4.3E-02	N/A	5.2E+01	C	7.0E+00	MCL	NO	BSL
(Industrial Building)	75-35-4	1,1-Dichloroethene	2.1E-01	J	5.3E-01	J	µg/L	IR69-GW03D-10A	2/6	0.5 - 3.1	5.3E-01	N/A	1.2E+02	N	N/A	N/A	NO	BSL
	120-82-1	1,2,4-Trichlorobenzene	1.3E-01	J	1.3E-01	J	µg/L	IR69-GW15-10A	1/6	0.5 - 3.1	1.3E-01	N/A	3.6E+01	N	7.0E+01	MCL	NO	BSL
	107-06-2	1,2-Dichloroethane	4.8E-01	J	1.3E+01		µg/L	IR69-GW15-10A	4/6	0.5 - 3.1	1.3E+01	N/A	1.7E+01	C	5.0E+00	MCL	NO	BSL
	541-73-1	1,3-Dichlorobenzene	1.4E-01	J	5.5E-01		µg/L	IR69-GW15-10A	2/6	0.5 - 3.1	5.5E-01	N/A	6.8E+03	N	N/A	N/A	NO	BSL
	106-46-7	1,4-Dichlorobenzene	3.3E+00		3.3E+00		µg/L	IR69-GW15-10A	1/6	0.5 - 3.1	3.3E+00	N/A	2.3E+01	C	7.5E+01	MCL	NO	BSL
	71-43-2	Benzene	5.8E-01		5.8E-01		µg/L	IR69-GW03-10A	1/6	0.5 - 3.1	5.8E-01	N/A	1.2E+01	C	5.0E+00	MCL	NO	BSL
	75-15-0	Carbon disulfide	4.1E-02	J	1.4E-01	J	µg/L	IR69-GW15-10A	2/6	0.5 - 3.1	1.4E-01	N/A	7.7E+02	N	N/A	N/A	NO	BSL
	108-90-7	Chlorobenzene	1.3E+00		7.5E+00		µg/L	IR69-GW03D-10A	2/6	0.5 - 3.1	7.5E+00	N/A	3.3E+02	N	1.0E+02	MCL	NO	BSL
	67-66-3	Chloroform	1.3E+00		1.3E+00		µg/L	IR69-GW04-10A	1/6	0.5 - 3.1	1.3E+00	N/A	5.5E+00	C	8.0E+01	MCL	NO	BSL
	156-59-2	cis-1,2-Dichloroethene	2.1E+00		1.8E+02		µg/L	IR69-GW03-10A	5/6	0.5 - 3.1	1.8E+02	N/A	2.5E+02	N	7.0E+01	MCL	NO	BSL
	110-82-7	Cyclohexane	2.7E-01	J	2.7E-01	J	µg/L	IR69-GW10-10A	1/6	0.5 - 3.1	2.7E-01	N/A	N/A	N	N/A	N/A	NO	NTX
	127-18-4	Tetrachloroethene	1.9E-01	J	1.9E-01	J	µg/L	IR69-GW02-10A	1/6	0.5 - 3.1	1.9E-01	N/A	5.1E+00	C	5.0E+00	MCL	NO	BSL
	108-88-3	Toluene	7.3E-01		8.3E+00		µg/L	IR69-GW04-10A	2/6	0.5 - 3.1	8.3E+00	N/A	1.5E+04	N	1.0E+03	MCL	NO	BSL
	156-60-5	trans-1,2-Dichloroethene	5.6E-01		2.3E+01		µg/L	IR69-GW02-10A	5/6	0.5 - 3.1	2.3E+01	N/A	2.4E+02	N	1.0E+02	MCL	NO	BSL
	79-01-6	Trichloroethene	3.0E-01	J	3.5E+00		µg/L	IR69-GW03D-10A	5/6	0.5 - 3.1	3.5E+00	N/A	1.9E+01	N	5.0E+00	MCL	NO	BSL
	75-01-4	**Vinyl chloride**	**2.1E-01**	**J**	**2.0E+01**		**µg/L**	**IR69-GW02-10A**	**4/6**	**0.5 - 3.1**	**2.0E+01**	**N/A**	**3.2E+00**	**C**	**5.0E+00**	**MCL**	**YES**	**ASL**
	91-57-6	2-Methylnaphthalene	1.6E-02	J	1.3E-01	J	µg/L	IR69-GW03-10A	3/6	0.2 - 0.22	1.3E-01	N/A	N/A		N/A	N/A	NO	NTX
	208-96-8	Acenaphthylene	1.0E-02	J	1.0E-02	J	µg/L	IR69-GW03D-10A	1/6	0.2 - 0.22	1.0E-02	N/A	N/A		N/A	N/A	NO	NTX
	129-00-0	Pyrene	1.5E-02	J	1.8E-02	J	µg/L	IR69-GW15-10A	2/6	0.2 - 0.22	1.8E-02	N/A	N/A		N/A	N/A	NO	NTX

[1] Minimum/Maximum detected concentrations.
[2] Maximum detected concentration is used for screening.
[3] Background values are two times the mean shallow groundwater basewide background concentrations.
[4] Vapor Intrusion Groundwater Screening Levels. See Table G 2.11 Supplement A
[5] Rationale Codes
Selection Reason: Above Screening Levels (ASL)
Deletion Reason: No Toxicity Information (NTX)
Essential Nutrient (NUT)
Below Screening Level (BSL)

COPC - Chemical of potential concern
ARAR/TBC - Applicable or relevant and appropriate requirement/to be considered
N/A - Not applicable/not available
C - Carcinogenic
J - Estimated value
MCL - Drinking water Maximum Contaminant Level (MCL) (USEPA, 2010).
N - Noncarcinogenic
NA - Not available
µg/L - Microgram per liter

TABLE G 2.11 Supplement A

Calculation of Target Groundwater Concentrations for Vapor Intrusion Screening[1]

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

CAS Number	Constituent	Target Indoor Air Concentration[2], carcinogen (C_{Cancer}) ug/m^3	Target Indoor Air Concentration[2], non-carcinogen ($C_{non-Cancer}$) ug/m^3	Target Indoor Air Concentration ($C_{target,ia}$) ug/m^3	System Temperature Henry's Law Constant (H'TS)[3] Dimensionless	Risk-Based Target Groundwater Concentration (C_{gw}) ug/L
79-34-5	1,1,2,2-Tetrachloroethane	2.1E-01	N/A	2.1E-01	7.5E-03	2.8E+01
79-00-5	1,1,2-Trichloroethane	7.7E-01	8.8E-02	8.8E-02	1.8E-02	4.9E+00
75-34-3	1,1-Dichloroethane	7.7E+00	N/A	7.7E+00	1.5E-01	5.2E+01
75-35-4	1,1-Dichloroethene	N/A	8.8E+01	8.8E+01	7.4E-01	1.2E+02
120-82-1	1,2,4-Trichlorobenzene	N/A	8.8E-01	8.8E-01	2.4E-02	3.6E+01
107-06-2	1,2-Dichloroethane	4.7E-01	3.1E+00	4.7E-01	2.8E-02	1.7E+01
541-73-1	1,3-Dichlorobenzene	N/A	3.5E+02	3.5E+02	5.2E-02	6.8E+03
106-46-7	1,4-Dichlorobenzene	1.1E+00	3.5E+02	1.1E+00	4.7E-02	2.3E+01
71-43-2	Benzene	1.6E+00	1.3E+01	1.6E+00	1.3E-01	1.2E+01
75-15-0	Carbon disulfide	N/A	3.1E+02	3.1E+02	4.0E-01	7.7E+02
108-90-7	Chlorobenzene	N/A	2.2E+01	2.2E+01	6.7E-02	3.3E+02
67-66-3	Chloroform	5.3E-01	4.3E+01	5.3E-01	9.7E-02	5.5E+00
156-59-2	cis-1,2-Dichloroethene	N/A	2.6E+01	2.6E+01	1.1E-01	2.5E+02
110-82-7	Cyclohexane	N/A	2.6E+03	2.6E+03	N/A	N/A
127-18-4	Tetrachloroethene	2.1E+00	1.2E+02	2.1E+00	4.1E-01	5.1E+00
108-88-3	Toluene	N/A	2.2E+03	2.2E+03	1.5E-01	1.5E+04
156-60-5	trans-1,2-Dichloroethene	N/A	2.6E+01	2.6E+01	1.1E-01	2.4E+02
79-01-6	Trichloroethene	6.1E+00	4.4E+00	4.4E+00	2.3E-01	1.9E+01
75-01-4	Vinyl chloride	2.8E+00	4.4E+01	2.8E+00	8.6E-01	3.2E+00
91-57-6	2-Methylnaphthalene	N/A	N/A	N/A	7.2E-03	N/A
208-96-8	Acenaphthylene	N/A	N/A	N/A	N/A	N/A
129-00-0	Pyrene	N/A	N/A	N/A	1.2E-04	N/A

Notes:

[1] The vapor intrusion screening levels [i.e., target groundwater concentration from Table 2c, Subsurface Vapor Intrusion Guidance (EPA, 2002)] were updated using the methodology presented in Appendix D of Subsurface Vapor Intrusion Guidance (EPA, 2002).

[2] Values are Regional Screening Levels (RSL) for industrial air (based on 10^6 for carcinogens and HQ of 0.1 for noncarcinogens). [Oak Ridge National Laboratory (ORNL), June 2011].

RSL value for 1,4-dichlorobenzene used as surrogate for 1,3-dichlorobenzene.

RSL value for trans-1,2-dichloroethene used as surrogate for cis-1,2-dichloroethene.

[3] H'TS = Henry's Law Constant (dimensionless) at system (i.e., groundwater) temperature. Calculated using equation 3 from USEPA, 2004.

Average groundwater temperature (13.2°C) based on data from March 2010 sampling event.

N/A = Not available

ug/L = microgram per liter

ug/m^3 = microgram per cubic meter

Variables	Units	Value
$C_{target,ia}$ = Target indoor air conc., minimum	ug/m^3	Solved by Eq. 1
C_{gw} = Target groundwater conc.	ug/L	Solved by Eq. 2
TCR = Target Cancer Risk	unitless	1.00E-06
THQ = Target Hazard Quotient	unitless	1
H'TS = Dimensionless Henry's Law Constant	unitless	Chemical-specific
alpha (α) = Attenuation Factor	unitless	0.001

Equation 1: $C_{target,ia}$ = Minimum(C_{cancer}, $C_{non-cancer}$)

Equation 2: C_{gw} = $C_{target,ia} \times 10^{-3}$ m^3/L * 1/H'TS * 1/α

TABLE G 2.12

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Air (Residential Building)

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration	Qualifier	Maximum [1] Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
Groundwater at	**79-34-5**	**1,1,2,2-Tetrachloroethane**	**1.7E-01**	**J**	**9.8E+00**		**µg/L**	**IR69-GW02-10A**	**4/6**	**0.5 - 3.1**	**9.8E+00**	**N/A**	**5.6E+00**	**C**	**N/A**	**N/A**	**YES**	**ASL**
Surficial Aquifer	**79-00-5**	**1,1,2-Trichloroethane**	**5.0E-01**	**J**	**7.8E+00**		**µg/L**	**IR69-GW02-10A**	**3/6**	**0.5 - 3.1**	**7.8E+00**	**N/A**	**1.2E+00**	**N**	**5.0E+00**	**MCL**	**YES**	**ASL**
Into Indoor Air	75-34-3	1,1-Dichloroethane	4.3E-02	J	4.3E-02	J	µg/L	IR69-GW03-10A	1/6	0.5 - 3.1	4.3E-02	N/A	1.0E+01	C	7.0E+00	MCL	NO	BSL
(Residential Building)	75-35-4	1,1-Dichloroethene	2.1E-01	J	4.3E-02	J	µg/L	IR69-GW03D-10A	2/6	0.5 - 3.1	5.3E-01	N/A	2.8E+01	N	N/A	N/A	NO	BSL
	120-82-1	1,2,4-Trichlorobenzene	1.3E-01	J	4.3E-02	J	µg/L	IR69-GW15-10A	1/6	0.5 - 3.1	1.3E-01	N/A	8.7E+00	N	7.0E+01	MCL	NO	BSL
	107-06-2	**1,2-Dichloroethane**	**4.8E-01**	**J**	4.3E-02		**µg/L**	**IR69-GW15-10A**	**4/6**	**0.5 - 3.1**	**1.3E+01**	**N/A**	**3.4E+00**	**C**	**5.0E+00**	**MCL**	**YES**	**ASL**
	541-73-1	1,3-Dichlorobenzene	1.4E-01	J	4.3E-02		µg/L	IR69-GW15-10A	2/6	0.5 - 3.1	5.5E-01	N/A	1.6E+03	N	N/A	N/A	NO	BSL
	106-46-7	1,4-Dichlorobenzene	3.3E+00		4.3E-02		µg/L	IR69-GW15-10A	1/6	0.5 - 3.1	3.3E+00	N/A	4.7E+00	C	7.5E+01	MCL	NO	BSL
	71-43-2	Benzene	5.8E-01		4.3E-02		µg/L	IR69-GW03-10A	1/6	0.5 - 3.1	5.8E-01	N/A	2.3E+00	C	5.0E+00	MCL	NO	BSL
	75-15-0	Carbon disulfide	4.1E-02	J	4.3E-02	J	µg/L	IR69-GW15-10A	2/6	0.5 - 3.1	1.4E-01	N/A	1.8E+02	N	N/A	N/A	NO	BSL
	108-90-7	Chlorobenzene	1.3E+00		4.3E-02		µg/L	IR69-GW03D-10A	2/6	0.5 - 3.1	7.5E+00	N/A	7.7E+01	N	1.0E+02	MCL	NO	BSL
	67-66-3	**Chloroform**	**1.3E+00**		4.3E-02		**µg/L**	**IR69-GW04-10A**	**1/6**	**0.5 - 3.1**	**1.3E+00**	**N/A**	**1.1E+00**	**C**	**8.0E+01**	**MCL**	**YES**	**ASL**
	156-59-2	**cis-1,2-Dichloroethene**	**2.1E+00**		4.3E-02		**µg/L**	**IR69-GW03-10A**	**5/6**	**0.5 - 3.1**	**1.8E+02**	**N/A**	**5.9E+01**	**N**	**7.0E+01**	**MCL**	**YES**	**ASL**
	110-82-7	Cyclohexane	2.7E-01	J	4.3E-02	J	µg/L	IR69-GW10-10A	1/6	0.5 - 3.1	2.7E-01	N/A	N/A	N	N/A	N/A	NO	NTX
	127-18-4	Tetrachloroethene	1.9E-01	J	4.3E-02	J	µg/L	IR69-GW02-10A	1/6	0.5 - 3.1	1.9E-01	N/A	1.0E+00	C	5.0E+00	MCL	NO	BSL
	108-88-3	Toluene	7.3E-01		4.3E-02		µg/L	IR69-GW04-10A	2/6	0.5 - 3.1	8.3E+00	N/A	3.5E+03	N	1.0E+03	MCL	NO	BSL
	156-60-5	trans-1,2-Dichloroethene	5.6E-01		4.3E-02		µg/L	IR69-GW02-10A	5/6	0.5 - 3.1	2.3E+01	N/A	5.7E+01	N	1.0E+02	MCL	NO	BSL
	79-01-6	Trichloroethene	3.0E-01	J	4.3E-02		µg/L	IR69-GW03D-10A	5/6	0.5 - 3.1	3.5E+00	N/A	4.3E+00	N	5.0E+00	MCL	NO	BSL
	75-01-4	**Vinyl chloride**	**2.1E-01**	**J**	4.3E-02		**µg/L**	**IR69-GW02-10A**	**4/6**	**0.5 - 3.1**	**2.0E+01**	**N/A**	**1.9E-01**	**C**	**5.0E+00**	**MCL**	**YES**	**ASL**
	91-57-6	2-Methylnaphthalene	1.6E-02	J	4.3E-02	J	µg/L	IR69-GW03-10A	3/6	0.2 - 0.22	1.3E-01	N/A	N/A		N/A	N/A	NO	NTX
	208-96-8	Acenaphthylene	1.0E-02	J	4.3E-02	J	µg/L	IR69-GW03D-10A	1/6	0.2 - 0.22	1.0E-02	N/A	N/A		N/A	N/A	NO	NTX
	129-00-0	Pyrene	1.5E-02	J	4.3E-02	J	µg/L	IR69-GW15-10A	2/6	0.2 - 0.22	1.8E-02	N/A	N/A		N/A	N/A	NO	NTX

[1] Minimum/Maximum detected concentrations.
[2] Maximum detected concentration is used for screening.
[3] Background values are two times the mean shallow groundwater basewide background concentrations.
[4] Vapor Intrusion Groundwater Screening Levels. See Table G 2.12 Supplement A
[5] Rationale Codes
Selection Reason: Above Screening Levels (ASL)
Deletion Reason: No Toxicity Information (NTX)
Essential Nutrient (NUT)
Below Screening Level (BSL)

COPC - Chemical of potential concern
ARAR/TBC - Applicable or relevant and appropriate requirement/to be considered
N/A - Not applicable/not available
C - Carcinogenic
J - Estimated value
MCL - Drinking water Maximum Contaminant Level (MCL) (USEPA, 2010).
N - Noncarcinogenic
NA - Not available
µg/L - Microgram per liter

TABLE G 2.12 Supplement A

Calculation of Target Groundwater Concentrations for Vapor Intrusion Screening[1]

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

CAS Number	Constituent	Target Indoor Air Concentration[2], carcinogen (C_{Cancer}) ug/m^3	Target Indoor Air Concentration[2], non-carcinogen ($C_{non-Cancer}$) ug/m^3	Target Indoor Air Concentration ($C_{target,ia}$) ug/m^3	System Temperature Henry's Law Constant (H'TS)[3] Dimensionless	Risk-Based Target Groundwater Concentration (C_{gw}) ug/L
79-34-5	1,1,2,2-Tetrachloroethane	4.2E-02	N/A	4.2E-02	7.5E-03	5.6E+00
79-00-5	1,1,2-Trichloroethane	1.5E-01	2.1E-02	2.1E-02	1.8E-02	1.2E+00
75-34-3	1,1-Dichloroethane	1.5E+00	N/A	1.5E+00	1.5E-01	1.0E+01
75-35-4	1,1-Dichloroethene	N/A	2.1E+01	2.1E+01	7.4E-01	2.8E+01
120-82-1	1,2,4-Trichlorobenzene	N/A	2.1E-01	2.1E-01	2.4E-02	8.7E+00
107-06-2	1,2-Dichloroethane	9.4E-02	7.3E-01	9.4E-02	2.8E-02	3.4E+00
541-73-1	1,3-Dichlorobenzene	N/A	8.3E+01	8.3E+01	5.2E-02	1.6E+03
106-46-7	1,4-Dichlorobenzene	2.2E-01	8.3E+01	2.2E-01	4.7E-02	4.7E+00
71-43-2	Benzene	3.1E-01	3.1E+00	3.1E-01	1.3E-01	2.3E+00
75-15-0	Carbon disulfide	N/A	7.3E+01	7.3E+01	4.0E-01	1.8E+02
108-90-7	Chlorobenzene	N/A	5.2E+00	5.2E+00	6.7E-02	7.7E+01
67-66-3	Chloroform	1.1E-01	1.0E+01	1.1E-01	9.7E-02	1.1E+00
156-59-2	cis-1,2-Dichloroethene	N/A	6.3E+00	6.3E+00	1.1E-01	5.9E+01
110-82-7	Cyclohexane	N/A	6.3E+02	6.3E+02	N/A	N/A
127-18-4	Tetrachloroethene	4.1E-01	2.8E+01	4.1E-01	4.1E-01	1.0E+00
108-88-3	Toluene	N/A	5.2E+02	5.2E+02	1.5E-01	3.5E+03
156-60-5	trans-1,2-Dichloroethene	N/A	6.3E+00	6.3E+00	1.1E-01	5.7E+01
79-01-6	Trichloroethene	1.2E+00	1.0E+00	1.0E+00	2.3E-01	4.3E+00
75-01-4	Vinyl chloride	1.6E-01	1.0E+01	1.6E-01	8.6E-01	1.9E-01
91-57-6	2-Methylnaphthalene	N/A	N/A	N/A	7.2E-03	N/A
208-96-8	Acenaphthylene	N/A	N/A	N/A	N/A	N/A
129-00-0	Pyrene	N/A	N/A	N/A	1.2E-04	N/A

Notes:

[1] The vapor intrusion screening levels [i.e., target groundwater concentration from Table 2c, Subsurface Vapor Intrusion Guidance (EPA, 2002)] were updated using the methodology presented in Appendix D of Subsurface Vapor Intrusion Guidance (EPA, 2002).

[2] Values are Regional Screening Levels (RSL) for residential air (based on 10^{-6} for carcinogens and HQ of 0.1 for noncarcinogens). [Oak Ridge National Laboratory (ORNL), June 2011].

RSL value for 1,4-dichlorobenzene used as surrogate for 1,3-dichlorobenzene.

RSL value for trans-1,2-dichloroethene used as surrogate for cis-1,2-dichloroethene.

[3] H'TS = Henry's Law Constant (dimensionless) at system (i.e., groundwater) temperature. Calculated using equation 3 from USEPA, 2004.

Average groundwater temperature (13.2°C) based on data from March 2010 sampling event.

N/A = Not available

ug/L = microgram per liter

ug/m^3 = microgram per cubic meter

Variables	Units	Value
$C_{target,ia}$ = Target indoor air conc., minimum	ug/m^3	Solved by Eq. 1
C_{gw} = Target groundwater conc.	ug/L	Solved by Eq. 2
TCR = Target Cancer Risk	unitless	1.00E-06
THQ = Target Hazard Quotient	unitless	1
H'TS = Dimensionless Henry's Law Constant	unitless	Chemical-specific
alpha (α) = Attenuation Factor	unitless	0.001

Equation 1: $C_{target,ia}$ = Minimum(C_{cancer}, $C_{non-cancer}$)

Equation 2: C_{gw} = $C_{target,ia} \times 10^{-3}$ m^3/L * 1/H'TS * 1/α

TABLE G 3.1.RME

Medium-Specific Exposure Point Concentration Summary

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)		Maximum Concentration (Qualifier)		Exposure Point Concentration			
								Value	Units	Statistic	Rationale
Surface Soil	Arsenic	mg/kg	4.9E-01	6.9E-01	NP	1.3E+00	J	6.9E-01	mg/kg	95% KM-t	1, 3
	Chromium	mg/kg	2.4E+00	3.5E+00	NP	8.8E+00		3.5E+00	mg/kg	95% KM-B	1, 3
	Manganese	mg/kg	6.8E+01	1.2E+02	G	3.5E+02		1.2E+02	mg/kg	App. Gamma	1, 3

Notes:

ProUCL, Version 4.00.05 used to determine distribution of data and calculate 95% UCL, following recommendations in users guide (USEPA. May 2010. Prepared by Lockheed Martin Environmental Services).

Options: 95% Kaplan-Meier (t) UCL (95% KM-t); 95% Approximate Gamma UCL (App. Gamma); 95% Kaplan-Meier (Percentile Bootstrap) UCL (95% KM-B)

UCL Rationale:

(1) Shapiro-Wilk W Test/Lilliefors test indicates data are log-normally distributed.

(2) Shapiro-Wilk W Test/Lilliefors indicates data are normally distributed.

(3) Test indicates data are gamma distributed.

(4) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).

(5) Maximum value used because calculated UCL exceeds maximum concentration.

G - Gamma

J - Estimated Value

mg/kg - milligrams per kilogram

N - Normal

NP - Non-Parametric

Generated by: Martha White/ATL

Checked by: D. Stannard/WDC

TABLE G 3.2.RME

Medium-Specific Exposure Point Concentration Summary

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Surface Water
Exposure Medium: Surface Water

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean[a]	95% UCL (Distribution)	Maximum Concentration (Qualifier)		Exposure Point Concentration			
							Value	Units	Statistic	Rationale
Drainage Ditches/	Iron	µg/L	3.2E+02	N/A	7.5E+02		7.5E+02	µg/L	Max	1
Marshy Area	Thallium	µg/L	6.9E+00	N/A	6.9E+00	J	6.9E+00	µg/L	Max	1

Notes:

Options: Maximum Detected Value (Max)

UCL Rationale:

(1) Maximum detected concentration used because only three surface water samples available.

(a) Arithmetic mean calculated with only detected values.

µg/L - milligrams per liter

N/A - Not applicable

Generated by: Martha White/ATL

Checked by: D. Stannard/WDC

TABLE G 3.3.RME

Medium-Specific Exposure Point Concentration Summary

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean[a]	95% UCL (Distribution)	Maximum Concentration (Qualifier)		Exposure Point Concentration			
							Value	Units	Statistic	Rationale
Drainage Ditches/ Marshy Area	Benzo(a)anthracene*	mg/kg	1.0E-02	N/A	1.7E-02	J	1.7E-02	mg/kg	Max	1
	Benzo(a)pyrene	mg/kg	1.9E-02	N/A	3.7E-02		3.7E-02	mg/kg	Max	1
	Benzo(b)fluoranthene*	mg/kg	1.6E-02	N/A	2.4E-02	J	2.4E-02	mg/kg	Max	1
	Benzo(k)fluoranthene*	mg/kg	1.1E-02	N/A	1.7E-02	J	1.7E-02	mg/kg	Max	1
	Chrysene*	mg/kg	1.1E-02	N/A	1.8E-02	J	1.8E-02	mg/kg	Max	1
	Indeno(1,2,3-cd)pyrene*	mg/kg	3.1E-03	N/A	3.1E-03	J	3.1E-03	mg/kg	Max	1
	Aluminum	mg/kg	5.5E+03	N/A	8.7E+03		8.7E+03	mg/kg	Max	1
	Antimony	mg/kg	3.4E+00	N/A	5.3E+00	J	5.3E+00	mg/kg	Max	1
	Chromium	mg/kg	6.2E+00	N/A	9.0E+00		9.0E+00	mg/kg	Max	1

Notes:

* Did not exceed screening values, retained as a COPC because other carcinogenic PAHs selected as COPCs.

Options: Maximum Detected Value (Max)

UCL Rationale:

(1) Maximum detected concentration used because only three sediment samples available.

(a) Arithmetic mean calculated with only detected values.

mg/kg - milligrams per kilogram

N/A - Not applicable

Generated by: Martha White/ATL

Checked by: D. Stannard/WDC

TABLE G 3.4.RME

Medium-Specific Exposure Point Concentration Summary

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)		Maximum Concentration (Qualifier)	Exposure Point Concentration			
							Value	Units	Statistic	Rationale
Soil*	Aluminum	mg/kg	5.7E+03	9.1E+03	G	2.1E+04	9.1E+03	mg/kg	App. Gamma	1, 3
	Arsenic	mg/kg	1.4E+00	3.9E+00	NP	4.8E+00	3.9E+00	mg/kg	97.5% KM	4
	Chromium	mg/kg	7.5E+00	1.7E+01	NP	3.0E+01	1.7E+01	mg/kg	95% KM	1, 3
	Iron	mg/kg	3.8E+03	8.8E+03	NP	1.4E+04	8.8E+03	mg/kg	95% Cheb-m	1
	Manganese	mg/kg	4.9E+01	8.2E+01	G	3.5E+02	8.2E+01	mg/kg	App. Gamma	1, 3
	Vanadium	mg/kg	9.7E+00	2.1E+01	NP	3.9E+01	2.1E+01	mg/kg	95% Cheb-m	1

Notes:

* Surface soil & subsurface soil combined.

ProUCL, Version 4.00.05 used to determine distribution of data and calculate 95% UCL, following recommendations in users guide (USEPA. May 2010. Prepared by Lockheed Martin Environmental Services).

Options: 95% Kaplan-Meier Chebyshev UCL (95% KM); 95% Chebyshev (Mean, Sd) UCL (95% Cheb-m); 95% Approximate Gamma UCL (App. Gamma); 97.5% Kaplan-Meier Chebyshev UCL (97.5% KM)

UCL Rationale:

(1) Shapiro-Wilk W Test/Lilliefors test indicates data are log-normally distributed.

(2) Shapiro-Wilk W Test/Lilliefors indicates data are normally distributed.

(3) Test indicates data are gamma distributed.

(4) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).

(5) Maximum value used because calculated UCL exceeds maximum concentration.

G = Gamma

mg/kg - milligrams per kilogram

N - Normal

NP - Non-Parametric

Generated by: Martha White/ATL

Checked by: D. Stannard/WDC

TABLE G 3.5.RME

Medium-Specific Exposure Point Concentration Summary

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Air

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
Emissions from Soil*	Chromium	mg/m^3	5.5E-09	1.3E-08 NP	2.2E-08	1.3E-08	mg/m^3	95% KM	1, 3

Notes:

* Surface soil & subsurface soil combined.

ProUCL, Version 4.00.05 used to determine distribution of data and calculate 95% UCL, following recommendations in users guide (USEPA. May 2010. Prepared by Lockheed Martin Environmental Services).

Options: 95% Kaplan-Meier Chebyshev UCL (95% KM)

UCL Rationale:

(1) Shapiro-Wilk W Test/Lilliefors test indicates data are log-normally distributed.

(2) Shapiro-Wilk W Test/Lilliefors indicates data are normally distributed.

(3) Test indicates data are gamma distributed.

(4) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).

(5) Maximum value used because calculated UCL exceeds maximum concentration.

mg/m^3 - milligrams per cubic meter

NP - Non-Parametric

Generated by: Martha White/ATL

Checked by: D. Stannard/WDC

TABLE G 3.6.RME

Medium-Specific Exposure Point Concentration Summary

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)		Maximum Concentration (Qualifier)		Exposure Point Concentration			
								Value	Units	Statistic	Rationale
Surficial Aquifer - Tap Water and Water in Excavation Pit	1,1,2,2-Tetrachloroethane	µg/L	2.2E+00	5.6E+00	NP	9.8E+00		5.6E+00	µg/L	95% KM-t	1, 2, 3
	1,1,2-Trichloroethane	µg/L	1.9E+00	4.5E+00	NP	7.8E+00		4.5E+00	µg/L	95% KM-t	1, 2
	1,2-Dichloroethane	µg/L	2.8E+00	6.9E+00	NP	1.3E+01		6.9E+00	µg/L	95% KM-BCA	1, 3
	1,3-Dichlorobenzene	µg/L	2.2E-01	4.3E-01	NP	5.5E-01		4.3E-01	µg/L	95% KM-t	4
	1,4-Dichlorobenzene	µg/L	NA	NA		3.3E+00		3.3E+00	µg/L	Max	5
	Benzene	µg/L	NA	NA		5.8E-01		5.8E-01	µg/L	Max	5
	Chloroform	µg/L	NA	NA		1.3E+00		1.3E+00	µg/L	Max	5
	cis-1,2-Dichloroethene	µg/L	5.1E+01	1.1E+02	NP	1.8E+02		1.1E+02	µg/L	95% KM-t	1, 2, 3
	Tetrachloroethene	µg/L	NA	NA		1.9E-01	J	1.9E-01	µg/L	Max	5
	trans-1,2-Dichloroethene	µg/L	4.9E+00	2.1E+01	NP	2.3E+01		2.1E+01	µg/L	95% KM	1, 3
	Trichloroethene	µg/L	1.2E+00	2.4E+00	NP	3.5E+00		2.4E+00	µg/L	95% KM-t	1, 2, 3
	Vinyl chloride	µg/L	6.3E+00	1.3E+01	NP	2.0E+01		1.3E+01	µg/L	95% KM-t	1, 2, 3
	alpha-BHC	µg/L	NA	NA		7.7E-02		7.7E-02	µg/L	Max	5
	Aroclor-1260	µg/L	NA	NA		1.2E+00		1.2E+00	µg/L	Max	5
	beta-BHC	µg/L	4.2E-02	2.8E-01	NP	1.9E-01	J	1.9E-01	µg/L	Max	4, 6
	delta-BHC	µg/L	2.6E-01	3.4E+00	NP	1.5E+00		1.5E+00	µg/L	Max	4, 6
	Heptachlor epoxide	µg/L	NA	NA		7.9E-02	J	7.9E-02	µg/L	Max	5
	Iron	µg/L	9.7E+03	1.8E+04	N	2.9E+04		1.8E+04	µg/L	95% Stud-t	1, 2, 3
	Manganese	µg/L	2.1E+02	8.2E+02	G	8.0E+02		8.0E+02	µg/L	Max	1, 3, 6
	Vanadium	µg/L	8.4E+00	2.3E+01	G	2.6E+01		2.3E+01	µg/L	App. Gamma	1, 3
	Zinc	µg/L	1.9E+03	4.6E+03	NP	6.8E+03		4.6E+03	µg/L	95% KM-t	1, 2, 3

TABLE G 3.6.RME

Medium-Specific Exposure Point Concentration Summary

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale

Notes:

ProUCL, Version 4.00.05 used to determine distribution of data and calculate 95% UCL, following recommendations in users guide (USEPA. May 2010. Prepared by Lockheed Martin Environmental Services).

Options: 95% Kaplan-Meier (t) UCL (95% KM-t); 95% Kaplan-Meier Chebyshev UCL (95% KM); (95% KM-BCA); 95% Student's-T test UCL (95% Stud-t) 95% Approximate Gamma UCL (App. Gamma); Maximum Detected Value (Max)

UCL Rationale:

(1) Shapiro-Wilk W Test/Lilliefors test indicates data are log-normally distributed.

(2) Shapiro-Wilk W Test/Lilliefors indicates data are normally distributed.

(3) Test indicates data are gamma distributed.

(4) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).

(5) Maximum detected concentration used because constituent detected in only one sample.

(6) Maximum value used because calculated UCL exceeds maximum concentration.

G = Gamma

J - Estimated Value

µg/L - micrograms per liter

N - Normal

NP - Non-Parametric

Generated by: Martha White/ATL

Checked by: D. Stannard/WDC

TABLE G 3.7.RME

Medium-Specific Exposure Point Concentration Summary

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)		Maximum Concentration (Qualifier)		Exposure Point Concentration			
								Value	Units	Statistic	Rationale
Castle-Hayne Aquifer - Tap Water	1,2,4-Trichlorobenzene	µg/L	NA	NA		8.5E+00		8.5E+00	µg/L	Max	5
	1,2-Dichloroethane	µg/L	1.7E+00	1.7E+01	NP	1.9E+01		1.7E+01	µg/L	99% KM	1
	1,3-Dichlorobenzene	µg/L	1.1E+00	1.2E+00	NP	1.8E+00		1.2E+00	µg/L	95% KM-t	4
	1,4-Dichlorobenzene	µg/L	NA	NA		1.0E+00		1.0E+00	µg/L	Max	5
	Benzene	µg/L	1.4E-01	1.3E+00	NP	1.2E+00		1.2E+00	µg/L	Max	1, 6
	Chloroform	µg/L	2.6E+00	4.0E+00	NP	7.8E+00		4.0E+00	µg/L	95% KM-t	1, 2, 3
	cis-1,2-Dichloroethene	µg/L	4.1E+03	4.3E+04	NP	5.1E+04		4.3E+04	µg/L	99% KM	1
	trans-1,2-Dichloroethene	µg/L	6.1E+01	6.4E+02	NP	7.5E+02		6.4E+02	µg/L	99% KM	1
	Trichloroethene	µg/L	1.4E+01	3.0E+01	NP	1.0E+02	J	3.0E+01	µg/L	95% KM-BCA	1, 3
	Vinyl chloride	µg/L	4.3E+02	4.7E+03	NP	5.5E+03		4.7E+03	µg/L	99% KM	1
	Aroclor-1260	µg/L	NA	NA		3.4E-01	J	3.4E-01	µg/L	Max	5
	Dieldrin	µg/L	NA	NA		2.6E-02	J	2.6E-02	µg/L	Max	5
	Heptachlor epoxide	µg/L	3.8E-02	5.4E-02	NP	1.2E-01	J	5.4E-02	µg/L	95% KM-t	4
	Chromium	µg/L	6.6E+00	1.1E+01	NP	2.2E+01		1.1E+01	µg/L	95% KM-t	1, 2, 3
	Iron	µg/L	4.6E+03	7.6E+03	G	1.5E+04		7.6E+03	µg/L	App. Gamma	1, 3
	Thallium	µg/L	NA	NA		5.6E+00	J	5.6E+00	µg/L	Max	5

Notes:

ProUCL, Version 4.00.05 used to determine distribution of data and calculate 95% UCL, following recommendations in users guide (USEPA. May 2010. Prepared by Lockheed Martin Environmental Services).

Options: 95% Kaplan-Meier (t) UCL (95% KM-t); 99% Kaplan-Meier Chebyshev UCL (99% KM); 95% Kaplan-Meier (BCA) UCL (95% KM-BCA); 95% Approximate Gamma UCL (App. Gamma); Maximum Detected Value (Max)

UCL Rationale:

(1) Shapiro-Wilk W Test/Lilliefors test indicates data are log-normally distributed.

(2) Shapiro-Wilk W Test/Lilliefors indicates data are normally distributed.

(3) Test indicates data are gamma distributed.

(4) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).

TABLE G 3.7.RME

Medium-Specific Exposure Point Concentration Summary

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale

(5) Maximum detected concentration used because constituent detected in only one sample.
(6) Maximum value used because calculated UCL exceeds maximum concentration.
G = Gamma
J - Estimated Value
µg/L - micrograms per liter
NP - Non-Parametric
Generated by: Martha White/ATL
Checked by: D. Stannard/WDC

TABLE G 3.8.RME

Medium-Specific Exposure Point Concentration Summary

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater Air

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)		Maximum Concentration (Qualifier)		Exposure Point Concentration			
								Value	Units	Statistic	Rationale
Surficial Aquifer - Water Vapors at Showerhead and Excavation Pit	1,1,2,2-Tetrachloroethane	µg/L	2.2E+00	5.6E+00	NP	9.8E+00		5.6E+00	µg/L	95% KM-t	1, 2, 3
	1,1,2-Trichloroethane	µg/L	1.9E+00	4.5E+00	NP	7.8E+00		4.5E+00	µg/L	95% KM-t	1, 2
	1,2-Dichloroethane	µg/L	2.8E+00	6.9E+00	NP	1.3E+01		6.9E+00	µg/L	95% KM-BCA	1, 3
	1,3-Dichlorobenzene	µg/L	2.2E-01	4.3E-01	NP	5.5E-01		4.3E-01	µg/L	95% KM-t	4
	1,4-Dichlorobenzene	µg/L	NA	NA		3.3E+00		3.3E+00	µg/L	Max	5
	Benzene	µg/L	NA	NA		5.8E-01		5.8E-01	µg/L	Max	5
	Chloroform	µg/L	NA	NA		1.3E+00		1.3E+00	µg/L	Max	5
	cis-1,2-Dichloroethene	µg/L	5.1E+01	1.1E+02	NP	1.8E+02		1.1E+02	µg/L	95% KM-t	1, 2, 3
	Tetrachloroethene	µg/L	NA	NA		1.9E-01	J	1.9E-01	µg/L	Max	5
	trans-1,2-Dichloroethene	µg/L	4.9E+00	2.1E+01	NP	2.3E+01		2.1E+01	µg/L	95% KM	1, 3
	Trichloroethene	µg/L	1.2E+00	2.4E+00	NP	3.5E+00		2.4E+00	µg/L	95% KM-t	1, 2, 3
	Vinyl chloride	µg/L	6.3E+00	1.3E+01	NP	2.0E+01		1.3E+01	µg/L	95% KM-t	1, 2, 3

Notes:

ProUCL, Version 4.00.05 used to determine distribution of data and calculate 95% UCL, following recommendations in users guide (USEPA. May 2010. Prepared by Lockheed Martin Environmental Services).

Options: 95% Kaplan-Meier (t) UCL (95% KM-t); 95% Kaplan-Meier Chebyshev UCL (95% KM); (95% KM-BCA); 97.5% Kaplan-Meier Chebyshev UCL (97.5% KM); 99% Kaplan-Meier Chebyshev UCL (99% KM)

UCL Rationale:

(1) Shapiro-Wilk W Test/Lilliefors test indicates data are log-normally distributed.

(2) Shapiro-Wilk W Test/Lilliefors indicates data are normally distributed.

(3) Test indicates data are gamma distributed.

(4) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).

(5) Maximum detected concentration used because constituent detected in only one sample.

(6) Maximum value used because calculated UCL exceeds maximum concentration.

J - Estimated Value

µg/L - micrograms per liter

NP - Non-Parametric

Generated by: Martha White/ATL

Checked by: D. Stannard/WDC

TABLE G 3.9.RME

Medium-Specific Exposure Point Concentration Summary

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater Air

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)		Maximum Concentration (Qualifier)		Exposure Point Concentration			
								Value	Units	Statistic	Rationale
Castle-Hayne Aquifer - Water Vapors at Showerhead	1,2,4-Trichlorobenzene	µg/L	NA	NA		8.5E+00		8.5E+00	µg/L	Max	5
	1,2-Dichloroethane	µg/L	1.7E+00	1.7E+01	NP	1.9E+01		1.7E+01	µg/L	99% KM	1
	1,3-Dichlorobenzene	µg/L	1.1E+00	1.2E+00	NP	1.8E+00		1.2E+00	µg/L	95% KM-t	4
	1,4-Dichlorobenzene	µg/L	NA	NA		1.0E+00		1.0E+00	µg/L	Max	5
	Benzene	µg/L	1.4E-01	1.3E+00	NP	1.2E+00		1.2E+00	µg/L	Max	1, 6
	Chloroform	µg/L	2.6E+00	4.0E+00	NP	7.8E+00		4.0E+00	µg/L	95% KM-t	1, 2, 3
	cis-1,2-Dichloroethene	µg/L	4.1E+03	4.3E+04	NP	5.1E+04		4.3E+04	µg/L	99% KM	1
	trans-1,2-Dichloroethene	µg/L	6.1E+01	6.4E+02	NP	7.5E+02		6.4E+02	µg/L	99% KM	1
	Trichloroethene	µg/L	1.4E+01	3.0E+01	NP	1.0E+02	J	3.0E+01	µg/L	95% KM-BCA	1, 3
	Vinyl chloride	µg/L	4.3E+02	4.7E+03	NP	5.5E+03		4.7E+03	µg/L	99% KM	1

Notes:

ProUCL, Version 4.00.05 used to determine distribution of data and calculate 95% UCL, following recommendations in users guide (USEPA. May 2010. Prepared by Lockheed Martin Environmental Services).

Options: 95% Kaplan-Meier (t) UCL (95% KM-t); 99% Kaplan-Meier Chebyshev UCL (99% KM); 95% Kaplan-Meier (BCA) UCL (95% KM-BCA); Maximum Detected Value (Max)

UCL Rationale:

(1) Shapiro-Wilk W Test/Lilliefors test indicates data are log-normally distributed.

(2) Shapiro-Wilk W Test/Lilliefors indicates data are normally distributed.

(3) Test indicates data are gamma distributed.

(4) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).

(5) Maximum detected concentration used because constituent detected in only one sample.

(6) Maximum value used because calculated UCL exceeds maximum concentration.

J - Estimated Value

µg/L - micrograms per liter

NP - Non-Parametric

Generated by: Martha White/ATL

Checked by: D. Stannard/WDC

TABLE G 3.1.CTE

Medium-Specific Exposure Point Concentration Summary

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)		Maximum Concentration (Qualifier)	Exposure Point Concentration			
							Value	Units	Statistic	Rationale
Soil*	Aluminum	mg/kg	5.7E+03	9.1E+03	G	2.1E+04	5.7E+03	mg/kg	Mean-N	1, 3
	Arsenic	mg/kg	1.4E+00	3.9E+00	NP	4.8E+00	1.4E+00	mg/kg	Mean-NP	4
	Chromium	mg/kg	7.5E+00	1.7E+01	NP	3.0E+01	7.5E+00	mg/kg	Mean-NP	1, 3
	Iron	mg/kg	3.8E+03	8.8E+03	NP	1.4E+04	3.8E+03	mg/kg	Mean-NP	1
	Manganese	mg/kg	4.9E+01	8.2E+01	G	3.5E+02	4.9E+01	mg/kg	Mean-N	1, 3
	Vanadium	mg/kg	9.7E+00	2.1E+01	NP	3.9E+01	9.7E+00	mg/kg	Mean-NP	1

Notes:

* Surface soil & subsurface soil combined.

ProUCL, Version 4.00.05 used to determine distribution of data and calculate 95% UCL, following recommendations in users guide (USEPA. May 2010. Prepared by Lockheed Martin Environmental Services).

Options: Mean-Nonparametric (Mean-NP); Mean-Normal (Mean-N)

UCL Rationale:

(1) Shapiro-Wilk W Test/Lilliefors test indicates data are log-normally distributed.

(2) Shapiro-Wilk W Test/Lilliefors indicates data are normally distributed.

(3) Test indicates data are gamma distributed.

(4) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).

G = Gamma

mg/kg - milligrams per kilogram

N - Normal

NP - Non-Parametric

Generated by: Martha White/ATL

Checked by: D. Stannard/WDC

TABLE G 3.2.CTE

Medium-Specific Exposure Point Concentration Summary

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)		Maximum Concentration (Qualifier)		Exposure Point Concentration			
								Value	Units	Statistic	Rationale
Surficial Aquifer - Tap Water and Water in Excavation Pit	1,1,2,2-Tetrachloroethane	µg/L	2.2E+00	5.6E+00	NP	9.8E+00		2.2E+00	µg/L	Mean-NP	1, 2, 3
	1,1,2-Trichloroethane	µg/L	1.9E+00	4.5E+00	NP	7.8E+00		1.9E+00	µg/L	Mean-NP	1, 2
	1,2-Dichloroethane	µg/L	2.8E+00	6.9E+00	NP	1.3E+01		2.8E+00	µg/L	Mean-NP	1, 3
	1,3-Dichlorobenzene	µg/L	2.2E-01	4.3E-01	NP	5.5E-01		2.2E-01	µg/L	Mean-NP	4
	1,4-Dichlorobenzene	µg/L	NA	NA		3.3E+00		3.3E+00	µg/L	Max	5
	Benzene	µg/L	NA	NA		5.8E-01		5.8E-01	µg/L	Max	5
	Chloroform	µg/L	NA	NA		1.3E+00		1.3E+00	µg/L	Max	5
	cis-1,2-Dichloroethene	µg/L	5.1E+01	1.1E+02	NP	1.8E+02		5.1E+01	µg/L	Mean-NP	1, 2, 3
	Tetrachloroethene	µg/L	NA	NA		1.9E-01	J	1.9E-01	µg/L	Max	5
	trans-1,2-Dichloroethene	µg/L	4.9E+00	2.1E+01	NP	2.3E+01		4.9E+00	µg/L	Mean-NP	1, 3
	Trichloroethene	µg/L	1.2E+00	2.4E+00	NP	3.5E+00		1.2E+00	µg/L	Mean-NP	1, 2, 3
	Vinyl chloride	µg/L	6.3E+00	1.3E+01	NP	2.0E+01		6.3E+00	µg/L	Mean-NP	1, 2, 3
	alpha-BHC	µg/L	NA	NA		7.7E-02		7.7E-02	µg/L	Max	5
	Aroclor-1260	µg/L	NA	NA		1.2E+00		1.2E+00	µg/L	Max	5
	beta-BHC	µg/L	4.2E-02	2.8E-01	NP	1.9E-01	J	4.2E-02	µg/L	Mean-NP	4
	delta-BHC	µg/L	2.6E-01	3.4E+00	NP	1.5E+00		2.6E-01	µg/L	Mean-NP	4
	Heptachlor epoxide	µg/L	NA	NA		7.9E-02	J	7.9E-02	µg/L	Max	5
	Iron	µg/L	9.7E+03	1.8E+04	N	2.9E+04		9.7E+03	µg/L	Mean-N	1, 2, 3
	Manganese	µg/L	2.1E+02	8.2E+02	G	8.0E+02		2.1E+02	µg/L	Mean-N	1, 3
	Vanadium	µg/L	8.4E+00	2.3E+01	G	2.6E+01		8.4E+00	µg/L	Mean-N	1, 3
	Zinc	µg/L	1.9E+03	4.6E+03	NP	6.8E+03		1.9E+03	µg/L	Mean-NP	1, 2, 3

TABLE G 3.2.CTE

Medium-Specific Exposure Point Concentration Summary

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale

Notes:

ProUCL, Version 4.00.05 used to determine distribution of data and calculate 95% UCL, following recommendations in users guide (USEPA. May 2010. Prepared by Lockheed Martin Environmental Services).

Options: Mean-Nonparametric (Mean-NP); Mean-Normal (Mean-N); Maximum Detected Value (Max)

UCL Rationale:

(1) Shapiro-Wilk W Test/Lilliefors test indicates data are log-normally distributed.

(2) Shapiro-Wilk W Test/Lilliefors indicates data are normally distributed.

(3) Test indicates data are gamma distributed.

(4) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).

(5) Maximum detected concentration used because constituent was detected in only one sample.

G = Gamma

J - Estimated Value

µg/L - micrograms per liter

N - Normal

NP - Non-Parametric

Generated by: Martha White/ATL

Checked by: D. Stannard/WDC

TABLE G 3.3.CTE

Medium-Specific Exposure Point Concentration Summary

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)		Maximum Concentration (Qualifier)		Exposure Point Concentration			
								Value	Units	Statistic	Rationale
Castle-Hayne Aquifer - Tap Water	1,2,4-Trichlorobenzene	µg/L	NA	NA		8.5E+00		8.5E+00	µg/L	Max	5
	1,2-Dichloroethane	µg/L	1.7E+00	1.7E+01	NP	1.9E+01		1.7E+00	µg/L	Mean-NP	1
	1,3-Dichlorobenzene	µg/L	1.1E+00	1.2E+00	NP	1.8E+00		1.1E+00	µg/L	Mean-NP	4
	1,4-Dichlorobenzene	µg/L	NA	NA		1.0E+00		1.0E+00	µg/L	Max	5
	Benzene	µg/L	1.4E-01	1.3E+00	NP	1.2E+00		1.4E-01	µg/L	Mean-NP	1
	Chloroform	µg/L	2.6E+00	4.0E+00	NP	7.8E+00		2.6E+00	µg/L	Mean-NP	1, 2, 3
	cis-1,2-Dichloroethene	µg/L	4.1E+03	4.3E+04	NP	5.1E+04		4.1E+03	µg/L	Mean-NP	1
	trans-1,2-Dichloroethene	µg/L	6.1E+01	6.4E+02	NP	7.5E+02		6.1E+01	µg/L	Mean-NP	1
	Trichloroethene	µg/L	1.4E+01	3.0E+01	NP	1.0E+02	J	1.4E+01	µg/L	Mean-NP	1, 3
	Vinyl chloride	µg/L	4.3E+02	4.7E+03	NP	5.5E+03		4.3E+02	µg/L	Mean-NP	1
	Aroclor-1260	µg/L	NA	NA		3.4E-01	J	3.4E-01	µg/L	Max	5
	Dieldrin	µg/L	NA	NA		2.6E-02	J	2.6E-02	µg/L	Max	5
	Heptachlor epoxide	µg/L	3.8E-02	5.4E-02	NP	1.2E-01	J	3.8E-02	µg/L	Mean-NP	4
	Chromium	µg/L	6.6E+00	1.1E+01	NP	2.2E+01		6.6E+00	µg/L	Mean-NP	1, 2, 3
	Iron	µg/L	4.6E+03	7.6E+03	G	1.5E+04		4.6E+03	µg/L	Mean-N	1, 3
	Thallium	µg/L	NA	NA		5.6E+00	J	5.6E+00	µg/L	Max	5

Notes:

ProUCL, Version 4.00.05 used to determine distribution of data and calculate 95% UCL, following recommendations in users guide (USEPA. May 2010. Prepared by Lockheed Martin Environmental Services).

Options: Mean-Nonparametric (Mean-NP); Mean-Normal (Mean-N); Maximum Detected Value (Max)

UCL Rationale:

(1) Shapiro-Wilk W Test/Lilliefors test indicates data are log-normally distributed.

(2) Shapiro-Wilk W Test/Lilliefors indicates data are normally distributed.

(3) Test indicates data are gamma distributed.

(4) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).

(5) Maximum detected concentration used because constituent detected in only one sample.

TABLE G 3.3.CTE

Medium-Specific Exposure Point Concentration Summary

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale

G = Gamma
J - Estimated Value
µg/L - micrograms per liter
NP - Non-Parametric
Generated by: Martha White/ATL
Checked by: D. Stannard/WDC

TABLE G 3.4.CTE

Medium-Specific Exposure Point Concentration Summary

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater Air

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)		Maximum Concentration (Qualifier)		Exposure Point Concentration			
								Value	Units	Statistic	Rationale
Surficial Aquifer - Water Vapors at Showerhead and Excavation Pit	1,1,2,2-Tetrachloroethane	µg/L	2.2E+00	5.6E+00	NP	9.8E+00		2.2E+00	µg/L	Mean-NP	1, 2, 3
	1,1,2-Trichloroethane	µg/L	1.9E+00	4.5E+00	NP	7.8E+00		1.9E+00	µg/L	Mean-NP	1, 2
	1,2-Dichloroethane	µg/L	2.8E+00	6.9E+00	NP	1.3E+01		2.8E+00	µg/L	Mean-NP	1, 3
	1,3-Dichlorobenzene	µg/L	2.2E-01	4.3E-01	NP	5.5E-01		2.2E-01	µg/L	Mean-NP	4
	1,4-Dichlorobenzene	µg/L	NA	NA		3.3E+00		3.3E+00	µg/L	Max	5
	Benzene	µg/L	NA	NA		5.8E-01		5.8E-01	µg/L	Max	5
	Chloroform	µg/L	NA	NA		1.3E+00		1.3E+00	µg/L	Max	5
	cis-1,2-Dichloroethene	µg/L	5.1E+01	1.1E+02	NP	1.8E+02		5.1E+01	µg/L	Mean-NP	1, 2, 3
	Tetrachloroethene	µg/L	NA	NA		1.9E-01	J	1.9E-01	µg/L	Max	5
	trans-1,2-Dichloroethene	µg/L	4.9E+00	2.1E+01	NP	2.3E+01		4.9E+00	µg/L	Mean-NP	1, 3
	Trichloroethene	µg/L	1.2E+00	2.4E+00	NP	3.5E+00		1.2E+00	µg/L	Mean-NP	1, 2, 3
	Vinyl chloride	µg/L	6.3E+00	1.3E+01	NP	2.0E+01		6.3E+00	µg/L	Mean-NP	1, 2, 3

Notes:

ProUCL, Version 4.00.05 used to determine distribution of data and calculate 95% UCL, following recommendations in users guide (USEPA. May 2010. Prepared by Lockheed Martin Environmental Services).

Options: Mean-Nonparametric (Mean-NP); Mean-Normal (Mean-N); Maximum Detected Value (Max)

UCL Rationale:

(1) Shapiro-Wilk W Test/Lilliefors test indicates data are log-normally distributed.

(2) Shapiro-Wilk W Test/Lilliefors indicates data are normally distributed.

(3) Test indicates data are gamma distributed.

(4) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).

(5) Maximum detected concentration used because constituent detected in only one sample.

J - Estimated Value

µg/L - micrograms per liter

NP - Non-Parametric

Generated by: Martha White/ATL

Checked by: D. Stannard/WDC

TABLE G 3.5.CTE

Medium-Specific Exposure Point Concentration Summary

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater Air

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)		Maximum Concentration (Qualifier)		Exposure Point Concentration			
								Value	Units	Statistic	Rationale
Castle-Hayne Aquifer - Water Vapors at Showerhead	1,2,4-Trichlorobenzene	µg/L	NA	NA		8.5E+00		8.5E+00	µg/L	Max	5
	1,2-Dichloroethane	µg/L	1.7E+00	1.7E+01	NP	1.9E+01		1.7E+00	µg/L	Mean-NP	1
	1,3-Dichlorobenzene	µg/L	1.1E+00	1.2E+00	NP	1.8E+00		1.1E+00	µg/L	Mean-NP	4
	1,4-Dichlorobenzene	µg/L	NA	NA		1.0E+00		1.0E+00	µg/L	Max	5
	Benzene	µg/L	1.4E-01	1.3E+00	NP	1.2E+00		1.4E-01	µg/L	Mean-NP	1
	Chloroform	µg/L	2.6E+00	4.0E+00	NP	7.8E+00		2.6E+00	µg/L	Mean-NP	1, 2, 3
	cis-1,2-Dichloroethene	µg/L	4.1E+03	4.3E+04	NP	5.1E+04		4.1E+03	µg/L	Mean-NP	1
	trans-1,2-Dichloroethene	µg/L	6.1E+01	6.4E+02	NP	7.5E+02		6.1E+01	µg/L	Mean-NP	1
	Trichloroethene	µg/L	1.4E+01	3.0E+01	NP	1.0E+02	J	1.4E+01	µg/L	Mean-NP	1, 3
	Vinyl chloride	µg/L	4.3E+02	4.7E+03	NP	5.5E+03		4.3E+02	µg/L	Mean-NP	1

Notes:

ProUCL, Version 4.00.05 used to determine distribution of data and calculate 95% UCL, following recommendations in users guide (USEPA. May 2010. Prepared by Lockheed Martin Environmental Services).

Options: Mean-Nonparametric (Mean-NP); Mean-Normal (Mean-N); Maximum Detected Value (Max)

UCL Rationale:

(1) Shapiro-Wilk W Test/Lilliefors test indicates data are log-normally distributed.

(2) Shapiro-Wilk W Test/Lilliefors indicates data are normally distributed.

(3) Test indicates data are gamma distributed.

(4) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).

(5) Maximum detected concentration used because constituent detected in only one sample.

J - Estimated Value

µg/L - micrograms per liter

NP - Non-Parametric

Generated by: Martha White/ATL

Checked by: D. Stannard/WDC

TABLE G 4.1.RME

Values Used for Daily Intake Calculations – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Ingestion	Military Personnel	Adult	Surface Soil	CS	Chemical Concentration in Soil	See Table 3.1.RME	mg/kg	See Table 3.1.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	100	mg/day	EPA, 1991	CS x IR-S x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	250	days/year	EPA, 1991	
				ED	Exposure Duration	4	years	(1)	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	1,460	days	EPA, 1989	
	Trespasser/Visitor	Adult	Surface Soil	CS	Chemical Concentration in Soil	See Table 3.1.RME	mg/kg	See Table 3.1.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	100	mg/day	EPA, 1991	CS x IR-S x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	52	days/year	(3)	
				ED	Exposure Duration	24	years	EPA, 1991	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Youth	Surface Soil	CS	Chemical Concentration in Soil	See Table 3.1.RME	mg/kg	See Table 3.1.RME	CDI (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	100	mg/day	EPA, 1991	CS x IR-S x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	52	days/year	(3)	
				ED	Exposure Duration	10	years	EPA, 2000, (4)	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				BW	Body Weight	45	kg	EPA, 2000	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,650	days	EPA, 1989	
Dermal	Military Personnel	Adult	Surface Soil	CS	Chemical Concentration in Soil	See Table 3.1.RME	mg/kg	See Table 3.1.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	3,300	cm^2	EPA, 2004	CS x SA x SSAF x DABS x CF x EF x
				SSAF	Soil to Skin Adherence Factor	0.2	mg/cm^2-day	EPA, 2004	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	chem specific	--	EPA, 2004	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				EF	Exposure Frequency	250	days/year	EPA, 1991	
				ED	Exposure Duration	4	years	(1)	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	1,460	days	EPA, 1989	
	Trespasser/Visitor	Adult	Surface Soil	CS	Chemical Concentration in Soil	See Table 3.1.RME	mg/kg	See Table 3.1.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	5,700	cm^2	EPA, 2004	CS x SA x SSAF x DABS x CF1 x EF x
				SSAF	Soil to Skin Adherence Factor	0.07	mg/cm^2-day	EPA, 2004	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	Chemical Specific	--	EPA, 2004	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				EF	Exposure Frequency	52	days/year	(3)	
				ED	Exposure Duration	24	years	EPA, 1991	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	

TABLE G 4.1.RME

Values Used for Daily Intake Calculations – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Dermal	Trespasser/Visitor	Youth	Surface Soil	CS	Chemical Concentration in Soil	See Table 3.1.RME	mg/kg	See Table 3.1.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	4,200	cm^2	EPA, 2004, (5)	CS x SA x SSAF x DABS x CF1 x EF x
				SSAF	Soil to Skin Adherence Factor	0.04	mg/cm^2-day	EPA, 2004, (6)	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	Chemical Specific	--	EPA, 2004	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				EF	Exposure Frequency	52	days/year	(3)	
				ED	Exposure Duration	10	years	EPA, 2000, (4)	
				BW	Body Weight	45	kg	EPA, 2000	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,650	days	EPA, 1989	

Notes:

(1) Standard tour of duty
(2) Professional judgment assuming maintenance activities performed 1 day/week in industrial area.
(3) Professional judgment assuming trespasser/visitor in industrial area of site 1 day per week for 52 weeks.
(4) Adolescents from 7 to 16 years of age, per EPA 2000.
(5) The skin surface area includes the head, hands, forearms and lower legs for the 7 through 16 year olds.
(6) SSAF is the geometric mean weighted soil adherence for soccer players (teens, 13-15 years old) from EPA, 2004, Exhibit 3-3.

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.
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EPA, 1997: Exposure Factors Handbook. EPA/600/P-95/002Fa.
EPA, 2000: Supplemental Guidance to RAGS: Region 4 Bulletins, Human Health Risk Assessment Bulletins. www.epa.gov/region4/waste/oftecser/healtbul.htm.
EPA, 2004: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

Generated by: M. White/ATL
Checked by:D. Stannard/WDC

TABLE G 4.2.RME

Values Used for Daily Intake Calculations – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Surface Water
Exposure Medium: Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Ingestion	Military Personnel	Adult	Drainage Ditches/	CSW	Chemical Concentration in Surface Water	See Table 3.3.RME	µg/L	See Table 3.3.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
			Marshy Area	IR-SW	Ingestion Rate of Surface Water	0.01	liters/hr	EPA, 2000	CSW x IR-SW x ET x EF x ED x CF1 x
				ET	Exposure Time	2	hr/day	(1)	1/BW x 1/AT
				EF	Exposure Frequency	12	days/year	(1)	
				ED	Exposure Duration	4	years	(2)	
				CF1	Conversion Factor 1	0.001	mg/µg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-N	Averaging Time (Non-Cancer)	1,460	days	EPA, 1989	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
	Trespasser/Visitor	Adult	Drainage Ditches/	CSW	Chemical Concentration in Surface Water	See Table 3.3.RME	µg/L	See Table 3.3.RME	CDI (mg/kg-day) =
			Marshy Area	IR-SW	Ingestion Rate of Surface Water	0.01	liters/hr	EPA, 2000	CSW x IR-SW x ET x EF x ED x CF1 x
				ET	Exposure Time	2	hr/day	(4)	1/BW x 1/AT
				EF	Exposure Frequency	52	days/year	(4)	
				ED	Exposure Duration	24	years	EPA, 1991	
				CF1	Conversion Factor 1	0.001	mg/µg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
		Youth	Drainage Ditches/	CSW	Chemical Concentration in Surface Water	See Table 3.3.RME	µg/L	See Table 3.3.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
			Marshy Area	IR-SW	Ingestion Rate of Surface Water	0.01	liters/hr	EPA, 2000	CSW x IR-SW x ET x EF x ED x CF1 x
				ET	Exposure Time	2	hr/day	(4)	1/BW x 1/AT
				EF	Exposure Frequency	52	days/year	(4)	
				ED	Exposure Duration	10	years	EPA, 2000	
				CF1	Conversion Factor 1	0.001	mg/µg	- -	
				BW	Body Weight	45	kg	EPA, 2000	
				AT-N	Averaging Time (Non-Cancer)	3,650	days	EPA, 1989	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
Dermal	Military Personnel	Adult	Drainage Ditches/	CSW	Chemical Concentration in Surface Water	See Table 3.3.RME	µg/L	See Table 3.3.RME	CDI (mg/kg-day) =
			Marshy Area	DAevent	Dermally Absorbed Dose per Event	calculated	mg/cm^2-event	calculated	DAevent x SA x EV x EF x ED x 1/BW x 1/AT
				FA	Fraction absorbed water	Chemical Specific	dimensionless	EPA, 2004	
				Kp	Permeability Coefficient	Chemical Specific	cm/hr	EPA, 2004	Inorganics: DAevent (mg/cm2-event) =
				τ	Lag Time	Chemical Specific	hr/event	EPA, 2004	Kp x CW x t_{event} x CF1 x CF2
				t*	Time to Reach Steady-state	Chemical Specific	hours	EPA, 2004	
				B	Ratio of Permeability of Stratum Corneum to	Chemical Specific	dimensionless	EPA, 2004	Organics :
				t_{event}	Event Time	2	hr/day	(1)	tevent<t*: DAevent (mg/cm2-event) =
				SA	Skin Surface Area Available for Contact	5,700	cm^2	EPA, 2004 (5)	2 x FA x Kp x CW x (sqrt((6 x τ x t_{event})/π))
				EV	Event Frequency	1	events/day	EPA, 2004	x CF1 x CF2
				EF	Exposure Frequency	12	days/year	(1)	
				ED	Exposure Duration	4	years	(2)	tevent>t*: DAevent (mg/cm2-event) =
				BW	Body Weight	70	kg	EPA, 1991	FA x Kp x CW x (t_{event}/(1+B) + 2 x τ x
				AT-N	Averaging Time (Non-Cancer)	1,460	days	EPA, 1989	((1 + 3B + 3B2)/(1+B)2)) x CF1 x CF2
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				CF1	Conversion Factor 1	0.001	mg/µg	- -	
				CF2	Conversion Factor 2	0.001	L/cm^3	- -	

TABLE G 4.2.RME

Values Used for Daily Intake Calculations – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Surface Water
Exposure Medium: Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Dermal (cont'd)	Trespasser/Visitor	Adult	Drainage Ditches/ Marshy Area	CSW	Chemical Concentration in Surface Water	See Table 3.3.RME	µg/L	See Table 3.3.RME	CDI (mg/kg-day) =
				DAevent	Dermally Absorbed Dose per Event	calculated	mg/cm^2-event	calculated	DAevent x SA x EV x EF x ED x 1/BW x 1/AT
				FA	Fraction absorbed water	Chemical Specific	dimensionless	EPA, 2004	
				Kp	Permeability Coefficient	Chemical Specific	cm/hr	EPA, 2004	Inorganics: DAevent (mg/cm2-event) =
				τ	Lag Time	Chemical Specific	hr/event	EPA, 2004	Kp x CW x t_{event} x CF1 x CF2
				t*	Time to Reach Steady-state	Chemical Specific	hours	EPA, 2004	
				B	Ratio of Permeability of Stratum Corneum to	Chemical Specific	dimensionless	EPA, 2004	Organics :
				t_{event}	Event Time	2	hr/day	(4)	tevent<t*: DAevent (mg/cm2-event) =
				SA	Skin Surface Area Available for Contact	5,700	cm^2	EPA, 2004 (5)	2 x FA x Kp x CW x (sqrt((6 x τ x t_{event})/π))
				EV	Event Frequency	1	events/day	EPA, 2004	x CF1 x CF2
				EF	Exposure Frequency	52	days/year	(4)	
				ED	Exposure Duration	24	years	EPA, 1991	tevent>t*: DAevent (mg/cm2-event) =
				BW	Body Weight	70	kg	EPA, 1991	FA x Kp x CW x (t_{event}/(1+B) + 2 x τ x
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	((1 + 3B + 3B2)/(1+B)2)) x CF1 x CF2
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				CF1	Conversion Factor 1	0.001	mg/µg	- -	
				CF2	Conversion Factor 2	0.001	L/cm^3	- -	
		Youth	Drainage Ditches/ Marshy Area	CSW	Chemical Concentration in Surface Water	See Table 3.3.RME	µg/L	See Table 3.3.RME	CDI (mg/kg-day) =
				DAevent	Dermally Absorbed Dose per Event	calculated	mg/cm^2-event	calculated	DAevent x SA x EV x EF x ED x 1/BW x 1/AT
				FA	Fraction absorbed water	Chemical Specific	dimensionless	EPA, 2004	
				Kp	Permeability Coefficient	Chemical Specific	cm/hr	EPA, 2004	Inorganics: DAevent (mg/cm2-event) =
				τ	Lag Time	Chemical Specific	hr/event	EPA, 2004	Kp x CW x t_{event} x CF1 x CF2
				t*	Time to Reach Steady-state	Chemical Specific	hours	EPA, 2004	
				B	Ratio of Permeability of Stratum Corneum to	Chemical Specific	dimensionless	EPA, 2004	Organics :
				t_{event}	Event Time	2	hr/day	(4)	tevent<t*: DAevent (mg/cm2-event) =
				SA	Skin Surface Area Available for Contact	4,000	cm^2	EPA, 2004 (5)	2 x FA x Kp x CW x (sqrt((6 x τ x t_{event})/π))
				EV	Event Frequency	1	events/day	EPA, 2004	x CF1 x CF2
				EF	Exposure Frequency	52	days/year	(4)	
				ED	Exposure Duration	10	years	EPA, 2000	tevent>t*: DAevent (mg/cm2-event) =
				BW	Body Weight	45	kg	EPA, 2000	FA x Kp x CW x (t_{event}/(1+B) + 2 x τ x
				AT-N	Averaging Time (Non-Cancer)	3,650	days	EPA, 1989	((1 + 3B + 3B2)/(1+B)2)) x CF1 x CF2
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				CF1	Conversion Factor 1	0.001	mg/µg	- -	
				CF2	Conversion Factor 2	0.001	L/cm^3	- -	

Notes:

(1) Professional judgment assuming 2 hours/day, 1 day/month.
(2) Standard tour of duty
(3) Professional judgment assuming maintenance work in and around pond occurs 4 hours/day, 5 days/week for 4 weeks/year.
(4) Professional judgment assuming fishing and/or tresspassing/visiting activities in and around the pond occur 2 hours/day, 1 day/week for 52 weeks/year.
(5) The skin surface area includes hands, forearms, lower legs, and feet.

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.
EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.
EPA, 1997: Exposure Factors Handbook. EPA/600/P-95/002Fa.
EPA. 2000. Supplemental Guidance to RAGS: Region 4 Bulletins, Human Health Risk Assessment Bulletins. EPA Region 4, originally published November 1995, Website version last updated May 2000: http://www.epa.gov/region4/waste/ots/healtbul.htm.
EPA, 2004: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. July 2004.

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Checked by:D. Stannard/WDC

TABLE G 4.3.RME
Values Used for Daily Intake Calculations -- Reasonable Maximum Exposure
Supplemental Investigation Report Operable Unit No. 14 (Site 69)
MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Ingestion	Military Personnel	Adult	Drainage Ditches/	CS	Chemical Concentration in Sediment	See Table 3.4.RME	mg/kg	See Table 3.4.RME	CDI (mg/kg-day) =
			Marshy Area	IR-S	Ingestion Rate of Soil	100	mg/day	(1)	CS x IR-S x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	12	days/year	(2)	
				ED	Exposure Duration	4	years	(3)	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	1,460	days	EPA, 1989	
	Trespasser/Visitor	Adult	Drainage Ditches/	CS	Chemical Concentration in Soil	See Table 3.4.RME	mg/kg	See Table 3.4.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
			Marshy Area	IR-S	Ingestion Rate of Soil	100	mg/day	(1)	CS x IR-S x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	52	days/year	(5)	
				ED	Exposure Duration	24	years	EPA, 1991	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Youth	Drainage Ditches/	CS	Chemical Concentration in Soil	See Table 3.4.RME	mg/kg	See Table 3.4.RME	CDI (mg/kg-day) =
			Marshy Area	IR-S	Ingestion Rate of Soil	100	mg/day	(1)	CS x IR-S x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	52	days/year	(5)	
				ED	Exposure Duration	10	years	EPA, 2000	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				BW	Body Weight	45	kg	EPA, 2000	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,650	days	EPA, 1989	
Dermal	Military Personnel	Adult	Drainage Ditches/	CS	Chemical Concentration in Soil	See Table 3.4.RME	mg/kg	See Table 3.4.RME	CDI (mg/kg-day) =
			Marshy Area	SA	Skin Surface Area Available for Contact	5,700	cm^2	EPA, 2004 (6)	CS x SA x SSAF x DABS x CF1 x EF x
				SSAF	Soil to Skin Adherence Factor	0.6	mg/cm^2-day	EPA, 2004 (7)	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	Chemical Specific	--	EPA, 2004	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				EF	Exposure Frequency	12	days/year	(2)	
				ED	Exposure Duration	4	years	(3)	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	1,460	days	EPA, 1989	
	Trespasser/Visitor	Adult	Drainage Ditches/	CS	Chemical Concentration in Soil	See Table 3.4.RME	mg/kg	See Table 3.4.RME	CDI (mg/kg-day) =
			Marshy Area	SA	Skin Surface Area Available for Contact	5,700	cm^2	EPA, 2004 (6)	CS x SA x SSAF x DABS x CF1 x EF x
				SSAF	Soil to Skin Adherence Factor	0.6	mg/cm^2-day	EPA, 2004 (7)	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	Chemical Specific	--	EPA, 2004	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				EF	Exposure Frequency	52	days/year	(5)	
				ED	Exposure Duration	24	years	EPA, 1991	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	

TABLE G 4.3.RME

Values Used for Daily Intake Calculations – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Dermal (cont'd)	Trespasser/Visitor	Youth	Drainage Ditches/ Marshy Area	CS	Chemical Concentration in Soil	See Table 3.4.RME	mg/kg	See Table 3.4.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	4,000	cm^2	EPA, 2004 (9)	2 x FA x Kp x CW x (sqrt((6 x τ x t_{event})/π))
				SSAF	Soil to Skin Adherence Factor	0.2	mg/cm^2-day	EPA, 2004, (10)	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	Chemical Specific	--	EPA, 2004	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				EF	Exposure Frequency	52	days/year	(2)	
				ED	Exposure Duration	10	years	(3)	
				BW	Body Weight	45	kg	EPA, 2000	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,650	days	EPA, 1989	

Notes:

(1) Professional judgment assuming the sediment ingestion rate is the same as the soil ingestion rate.
(2) Professional judgment assuming 2 hours/day, 1 day/month.
(3) Standard tour of duty
(4) Professional judgment assuming maintenance work in and around pond occurs 4 hours/day, 5 days/week for 4 weeks/year.
(5) Professional judgment assuming 1 day/week for 52 weeks/year.
(6) Skin surface area is skin surface area is the skin surface area for adult resident exposed to soil, includes head, hands, forearems, and lower legs.
(7) SSAF is the geometric mean weighted soil adherence factor for pipe layers in wet soil - Exhibit 3-3 of RAGS Part E.
(8) Skin surface area is skin surface area for adult industrial worker exposed to soil, includes head, hands, forearems, and lower legs.
(9) The skin surface area includes hands, forearms, lower legs, and feet.
(10) SSAF is the geometric mean weighted soil adherence factor for children playing in wet soil - Exhibit 3-3 of RAGS Part E.

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.
EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.
EPA, 1997: Exposure Factors Handbook. EPA/600/P-95/002Fa.
EPA, 2000: Supplemental Guidance to RAGS: Region 4 Bulletins, Human Health Risk Assessment Bulletins. www.epa.gov/region4/waste/oftecser/healtbul.htm.
EPA, 2004: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

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TABLE G 4.4.RME

Values Used for Daily Intake Calculations – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Surface Water
Exposure Medium: Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Ingestion	Construction Worker	Adult	Drainage Ditches/	CSW	Chemical Concentration in Surface Water	See Table 3.3.RME	µg/L	See Table 3.3.RME	CDI (mg/kg-day) =
			Marshy Area	IR-SW	Ingestion Rate of Surface Water	0.01	liters/hr	EPA, 2000	CSW x IR-SW x ET x EF x ED x CF1 x
				ET	Exposure Time	4	hr/day	(1)	1/BW x 1/AT
				EF	Exposure Frequency	20	days/year	(1)	
				ED	Exposure Duration	1	years	EPA, 1991	
				CF1	Conversion Factor 1	0.001	mg/µg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-N	Averaging Time (Non-Cancer)	365	days	EPA, 1989	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
Dermal	Construction Worker	Adult	Drainage Ditches/	CSW	Chemical Concentration in Surface Water	See Table 3.3.RME	µg/L	See Table 3.3.RME	CDI (mg/kg-day) =
			Marshy Area	DAevent	Dermally Absorbed Dose per Event	calculated	mg/cm^2-event	calculated	DAevent x SA x EV x EF x ED x 1/BW x 1/AT
				FA	Fraction absorbed water	Chemical Specific	dimensionless	EPA, 2004	
				Kp	Permeability Coefficient	Chemical Specific	cm/hr	EPA, 2004	Inorganics: DAevent (mg/cm2-event) =
				τ	Lag Time	Chemical Specific	hr/event	EPA, 2004	Kp x CW x t_{event} x CF1 x CF2
				t*	Time to Reach Steady-state	Chemical Specific	hours	EPA, 2004	
				B	Ratio of Permeability of Stratum Corneum to Epidermis	Chemical Specific	dimensionless	EPA, 2004	Organics :
				t_{event}	Event Time	4	hr/day	(1)	tevent<t*: DAevent (mg/cm2-event) =
				SA	Skin Surface Area Available for Contact	5,700	cm^2	EPA, 2004 (2)	2 x FA x Kp x CW x (sqrt((6 x τ x t_{event})/π))
				EV	Event Frequency	1	events/day	EPA, 2004	x CF1 x CF2
				EF	Exposure Frequency	20	days/year	(1)	
				ED	Exposure Duration	1	years	EPA, 1991	tevent>t*: DAevent (mg/cm2-event) =
				BW	Body Weight	70	kg	EPA, 1991	FA x Kp x CW x (t_{event}/(1+B) + 2 x τ x
				AT-N	Averaging Time (Non-Cancer)	365	days	EPA, 1989	((1 + 3B + 3B2)/(1+B)2)) x CF1 x CF2
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				CF1	Conversion Factor 1	0.001	mg/µg	- -	
				CF2	Conversion Factor 2	0.001	L/cm^3	- -	

Notes:

(1) Professional judgment assuming construction work in and around pond occurs 4 hours/day, 5 days/week for 4 weeks/year.
(2) The skin surface area includes hands, forearms, lower legs, and feet.

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.
EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.
EPA, 1997: Exposure Factors Handbook. EPA/600/P-95/002Fa.
EPA. 2000. Supplemental Guidance to RAGS: Region 4 Bulletins, Human Health Risk Assessment Bulletins. EPA Region 4, originally published November 1995, Website version last updated May 2000: http://www.epa.gov/region4/waste/ots/healtbul.htm.
EPA, 2004: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. July 2004.

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Checked by:D. Stannard/WDC

TABLE G 4.5.RME

Values Used for Daily Intake Calculations – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Ingestion	Construction	Adult	Drainage Ditches/	CS	Chemical Concentration in Sediment	See Table 3.4.RME	mg/kg	See Table 3.4.RME	CDI (mg/kg-day) =
			Marshy Area	IR-S	Ingestion Rate of Soil	100	mg/day	(1)	CS x IR-S x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	20	days/year	(2)	
				ED	Exposure Duration	1	years	EPA, 1991	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	365	days	EPA, 1989	
Dermal	Construction Worker	Adult	Drainage Ditches/	CS	Chemical Concentration in Soil	See Table 3.4.RME	mg/kg	See Table 3.4.RME	CDI (mg/kg-day) =
			Marshy Area	SA	Skin Surface Area Available for Contact	3,300	cm^2	EPA, 2004 (3)	CS x SA x SSAF x DABS x CF1 x EF x
				SSAF	Soil to Skin Adherence Factor	0.6	mg/cm^2-day	EPA, 2004 (4)	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	Chemical Specific	--	EPA, 2004	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				EF	Exposure Frequency	20	days/year	(2)	
				ED	Exposure Duration	1	years	EPA, 1991	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	365	days	EPA, 1989	

Notes:

(1) Professional judgment assuming the sediment ingestion rate is the same as the soil ingestion rate.
(2) Professional judgment assuming construction work in and around pond occurs 4 hours/day, 5 days/week for 4 weeks/year.
(3) Skin surface area is skin surface area for adult industrial worker exposed to soil, includes head, hands, forearems, and lower legs.
(4) SSAF is the geometric mean weighted soil adherence factor for pipe layers in wet soil - Exhibit 3-3 of RAGS Part E.

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.
EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.
EPA, 1997: Exposure Factors Handbook. EPA/600/P-95/002Fa.
EPA, 2000: Supplemental Guidance to RAGS: Region 4 Bulletins, Human Health Risk Assessment Bulletins. www.epa.gov/region4/waste/oftecser/healtbul.htm.
EPA, 2004: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

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TABLE G 4.6.RME
Values Used for Daily Intake Calculations – Reasonable Maximum Exposure
Supplemental Investigation Report Operable Unit No. 14 (Site 69)
MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Ingestion	Resident	Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.5.RME	mg/kg	See Table 3.5.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	100	mg/day	EPA, 1991	CS x IR-S x EF x ED x CF x 1/BW x 1/AT
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ED	Exposure Duration	24	years	EPA, 1991	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Child	Soil*	CS	Chemical Concentration in Soil	See Table 3.5.RME	mg/kg	See Table 3.5.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	200	mg/day	EPA, 1991	CS x IR-S x EF x ED x CF x 1/BW x 1/AT
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ED	Exposure Duration	6	years	EPA, 1991	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				BW	Body Weight	15	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
		Child/Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.5.RME	mg/kg	See Table 3.5.RME	Carcinogenic
				IR-Sa	Ingestion Rate of Soil-adult	100	mg/day	EPA, 1991	Chronic Daily Intake (CDI) (mg/kg-day) =
				EDa	Exposure Duration adult	24	years	EPA, 1991	CS x IR-S x EF x CF x 1/AT
				BWa	Body Weight adult	70	kg	EPA, 1991	
				IR-Sc	Ingestion Rate of Soil-child	200	mg/day	EPA, 1991	
				EDc	Exposure Duration child	6	years	EPA, 1991	IR-S = (EDc * IR-Sc/ BWc) + (EDa * IR-Sa/BWa)
				BWc	Body Weight child	15	kg	EPA, 1991	
				IR-S	Ingestion Rate of Soil-adjusted	114.29	mg-year/kg-day	- -	
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				CF3	Conversion Factor 3	0.000001	kg/mg	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
	Construction Worker	Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.5.RME	mg/kg	See Table 3.5.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	480	mg/day	EPA, 1991	CS x IR-S x EF x ED x CF x 1/BW x 1/AT
				EF	Exposure Frequency	250	days/year	EPA, 1991	
				ED	Exposure Duration	1	years	EPA, 1991	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	365	days	EPA, 1989	

TABLE G 4.6.RME
Values Used for Daily Intake Calculations -- Reasonable Maximum Exposure
Supplemental Investigation Report Operable Unit No. 14 (Site 69)
MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Ingestion (cont'd)	Industrial Worker	Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.5.RME	mg/kg	See Table 3.5.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	100	mg/day	EPA, 1991	CS x IR-S x EF x ED x CF x 1/BW x 1/AT
				EF	Exposure Frequency	250	days/year	EPA, 1991	
				ED	Exposure Duration	25	years	EPA, 1991	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	9,125	days	EPA, 1989	
	Trespasser/Visitor	Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.5.RME	mg/kg	See Table 3.5.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	100	mg/day	EPA, 1991	CS x IR-S x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	52	days/year	(3)	
				ED	Exposure Duration	24	years	EPA, 1991	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Youth	Soil*	CS	Chemical Concentration in Soil	See Table 3.5.RME	mg/kg	See Table 3.5.RME	CDI (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	100	mg/day	EPA, 1991	CS x IR-S x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	52	days/year	(3)	
				ED	Exposure Duration	10	years	EPA, 2000, (4)	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				BW	Body Weight	45	kg	EPA, 2000	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,650	days	EPA, 1989	

TABLE G 4.6.RME
Values Used for Daily Intake Calculations – Reasonable Maximum Exposure
Supplemental Investigation Report Operable Unit No. 14 (Site 69)
MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Dermal	Resident	Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.5.RME	mg/kg	See Table 3.5.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	5,700	cm^2	EPA, 2004	CS x SA x SSAF x DABS x CF x EF x
				SSAF	Soil to Skin Adherence Factor	0.07	mg/cm^2-day	EPA, 2004	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	chem specific	--	EPA, 2004	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ED	Exposure Duration	24	years	EPA, 1991	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Child	Soil*	CS	Chemical Concentration in Soil	See Table 3.5.RME	mg/kg	See Table 3.5.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	2,800	cm^2	EPA, 2004	CS x SA x SSAF x DABS x CF x EF x
				SSAF	Soil to Skin Adherence Factor	0.2	mg/cm^2-day	EPA, 2004	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	chem specific	--	EPA, 2004	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ED	Exposure Duration	6	years	EPA, 1991	
				BW	Body Weight	15	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
		Child/Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.5.RME	mg/kg	See Table 3.5.RME	Carcinogenic CDI (mg/kg-day) =
				SAc	Skin Surface Area child	2,800	cm^2	EPA, 2004	CS x SA x DABS x CF3 x EF x 1/AT
				SSAFc	Soil to Skin Adherence Factor child	0.2	mg/cm^2-day	EPA, 2004	
				EDc	Exposure Duration child	6	years	EPA, 1991	SA =
				BWc	Body Weight child	15	kg	EPA, 1991	((EDc * SAc/BWc)*SSAFc) + ((EDa * SAa/BWa)*SSAFa)
				SAa	Skin Surface Area adult	5,700	cm^2	EPA, 2004	
				SSAFa	Soil to Skin Adherence Factor-adult	0.07	mg/cm^2-day	EPA, 2004	
				EDa	Exposure Duration adult	24	years	EPA, 1991	
				BWa	Body Weight adult	70	kg	EPA, 1991	
				SA	Skin Surface Area adjusted	361	cm^2-year/kg-day	---	
				DABS	Dermal Absorption Factor Solids	chem specific	--	EPA, 2004	
				CF3	Conversion Factor 3	0.000001	kg/mg	- -	
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	

TABLE G 4.6.RME
Values Used for Daily Intake Calculations – Reasonable Maximum Exposure
Supplemental Investigation Report Operable Unit No. 14 (Site 69)
MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Dermal (cont'd)	Construction Worker	Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.5.RME	mg/kg	See Table 3.5.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	3,300	cm^2	EPA, 2004	CS x SA x SSAF x DABS x CF x EF x
				SSAF	Soil to Skin Adherence Factor	0.2	mg/cm^2-day	EPA, 2004	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	chem specific	--	EPA, 2004	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				EF	Exposure Frequency	250	days/years	Prof. Judgment	
				ED	Exposure Duration	1	years	Prof. Judgment	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	365	days	EPA, 1989	
	Industrial Worker	Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.5.RME	mg/kg	See Table 3.5.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	3,300	cm^2	EPA, 2004	CS x SA x SSAF x DABS x CF x EF x
				SSAF	Soil to Skin Adherence Factor	0.2	mg/cm^2-day	EPA, 2004	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	chem specific	--	EPA, 2004	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				EF	Exposure Frequency	250	days/year	EPA, 1991	
				ED	Exposure Duration	25	years	EPA, 1991	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	9,125	days	EPA, 1989	
	Trespasser/Visitor	Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.5.RME	mg/kg	See Table 3.5.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	5,700	cm^2	EPA, 2004	CS x SA x SSAF x DABS x CF1 x EF x
				SSAF	Soil to Skin Adherence Factor	0.07	mg/cm^2-day	EPA, 2004	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	Chemical Specific	--	EPA, 2004	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				EF	Exposure Frequency	52	days/year	(3)	
				ED	Exposure Duration	24	years	EPA, 1991	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Youth	Soil*	CS	Chemical Concentration in Soil	See Table 3.5.RME	mg/kg	See Table 3.5.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	4,200	cm^2	EPA, 2004, (5)	CS x SA x SSAF x DABS x CF1 x EF x
				SSAF	Soil to Skin Adherence Factor	0.04	mg/cm^2-day	EPA, 2004, (6)	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	Chemical Specific	--	EPA, 2004	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				EF	Exposure Frequency	52	days/year	(3)	
				ED	Exposure Duration	10	years	EPA, 2000, (4)	
				BW	Body Weight	45	kg	EPA, 2000	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,650	days	EPA, 1989	

TABLE G 4.6.RME

Values Used for Daily Intake Calculations – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name

Notes:

* Includes surface and subsurface soil.

(1) Standard tour of duty
(2) Professional judgment assuming maintenance activities performed 1 day/week in industrial area.
(3) Professional judgment assuming trespasser/visitor in industrial area of site 1 day per week for 52 weeks.
(4) Adolescents from 7 to 16 years of age, per EPA 2000.
(5) The skin surface area includes the head, hands, forearms and lower legs for the 7 through 16 year olds.
(6) SSAF is the geometric mean weighted soil adherence for soccer players (teens, 13-15 years old) from EPA, 2004, Exhibit 3-3.

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.
EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.
EPA, 2000: Supplemental Guidance to RAGS: Region 4 Bulletins, Human Health Risk Assessment Bulletins. www.epa.gov/region4/waste/oftecser/healtbul.htm.
EPA, 2004: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.
Generated by: M. White/ATL
Checked by:D. Stannard/WDC

TABLE G 4.7.RME

Values Used for Daily Intake Calculations – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Inhalation	Resident	Adult	Emissions from Soil*	CS	Chemical Concentration in Soil	See Table 3.6.RME	mg/kg	See Table 3.6.RME	Exposure Concentration (EC) (mg/m^3) =
				CA	Chemical Concentration in Air	calc	mg/m^3	calc	CA x ET x EF x ED x CF x 1/AT
				PEF	Particulate Emission Factor	1.36E+09	m^3/kg	EPA, 2002	
				VF	Volatilization Factor for volatile constituents	calc	m^3/kg	EPA, 2002	CA (mg/m^3) = CS (1/PEF + 1/VF)
				ET	Exposure Time	24	hour/day	--	
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ED	Exposure Duration	24	years	EPA, 1991	
				CF	Conversion Factor 1	1/24	day/hr	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Child	Emissions from Soil*	CS	Chemical Concentration in Soil	See Table 3.6.RME	mg/kg	See Table 3.6.RME	Exposure Concentration (EC) (mg/m^3) =
				CA	Chemical Concentration in Air	calc	mg/m^3	calc	CA x ET x EF x ED x CF x 1/AT
				PEF	Particulate Emission Factor	1.36E+09	m^3/kg	EPA, 2002	
				VF	Volatilization Factor for volatile constituents	calc	m^3/kg	EPA, 2002	CA (mg/m^3) = CS (1/PEF + 1/VF)
				ET	Exposure Time	24	hour/day	--	
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ED	Exposure Duration	6	years	EPA, 1991	
				CF	Conversion Factor 1	1/24	day/hr	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
		Child/Adult	Emissions from Soil*	CS	Chemical Concentration in Soil	See Table 3.6.RME	mg/kg	See Table 3.6.RME	Exposure Concentration (EC) (mg/m^3) =
				CA	Chemical Concentration in Air	calc	mg/m^3	calc	CA x ET x EF x ED x CF x 1/AT
				PEF	Particulate Emission Factor	1.36E+09	m^3/kg	EPA, 2002	
				VF	Volatilization Factor for volatile constituents	calc	m^3/kg	EPA, 2002	CA (mg/m^3) = CS (1/PEF + 1/VF)
				ET	Exposure Time	24	hr/day	EPA, 2009	
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ED	Exposure Duration	30	years	EPA, 2002	
				CF	Conversion Factor 1	1/24	day/hr	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
	Construction Worker	Adult	Emissions from Soil*	CS	Chemical Concentration in Soil	See Table 3.6.RME	mg/kg	See Table 3.6.RME	Exposure Concentration (EC) (mg/m^3) =
				CA	Chemical Concentration in Air	calc	mg/m^3	calc	CA x ET x EF x ED x CF x 1/AT
				PEF	Particulate Emission Factor	1.36E+09	m^3/kg	EPA, 2002	
				VF	Volatilization Factor for volatile constituents	calc	m^3/kg	EPA, 2002	CA (mg/m^3) = CS (1/PEF + 1/VF)
				ET	Exposure Time	8	hour/day	EPA, 1991	
				EF	Exposure Frequency	250	days/year	EPA,1991	
				ED	Exposure Duration	1	years	EPA, 2002	
				CF	Conversion Factor 1	1/24	day/hr	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	365	days	EPA, 1989	
	Industrial Worker	Adult	Emissions from Soil*	CS	Chemical Concentration in Soil	See Table 3.6.RME	mg/kg	See Table 3.6.RME	Exposure Concentration (EC) (mg/m^3) =
				CA	Chemical Concentration in Air	calc	mg/m^3	calc	CA x ET x EF x ED x CF x 1/AT
				PEF	Particulate Emission Factor	1.36E+09	m^3/kg	EPA, 2002	
				VF	Volatilization Factor for volatile constituents	calc	m^3/kg	EPA, 2002	CA (mg/m^3) = CS (1/PEF + 1/VF)
				ET	Exposure Time	8	hour/day	EPA, 1991	
				EF	Exposure Frequency	250	days/year	EPA, 1991	
				ED	Exposure Duration	25	years	EPA, 1991	
				CF	Conversion Factor 1	1/24	day/hr	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	9,125	days	EPA, 1989	

TABLE G 4.7.RME

Values Used for Daily Intake Calculations – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Inhalation (cont'd)	Trespasser/Visitor	Adult	Emissions from Soil*	CS	Chemical Concentration in Soil	See Table 3.6.RME	mg/kg	See Table 3.6.RME	Exposure Concentration (EC) (mg/m^3) =
				CA	Chemical Concentration in Air	calc	mg/m^3	calc	CA x ET x EF x ED x CF x 1/AT
				PEF	Particulate Emission Factor	1.36E+09	m^3/kg	EPA, 2002	
				VF	Volatilization Factor for volatile constituents	calc	m^3/kg	EPA, 2002	CA (mg/m^3) = CS (1/PEF + 1/VF)
				ET	Exposure Time	2	hour/day	(4)	
				EF	Exposure Frequency	52	days/year	(3)	
				ED	Exposure Duration	24	years	EPA, 1991	
				CF	Conversion Factor 1	1/24	day/hr	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Youth	Emissions from Soil*	CS	Chemical Concentration in Soil	See Table 3.6.RME	mg/kg	See Table 3.6.RME	Exposure Concentration (EC) (mg/m^3) =
				CA	Chemical Concentration in Air	calc	mg/m^3	calc	CA x ET x EF x ED x CF x 1/AT
				PEF	Particulate Emission Factor	1.36E+09	m^3/kg	EPA, 2002	
				VF	Volatilization Factor for volatile constituents	calc	m^3/kg	EPA, 2002	CA (mg/m^3) = CS (1/PEF + 1/VF)
				ET	Exposure Time	2	hour/day	(4)	
				EF	Exposure Frequency	52	days/year	(3)	
				ED	Exposure Duration	10	years	EPA, 2000	
				CF	Conversion Factor 1	1/24	day/hr	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,650	days	EPA, 1989	

Notes:

* Surface soil & subsurface soil combined

(1) Standard tour of duty

(2) Professional judgment assuming maintenance activities performed 1 day/week in industrial area.

(3) Professional judgment assuming trespasser/visitor in industrial area of site 1 day per week for 52 weeks.

(4) Professional judgment assuming 2 hours per day.

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.

EPA, 2000: Supplemental Guidance to RAGS: Region 4 Bulletins, Human Health Risk Assessment Bulletins. www.epa.gov/region4/waste/oftecser/healtbul.htm.

EPA, 2002: Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. OSWER 9355.4-24.

Generated by: M. White/ATL

Checked by:D. Stannard/WDC

TABLE G 4.8.RME

Values Used for Daily Intake Calculations – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Ingestion	Resident	Adult	Surficial and Castle-Hayne Aquifer - Tap Water	CW	Chemical Concentration in Water	See Tables 3.7.RME and 3.8.RME	µg/L	See Tables 3.7.RME and 3.8.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-W	Ingestion Rate of Water	2	liters/day	EPA, 1997	CW x IR-W x EF x ED x CF2 x 1/BW x 1/AT
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ED	Exposure Duration	24	years	EPA, 1991	
				CF2	Conversion Factor 2	0.001	mg/µg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Child	Surficial and Castle-Hayne Aquifer - Tap Water	CW	Chemical Concentration in Water	See Tables 3.7.RME and 3.8.RME	µg/L	See Tables 3.7.RME and 3.8.RME	CDI (mg/kg-day) =
				IR-W	Ingestion Rate of Water	1	liters/day	EPA, 1997	CW x IR-W x EF x ED x CF2 x 1/BW x 1/AT
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ED	Exposure Duration	6	years	EPA, 1991	
				CF2	Conversion Factor 2	0.001	mg/µg	- -	
				BW	Body Weight	15	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
		Child/Adult	Surficial and Castle-Hayne Aquifer - Tap Water	CW	Chemical Concentration in Water	See Tables 3.7.RME and 3.8.RME	µg/L	See Tables 3.7.RME and 3.8.RME	CDI (mg/kg-day) =
				IR-W-A	Ingestion Rate of Water, Adult	2	liters/day	EPA, 1997	CW x IR-W-Adj x EF x CF2 x 1/AT
				IR-W-C	Ingestion Rate of Water, Child	1	liters/day	EPA, 1997	
				IR-W-Adj	Ingestion Rate of Water, Age-adjusted	1.09	liter-year/kg-day	calculated	IR-W-Adj (liter-year/kg-day) =
				EF	Exposure Frequency	350	days/year	EPA, 1991	(ED-C x IR-W-C / BW-C) +
				ED-A	Exposure Duration, Adult	24	years	EPA, 1991	(ED-A x IR-W-A / BW-A)
				ED-C	Exposure Duration, Child	6	years	EPA, 1991	
				CF2	Conversion Factor 2	0.001	mg/µg	- -	
				BW-A	Body Weight , Adult	70	kg	EPA, 1991	
				BW-C	Body Weight, Child	15	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
	Industrial Worker	Adult	Surficial and Castle-Hayne Aquifer - Tap Water	CW	Chemical Concentration in Water	See Tables 3.7.RME and 3.8.RME	µg/L	See Tables 3.7.RME and 3.8.RME	CDI (mg/kg-day) =
				IR-W	Ingestion Rate of Water	1	liters/day	EPA, 1991	CW x IR-W x EF x ED x CF2 x 1/BW x 1/AT
				EF	Exposure Frequency	250	days/year	EPA, 1991	
				ED	Exposure Duration	25	years	EPA, 1991	
				CF2	Conversion Factor 2	0.001	mg/µg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	9,125	days	EPA, 1989	

TABLE G 4.8.RME

Values Used for Daily Intake Calculations – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Dermal	Resident	Adult	Surficial and Castle-Hayne Aquifer - Tap Water	CW	Chemical Concentration in Water	See Tables 3.7.RME and 3.8.RME	µg/L	See Tables 3.7.RME and 3.8.RME	CDI (mg/kg-day) =
				DAevent	Dermally Absorbed Dose per Event	calculated	mg/cm^2-event	calculated	DAevent x SA x EV x EF x ED x 1/BW x 1/AT
				FA	Fraction absorbed water	chemical specific	dimensionless	EPA, 2004	
				K_p	Permeability Coefficient	chemical specific	cm/hr	EPA, 2004	Inorganics: DAevent (mg/cm2-event) =
				τ	Lag Time	chemical specific	hr/event	EPA, 2004	Kp x CW x t_{event} x CF2 x CF3
				t*	Time to Reach Steady-state	chemical specific	hours	EPA, 2004	
				B	Ratio of Permeability of Stratum Corneum to Epidermis	chemical specific	dimensionless	EPA, 2004	Organics :
				t_{event}	Event Time	0.58	hr/event	EPA, 2004	tevent<t*: DAevent (mg/cm2-event) =
				SA	Skin Surface Area Available for Contact	18,000	cm^2	EPA, 2004	2 x FA x Kp x CW x (sqrt((6 x τ x t_{event})/π))
				EV	Event Frequency	1	events/day	EPA, 2004	x CF2 x CF3
				EF	Exposure Frequency	350	days/year	EPA, 2004	
				ED	Exposure Duration	24	years	EPA, 2004	tevent>t*: DAevent (mg/cm2-event) =
				BW	Body Weight	70	kg	EPA, 1991	FA x Kp x CW x (t_{event}/(1+B) + 2 x τ x
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	((1 + 3B + 3B2)/(1+B)2)) x CF2 x CF3
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
				CF2	Conversion Factor 2	0.001	mg/µg	- -	
				CF3	Conversion Factor 3	0.001	L/cm^3	- -	
		Child	Surficial and Castle-Hayne Aquifer - Tap Water	CW	Chemical Concentration in Water	See Tables 3.7.RME and 3.8.RME	µg/L	See Tables 3.7.RME and 3.8.RME	CDI (mg/kg-day) =
				DAevent	Dermally Absorbed Dose per Event	calculated	mg/cm^2-event	calculated	DAevent x SA x EV x EF x ED x 1/BW x 1/AT
				FA	Fraction absorbed water	chemical specific	dimensionless	EPA, 2004	
				K_p	Permeability Coefficient	chemical specific	cm/hr	EPA, 2004	Inorganics: DAevent (mg/cm2-event) =
				τ	Lag Time	chemical specific	hr/event	EPA, 2004	Kp x CW x t_{event} x CF2 x CF3
				t*	Time to Reach Steady-state	chemical specific	hours	EPA, 2004	
				B	Ratio of Permeability of Stratum Corneum to Epidermis	chemical specific	dimensionless	EPA, 2004	Organics :
				t_{event}	Event Time	1.0	hr/event	EPA, 2004	tevent<t*: DAevent (mg/cm2-event) =
				SA	Skin Surface Area Available for Contact	6,600	cm^2	EPA, 2004	2 x FA x Kp x CW x (sqrt((6 x τ x t_{event})/π))
				EV	Event Frequency	1	events/day	EPA, 2004	x CF2 x CF3
				EF	Exposure Frequency	350	days/year	EPA, 2004	
				ED	Exposure Duration	6	years	EPA, 2004	tevent>t*: DAevent (mg/cm2-event) =
				BW	Body Weight	15	kg	EPA, 1991	FA x Kp x CW x (t_{event}/(1+B) + 2 x τ x
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	((1 + 3B + 3B2)/(1+B)2)) x CF2 x CF3
				AT-N	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
				CF2	Conversion Factor 2	0.001	mg/µg	- -	
				CF3	Conversion Factor 3	0.001	L/cm^3	- -	

TABLE G 4.8.RME

Values Used for Daily Intake Calculations – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Dermal (cont'd)	Resident	Child/Adult	Surficial and Castle-Hayne Aquifer - Tap Water	CW	Chemical Concentration in Water	See Tables 3.7.RME and 3.8.RME	µg/L	See Tables 3.7.RME and 3.8.RME	CDI (mg/kg-day) = DA-Adj x EF x 1/AT
				DAevent-A	Dermally Absorbed Dose per Event, Adult	calculated	mg/cm^2-event	calculated	
				DAevent-C	Dermally Absorbed Dose per Event, Child	calculated	mg/cm^2-event	calculated	DA-Adj = (Daevent-A x SA-A x ED-A x 1/BW-A)
				DA-Adj	Dermally Absorbed Dose, Age-adjusted	calculated	mg-year/event-kg	calculated	+ (Daevent-C x SA-C x ED-C x 1/BW-C)
				FA	Fraction absorbed water	chemical specific	dimensionless	EPA, 2004	
				K_p	Permeability Coefficient	chemical specific	cm/hr	EPA, 2004	Inorganics: DAevent (mg/cm2-event) =
				τ	Lag Time	chemical specific	hr/event	EPA, 2004	Kp x CW x t_{event} x CF2 x CF3
				t*	Time to Reach Steady-state	chemical specific	hours	EPA, 2004	
				B	Ratio of Permeability of Stratum Corneum to Epidermis	chemical specific	dimensionless	EPA, 2004	Organics :
				t_{event}-A	Event Time, Adult	0.58	hr/event	EPA, 2004	tevent<t*: DAevent (mg/cm2-event) =
				t_{event}-C	Event Time, Child	1.0	hr/event	EPA, 2004	2 x FA x Kp x CW x (sqrt((6 x τ x t_{event})/π))
				SA-A	Skin Surface Area, Adult	18,000	cm^2	EPA, 2004	x CF2 x CF3
				SA-C	Skin Surface Area, Child	6,600	cm^2	EPA, 2004	
				EV	Event Frequency	1	events/day	EPA, 2004	tevent>t*: DAevent (mg/cm2-event) =
				EF	Exposure Frequency	350	days/year	EPA, 2004	FA x Kp x CW x (t_{event}/(1+B) + 2 x τ x
				ED-A	Exposure Duration, Adult	24	years	EPA, 2004	((1 + 3B + 3B2)/(1+B)2)) x CF2 x CF3
				ED-C	Exposure Duration, Child	6	years	EPA, 2004	
				BW-A	Body Weight, Adult	70	kg	EPA, 1991	
				BW-C	Body Weight, Child	15	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				CF2	Conversion Factor 2	0.001	mg/µg	- -	
				CF3	Conversion Factor 3	0.001	L/cm^3	- -	
	Construction Worker	Adult	Surficial Aquifer - Water in Excavation Pit	CW	Chemical Concentration in Water	See Table 3.7.RME	µg/L	See Table 3.7.RME	CDI (mg/kg-day) =
				DAevent	Dermally Absorbed Dose per Event	calculated	mg/cm^2-event	calculated	DAevent x SA x EV x EF x ED x 1/BW x 1/AT
				FA	Fraction absorbed water	chemical specific	dimensionless	EPA, 2004	
				K_p	Permeability Coefficient	chemical specific	cm/hr	EPA, 2004	Inorganics: DAevent (mg/cm2-event) =
				τ	Lag Time	chemical specific	hr/event	EPA, 2004	Kp x CW x t_{event} x CF2 x CF3
				t*	Time to Reach Steady-state	chemical specific	hours	EPA, 2004	
				B	Ratio of Permeability of Stratum Corneum to Epidermis	chemical specific	dimensionless	EPA, 2004	Organics :
				t_{event}	Event Time	4	hr/day	(1)	tevent<t*: DAevent (mg/cm2-event) =
				SA	Skin Surface Area Available for Contact	5,700	cm^2	EPA, 2004, (3)	2 x FA x Kp x CW x (sqrt((6 x τ x t_{event})/π))
				EV	Event Frequency	1	events/day	EPA, 2004	x CF2 x CF3
				EF	Exposure Frequency	30	days/year	(2)	
				ED	Exposure Duration	1	years	EPA, 1991	tevent>t*: DAevent (mg/cm2-event) =
				BW	Body Weight	70	kg	EPA, 1991	FA x Kp x CW x (t_{event}/(1+B) + 2 x τ x
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	((1 + 3B + 3B2)/(1+B)2)) x CF2 x CF3
				AT-N	Averaging Time (Non-Cancer)	365	days	EPA, 1989	
				CF2	Conversion Factor 2	0.001	mg/µg	- -	
				CF3	Conversion Factor 3	0.001	L/cm^3	- -	

Notes:

(1) Professional Judgment based on construction activities that would result in contact with groundwater would occur 4 hrs per day for the RME.

(2) Assumes contact with groundwater during construction could occur 30 days per year.

(3) Skin surface area in contact with groundwater assumed to be hands, forearms, lower legs, and feet.

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.

EPA, 1997: Exposure Factors Handbook. EPA/600/P-95/002Fa.

EPA, 2004 . Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment (Final). EPA/540/R/99/005. July 2004.

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Checked by:D. Stannard/WDC

TABLE G 4.9.RME

Values Used for Daily Intake Calculations -- Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Inhalation	Resident	Adult	Surficial and Castle Hayne Aquifer - Water Vapors at Showerhead	CW	Chemical Concentration in Water	See Tables 3.9.RME and 3.10.RME	µg/L	See Tables 3.9.RME and 3.10.RME	Chronic Daily Intake (CDI) (mg/m3) =
				CAa	Chemical Concentration in Air	Calculated	mg/m^3	Calculated	CAa x ETa x EDa x EF x CF1 x 1/AT
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				EDa	Exposure Duration	24	years	EPA, 1991	Use Foster & Chrostowski Shower model to
				ETa	Exposure Time	0.58	hr/day	EPA, 2004	calculate Ca-a and Ca-c
				CF1	Conversion Factor 1	1/24	day/hour	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Child	Surficial and Castle Hayne Aquifer - Water Vapors at Showerhead	CW	Chemical Concentration in Water	See Tables 3.9.RME and 3.10.RME	µg/L	See Tables 3.9.RME and 3.10.RME	Chronic Daily Intake (CDI) (mg/m3) =
				CAc	Chemical Concentration in Air	Calculated	mg/m^3	Calculated	CA_c x ET_c x ED_c x EF x CF1 x 1/AT
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				EDc	Exposure Duration	6	years	EPA, 1991	Use Foster & Chrostowski Shower model to
				ETc	Exposure Time	1	hr/day	EPA, 2004	calculate Ca-a and Ca-c
				CF1	Conversion Factor 1	1/24	day/hour	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
		Child/Adult	Surficial and Castle Hayne Aquifer - Water Vapors at Showerhead	CW	Chemical Concentration in Water	See Tables 3.9.RME and 3.10.RME	µg/L	See Tables 3.9.RME and 3.10.RME	Chronic Daily Intake (CDI) (mg/m3) =
				Ca-a	Air Concentration for shower, Adult	Calculated	mg/m^3	Calculated	(CAc x ETc x EDc + CAa x ETa x EDa) x EF x CF1 x 1/AT
				Ca-c	Air Concentration for shower, child	Calculated	mg/m^3	Calculated	
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				EDa	Exposure Duration, Adult	24	years	EPA, 1991	Use Foster & Chrostowski Shower model to
				EDc	Exposure Duration, Child	6	years	EPA, 1991	calculate Ca-a and Ca-c
				ETa	Exposure Time	0.58	hr/day	EPA, 2004	
				ETc	Exposure Time	1	hr/day	EPA, 2004	
				CF1	Conversion Factor 1	1/24	day/hour	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
	Construction Worker	Adult	Surficial Aquifer - Water Vapors in Excavation Pit	CW	Chemical Concentration in Water	See Table 3.9.RME	µg/L	See Table 3.9.RME	Chronic Daily Intake (CDI) (mg/m3) =
				CA	Chemical Concentration in Air	calculated	mg/m^3		CA x ET x EF x ED x CF1 x 1/AT
				ET	Exposure Time	8	hr/day	(1)	
				EF	Exposure Frequency	125	days/year	(2)	
				ED	Exposure Duration	1	years	EPA, 1991	CA calculated using two-film model
				CF1	Conversion Factor 1	1/24	day/hour	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	365	days	EPA, 1989	

Notes:

(1) Professional judgment based on construction activities that would occur 8 hrs per day for the RME

(2) Assumed contact with groundwater during construction project would be 125 days/year.

(3) Assumed that worker would be present 8 hrs per day.

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.

EPA, 1997: Exposure Factors Handbook. EPA/600/P-95/002Fa.

EPA, 2004 . Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment (Final). EPA/540/R/99/005. July 2004.

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Checked by:D. Stannard/WDC

TABLE G 4.1.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS - CENTRAL TENDENCY EXPOSURE

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Ingestion	Resident	Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.1.CTE	mg/kg	See Table 3.1.CTE	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	50	mg/day	EPA, 1993	CS x IR-S x EF x ED x CF x 1/BW x 1/AT
				EF	Exposure Frequency	234	days/year	EPA, 1993	
				ED	Exposure Duration	9	years	EPA, 2004	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,285	days	EPA, 1989	
		Child	Soil*	CS	Chemical Concentration in Soil	See Table 3.1.CTE	mg/kg	See Table 3.1.CTE	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	100	mg/day	EPA, 1993	CS x IR-S x EF x ED x CF x 1/BW x 1/AT
				EF	Exposure Frequency	234	days/year	EPA, 1993	
				ED	Exposure Duration	6	years	EPA, 1991	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				BW	Body Weight	15	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
		Child/Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.1.CTE	mg/kg	See Table 3.1.CTE	Carcinogenic
				IR-Sa	Ingestion Rate of Soil-adult	50	mg/day	EPA, 1993	Chronic Daily Intake (CDI) (mg/kg-day) =
				EDa	Exposure Duration adult	9	years	EPA, 2004	CS x IR-S x EF x CF x 1/AT
				BWa	Body Weight adult	70	kg	EPA, 1991	
				IR-Sc	Ingestion Rate of Soil-child	100	mg/day	EPA, 1993	
				EDc	Exposure Duration child	6	years	EPA, 1993	IR-S = (EDc * IR-Sc/ BWc) +
				BWc	Body Weight child	15	kg	EPA, 1991	(EDa * IR-Sa/BWa)
				IR-S	Ingestion Rate of Soil-adjusted	46.43	mg-year/kg-day	- -	
				EF	Exposure Frequency	234	days/year	EPA, 1993	
				CF3	Conversion Factor 3	0.000001	kg/mg	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
	Industrial Worker	Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.1.CTE	mg/kg	See Table 3.1.CTE	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	50	mg/day	EPA, 1993	CS x IR-S x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	219	days/year	EPA, 2004	
				ED	Exposure Duration	9	years	EPA, 2004	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,285	days	EPA, 1989	

TABLE G 4.1.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS - CENTRAL TENDENCY EXPOSURE

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Dermal	Resident	Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.1.CTE	mg/kg	See Table 3.1.CTE	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	5,700	cm^2	EPA, 2004	CS x SA x SSAF x DABS x CF x EF x
				SSAF	Soil to Skin Adherence Factor	0.01	mg/cm^2-day	EPA, 2004	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	Chemical Specific	--	EPA, 2004	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				EF	Exposure Frequency	234	days/year	EPA, 1993	
				ED	Exposure Duration	9	years	EPA, 2004	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,285	days	EPA, 1989	
		Child	Soil*	CS	Chemical Concentration in Soil	See Table 3.1.CTE	mg/kg	See Table 3.1.CTE	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	2,800	cm^2	EPA, 2004	CS x SA x SSAF x DABS x CF x EF x
				SSAF	Soil to Skin Adherence Factor	0.04	mg/cm^2-day	EPA, 2004	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	Chemical Specific	--	EPA, 2004	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				EF	Exposure Frequency	234	days/year	EPA, 1993	
				ED	Exposure Duration	6	years	EPA, 1991	
				BW	Body Weight	15	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
		Child/Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.1.CTE	mg/kg	See Table 3.1.CTE	Carcinogenic CDI (mg/kg-day) =
				SAc	Skin Surface Area child	2,800	cm^2	EPA, 2004	CS x SA x DABS x CF3 x EF x 1/AT
				SSAFc	Soil to Skin Adherence Factor child	0.04	mg/cm^2-day	EPA, 2004	
				EDc	Exposure Duration child	6	years	EPA, 1991	SA =
				BWc	Body Weight child	15	kg	EPA, 1991	((EDc * SAc/BWc)*SSAFc) + ((EDa * SAa/BWa)*SSAFa)
				SAa	Skin Surface Area adult	5,700	cm^2	EPA, 2004	
				SSAFa	Soil to Skin Adherence Factor-adult	0.01	mg/cm^2-day	EPA, 2004	
				EDa	Exposure Duration adult	9	years	EPA, 2004	
				BWa	Body Weight adult	70	kg	EPA, 1991	
				SA	Skin Surface Area adjusted	52.13	cm^2-year/kg-day	---	
				DABS	Dermal Absorption Factor Solids	Chemical Specific	--	EPA, 2004	
				CF3	Conversion Factor 3	0.000001	kg/mg	- -	
				EF	Exposure Frequency	234	days/year	EPA, 1993	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
	Industrial Worker	Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.1.CTE	mg/kg	See Table 3.1.CTE	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	3,300	cm^2	EPA, 2004	CS x SA x SSAF x DABS x CF x EF x
				SSAF	Soil to Skin Adherence Factor	0.02	mg/cm^2-day	EPA, 2004	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	Chemical Specific	--	EPA, 2004	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				EF	Exposure Frequency	219	days/year	EPA, 2004	
				ED	Exposure Duration	9	years	EPA, 2004	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,285	days	EPA, 1989	

TABLE G 4.1.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS - CENTRAL TENDENCY EXPOSURE

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name

Notes:

* Surface and subsurface soil combined.

(1) Professional judgement assuming 1/2 of an RME exposure.
(2) Standard tour of duty

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.
EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.
EPA, 1993: Superfund's Standard Default Exposure Factors for the Central Tendency and Reasonable Maximum Exposure.
EPA, 2000: Supplemental Guidance to RAGS: Region 4 Bulletins, Human Health Risk Assessment Bulletins. www.epa.gov/region4/waste/oftecser/healtbul.htm.
EPA, 2004: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

Generated by: M. White/ATL
Checked by: D. Stannard/WDC

TABLE G 4.2.CTE
VALUES USED FOR DAILY INTAKE CALCULATIONS - CENTRAL TENDENCY EXPOSURE
Supplemental Investigation Report Operable Unit No. 14 (Site 69)
MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Ingestion	Industrial Worker	Adult	Surficial and Castle-Hayne Aquifer - Tap Water	CW	Chemical Concentration in Water	See Tables 3.3.CTE and 3.4.CTE	µg/L	See Tables 3.3.CTE and 3.4.CTE	CDI (mg/kg-day) =
				IR-W	Ingestion Rate of Water	1	liters/day	EPA, 1991	CW x IR-W x EF x ED x CF2 x 1/BW x 1/AT
				EF	Exposure Frequency	219	days/year	EPA, 2004	
				ED	Exposure Duration	9	years	EPA, 2004	
				CF2	Conversion Factor 2	0.001	mg/µg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,285	days	EPA, 1989	
	Resident	Adult	Surficial and Castle-Hayne Aquifer - Tap Water	CW	Chemical Concentration in Water	See Tables 3.3.CTE and 3.4.CTE	µg/L	See Tables 3.3.CTE and 3.4.CTE	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-W	Ingestion Rate of Water	1.4	liters/day	EPA, 1997	CW x IR-W x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	234	days/year	EPA, 2003	
				ED	Exposure Duration	9	years	EPA, 2004	
				CF1	Conversion Factor 1	0.001	mg/µg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,285	days	EPA, 1989	
		Child	Surficial and Castle-Hayne Aquifer - Tap Water	CW	Chemical Concentration in Water	See Tables 3.3.CTE and 3.4.CTE	µg/L	See Tables 3.3.CTE and 3.4.CTE	CDI (mg/kg-day) =
				IR-W	Ingestion Rate of Water	1	liters/day	EPA, 1997	CW x IR-W x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	234	days/year	EPA, 2003	
				ED	Exposure Duration	6	years	EPA, 2004	
				CF1	Conversion Factor 1	0.001	mg/µg	- -	
				BW	Body Weight	15	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
		Child/Adult	Surficial and Castle-Hayne Aquifer - Tap Water	CW	Chemical Concentration in Water	See Tables 3.3.CTE and 3.4.CTE	µg/L	See Tables 3.3.CTE and 3.4.CTE	CDI (mg/kg-day) =
				IR-W-A	Ingestion Rate of Water, Adult	1.4	liters/day	EPA, 1997	CW x IR-W-Adj x EF x CF1 x 1/AT
				IR-W-C	Ingestion Rate of Water, Child	1	liters/day	EPA, 1997	
				IR-W-Adj	Ingestion Rate of Water, Age-adjusted	0.58	liter-year/kg-day	calculated	IR-W-Adj (liter-year/kd-day) =
				EF	Exposure Frequency	234	days/year	EPA, 2003	(ED-C x IR-W-C / BW-C) +
				ED-A	Exposure Duration, Adult	9	years	EPA, 2004	(ED-A x IR-W-A / BW-A)
				ED-C	Exposure Duration	6	years	EPA, 2004	
				CF1	Conversion Factor 1	0.001	mg/µg	- -	
				BW-A	Body Weight , Adult	70	kg	EPA, 1991	
				BW-C	Body Weight, Child	15	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	

TABLE G 4.2.CTE
VALUES USED FOR DAILY INTAKE CALCULATIONS - CENTRAL TENDENCY EXPOSURE
Supplemental Investigation Report Operable Unit No. 14 (Site 69)
MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Dermal	Resident	Adult	Surficial and Castle-Hayne Aquifer - Tap Water	CW	Chemical Concentration in Water	See Tables 3.3.CTE and 3.4.CTE	µg/L	See Tables 3.3.CTE and 3.4.CTE	CDI (mg/kg-day) =
				DAevent	Dermally Absorbed Dose per Event	Calculated	mg/cm^2-event	calculated	DAevent x SA x EV x EF x ED x 1/BW x 1/AT
				FA	Fraction absorbed water	Chemical specific	dimensionless	EPA, 2004	
				K_p	Permeability Coefficient	Chemical specific	cm/hr	EPA, 2004	Inorganics: DAevent (mg/cm2-event) =
				τ	Lag Time	Chemical specific	hr/event	EPA, 2004	Kp x CW x t_{event} x CF2 x CF3
				t*	Time to Reach Steady-state	Chemical specific	hours	EPA, 2004	
				B	Ratio of Permeability of Stratum Corneum to Epidermis	Chemical specific	dimensionless	EPA, 2004	Organics :
				t_{event}	Event Time	0.25	hr/event	EPA, 2004	tevent<t*: DAevent (mg/cm2-event) =
				SA	Skin Surface Area Available for Contact	18,000	cm^2	EPA, 2004	2 x FA x Kp x CW x (sqrt((6 x τ x t_{event})/π))
				EV	Event Frequency	1	events/day	EPA, 2004	x CF2 x CF3
				EF	Exposure Frequency	234	days/year	EPA, 1993	
				ED	Exposure Duration	9	years	EPA, 2004	tevent>t*: DAevent (mg/cm2-event) =
				BW	Body Weight	70	kg	EPA, 1991	FA x Kp x CW x (t_{event}/(1+B) + 2 x τ x
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	((1 + 3B + 3B2)/(1+B)2)) x CF2 x CF3
				AT-N	Averaging Time (Non-Cancer)	3,285	days	EPA, 1989	
				CF2	Conversion Factor 2	0.001	mg/µg	- -	
				CF3	Conversion Factor 3	0.001	L/cm^3	- -	
		Child	Surficial and Castle-Hayne Aquifer - Tap Water	CW	Chemical Concentration in Water	See Tables 3.3.CTE and 3.4.CTE	µg/L	See Tables 3.3.CTE and 3.4.CTE	CDI (mg/kg-day) =
				DAevent	Dermally Absorbed Dose per Event	Calculated	mg/cm^2-event	calculated	DAevent x SA x EV x EF x ED x 1/BW x 1/AT
				FA	Fraction absorbed water	Chemical specific	dimensionless	EPA, 2004	
				K_p	Permeability Coefficient	Chemical specific	cm/hr	EPA, 2004	Inorganics: DAevent (mg/cm2-event) =
				τ	Lag Time	Chemical specific	hr/event	EPA, 2004	Kp x CW x t_{event} x CF2 x CF3
				t*	Time to Reach Steady-state	Chemical specific	hours	EPA, 2004	
				B	Ratio of Permeability of Stratum Corneum to Epidermis	Chemical specific	dimensionless	EPA, 2004	Organics :
				t_{event}	Event Time	0.33	hr/event	EPA, 2004	tevent<t*: DAevent (mg/cm2-event) =
				SA	Skin Surface Area Available for Contact	6,600	cm^2	EPA, 2004	2 x FA x Kp x CW x (sqrt((6 x τ x t_{event})/π))
				EV	Event Frequency	1	events/day	EPA, 2004	x CF2 x CF3
				EF	Exposure Frequency	234	days/year	EPA, 1993	
				ED	Exposure Duration	6	years	EPA, 1991	tevent>t*: DAevent (mg/cm2-event) =
				BW	Body Weight	15	kg	EPA, 1991	FA x Kp x CW x (t_{event}/(1+B) + 2 x τ x
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	((1 + 3B + 3B2)/(1+B)2)) x CF2 x CF3
				AT-N	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
				CF2	Conversion Factor 2	0.001	mg/µg	- -	
				CF3	Conversion Factor 3	0.001	L/cm^3	- -	

TABLE G 4.2.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS - CENTRAL TENDENCY EXPOSURE

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
		Child/Adult	Surficial and Castle-Hayne Aquifer - Tap Water	CW	Chemical Concentration in Water	See Tables 3.3.CTE and 3.4.CTE	µg/L	See Tables 3.3.CTE and 3.4.CTE	CDI (mg/kg-day) = DA-Adj x EF x 1/AT
				DAevent-A	Dermally Absorbed Dose per Event, Adult	Calculated	mg/cm^2-event	calculated	
				DAevent-C	Dermally Absorbed Dose per Event, Child	Calculated	mg/cm^2-event	calculated	DA-Adj = (Daevent-A x SA-A x ED-A x 1/BW-A)
				DA-Adj	Dermally Absorbed Dose, Age-adjusted	Calculated	mg-year/event-kg	calculated	+ (Daevent-C x SA-C x ED-C x 1/BW-C)
				FA	Fraction absorbed water	Chemical specific	dimensionless	EPA, 2004	
				K_p	Permeability Coefficient	Chemical specific	cm/hr	EPA, 2004	Inorganics: DAevent (mg/cm2-event) =
				τ	Lag Time	Chemical specific	hr/event	EPA, 2004	Kp x CW x t_{event} x CF2 x CF3
				t*	Time to Reach Steady-state	Chemical specific	hours	EPA, 2004	
				B	Ratio of Permeability of Stratum Corneum to Epidermis	Chemical specific	dimensionless	EPA, 2004	Organics :
				t_{event}-A	Event Time, Adult	0.25	hr/event	EPA, 2004	tevent<t*: DAevent (mg/cm2-event) =
				t_{event}-C	Event Time, Child	0.33	hr/event	EPA, 2004	2 x FA x Kp x CW x (sqrt((6 x τ x t_{event})/π))
				SA-A	Skin Surface Area, Adult	18,000	cm^2	EPA, 2004	x CF2 x CF3
				SA-C	Skin Surface Area, Child	6,600	cm^2	EPA, 2004	
				EV	Event Frequency	1	events/day	EPA, 2004	tevent>t*: DAevent (mg/cm2-event) =
				EF	Exposure Frequency	234	days/year	EPA, 1993	FA x Kp x CW x (t_{event}/(1+B) + 2 x τ x
				ED-A	Exposure Duration, Adult	9	years	EPA, 2004	((1 + 3B + 3B2)/(1+B)2)) x CF2 x CF3
				ED-C	Exposure Duration, Child	6	years	EPA, 1991	
				BW-A	Body Weight, Adult	70	kg	EPA, 1991	
				BW-C	Body Weight, Child	15	ke	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				CF2	Conversion Factor 2	0.001	mg/µg	- -	
				CF3	Conversion Factor 3	0.001	L/cm^3	- -	

Notes:

(1) Professional Judgment based on construction activities that would result in contact with groundwater would occur 4 hrs per day for the RME.
(2) Assumes contact with groundwater during construction could occur 30 days per year.
(3) Skin surface area in contact with groundwater assumed to be hands, forearms, lower legs, and feet.

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.
EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.
EPA, 2003: Superfund Standard Default Exposure Factors for the Central Tendency and Reasonable Maximum Exposure, Draft.
EPA, 2004: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

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Checked by: D. Stannard/WDC

TABLE H 4.3.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS - CENTRAL TENDENCY EXPOSURE

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name
Inhalation	Resident	Adult	Surficial and Castle Hayne Aquifer - Water Vapors at Showerhead	CW	Chemical Concentration in Water	See Tables 3.5.CTE and 3.6.CTE	µg/L	See Tables 3.5.CTE-3.6.CTE	Chronic Daily Intake (CDI) (mg/m3) =
				CAa	Chemical Concentration in Air	Calculated	mg/m^3	Calculated	CAa x ETa x EDa x EF x CF1 x 1/AT
				EF	Exposure Frequency	234	days/year	EPA, 1993	
				EDa	Exposure Duration	9	years	EPA, 1993	Use Foster & Chrostowski Shower model to
				ETa	Exposure Time	0.25	hr/day	EPA, 2004	calculate Ca-a and Ca-c
				CF1	Conversion Factor 1	1/24	day/hour	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,285	days	EPA, 1989	
		Child	Surficial and Castle Hayne Aquifer - Water Vapors at Showerhead	CW	Chemical Concentration in Water	See Tables 3.5.CTE and 3.6.CTE	µg/L	See Tables 3.5.CTE-3.6.CTE	Chronic Daily Intake (CDI) (mg/m3) =
				CAc	Chemical Concentration in Air	Calculated	mg/m^3	Calculated	CA_c x ET_c x ED_c x EF x CF1 x 1/AT
				EF	Exposure Frequency	234	days/year	EPA, 1993	
				EDc	Exposure Duration	6	years	EPA, 1991	Use Foster & Chrostowski Shower model to
				ETc	Exposure Time	0.33	hr/day	EPA, 2004	calculate Ca-a and Ca-c
				CF1	Conversion Factor 1	1/24	day/hour	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
		Child/Adult	Surficial and Castle Hayne Aquifer - Water Vapors at Showerhead	CW	Chemical Concentration in Water	See Tables 3.5.CTE and 3.6.CTE	µg/L	See Tables 3.5.CTE-3.6.CTE	Chronic Daily Intake (CDI) (mg/m3) =
				Ca-a	Air Concentration for shower, Adult	Calculated	mg/m^3	Calculated	(CAc x ETc x EDc + CAa x ETa x EDa)
				Ca-c	Air Concentration for shower, child	Calculated	mg/m^3	Calculated	x EF x CF1 x 1/AT
				EF	Exposure Frequency	234	days/year	EPA, 1993	
				EDa	Exposure Duration, Adult	9	years	EPA, 1993	Use Foster & Chrostowski Shower model to
				EDc	Exposure Duration, Child	6	years	EPA, 1991	calculate Ca-a and Ca-c
				ETa	Exposure Time	0.25	hr/day	EPA, 2004	
				ETc	Exposure Time	0.33	hr/day	EPA, 2004	
				CF1	Conversion Factor 1	1/24	day/hour	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	

Notes:

(1) Professional judgment assuming 1/2 RME value for CT.

(2) Assumed contact with groundwater during construction project would be 125 days/year.

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.

EPA, 1993: Superfund's Standard Default Exposure Factors for the Central Tendency and Reasonable Maximum Exposure.

EPA, 2004 . Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment (Final). EPA/540/R/99/005. July 2004.

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Checked by: D. Stannard/WDC

TABLE G 5.1

Non-Cancer Toxicity Data -- Oral/Dermal

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor (1)	Adjusted Dermal RfD (2)	Units	Primary Target Organ	Combined Uncertainty/ Modifying Factors	Sources of RfD: Target Organ	Dates of RfD: Target Organ (3) (MM/DD/YY)
1,1,2,2-Tetrachloroethane	Chronic	2.0E-02	mg/kg-day	Generally > 50%	2.0E-02	mg/kg-day	Liver	1000/1	IRIS	7/26/2011
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	Chronic	4.0E-03	mg/kg-day	Generally > 50%	4.0E-03	mg/kg-day	Blood	1000/1	IRIS	8/30/2010
	Subchronic	4.0E-02	mg/kg-day	Generally > 50%	4.0E-02	mg/kg-day	Blood	100	HEAST	7/1/1997
1,2,4-Trichlorobenzene	Chronic	1.0E-02	mg/kg-day	Generally > 50%	1.0E-02	mg/kg-day	Adrenal	1000/1	IRIS	8/30/2010
	Subchronic	1.0E-02	mg/kg-day	Generally > 50%	1.0E-02	mg/kg-day	Adrenal	1000	HEAST	7/1/1997
1,2-Dichloroethane	Chronic	6.0E-03	mg/kg-day	Generally > 50%	6.0E-03	mg/kg-day	Kidney	10,000	PPRTV	10/1/2010
	Subchronic	2.0E-02	mg/kg-day	Generally > 50%	2.0E-02	mg/kg-day	Kidney	3000	PPRTV	10/1/2010
1,3-Dichlorobenzene	Chronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	Chronic	7.0E-02	mg/kg-day	Generally > 50%	7.0E-02	mg/kg-day	Liver	NA	ATSDR (RSL)	5/17/2010
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-BHC	Chronic	8.0E-03	mg/kg-day	Generally > 50%	8.0E-03	mg/kg-day	CNS	NA	ATSDR (RSL)	8/30/2010
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	Chronic	1.0E+00	mg/kg-day	NA	1.0E+00	mg/kg-day	Neurological, Developmental	100	PPRTV	10/23/2006
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	Chronic	4.0E-04	mg/kg-day	15%	6.0E-05	mg/kg-day	Longevity, Blood	1,000/1	IRIS	8/30/2010
	Subchronic	4.0E-04	mg/kg-day	15%	6.0E-05	mg/kg-day	Whole Body, Blood	1,000	PPRTV	7/29/2008
Aroclor-1260	Chronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	Chronic	3.0E-04	mg/kg-day	95%	3.0E-04	mg/kg-day	Skin, Vascular	3/1	IRIS	8/30/2010
	Subchronic	3.0E-04	mg/kg-day	95%	3.0E-04	mg/kg-day	Skin, Vascular	3	HEAST	7/01/1997
Benzene	Chronic	4.0E-03	mg/kg-day	Generally > 50%	4.0E-03	mg/kg-day	Blood, Immune	300/1	IRIS	8/30/2010
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	Chronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	Chronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	Chronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	Chronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
beta-BHC	Chronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	Chronic	1.0E-02	mg/kg-day	Generally > 50%	1.0E-02	mg/kg-day	Liver	100/1	IRIS	8/30/2010
	Subchronic	1.0E-02	mg/kg/day	Generally > 50%	1.0E-02	mg/kg/day	Liver	1000	HEAST	7/01/1997

TABLE G 5.1

Non-Cancer Toxicity Data -- Oral/Dermal

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor (1)	Adjusted Dermal RfD (2)	Units	Primary Target Organ	Combined Uncertainty/ Modifying Factors	Sources of RfD: Target Organ	Dates of RfD: Target Organ (3) (MM/DD/YY)
Chromium	Chronic	3.0E-03	mg/kg-day	2.5%	7.5E-05	mg/kg-day	Not identified	300/3	IRIS	8/30/2010
	Subchronic	2.0E-02	mg/kg-day	2.5%	5.0E-04	mg/kg-day	Not identified	100	HEAST	7/01/1997
Chrysene	Chronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	Chronic	2.0E-03	mg/kg/day	Generally > 50%	2.0E-03	mg/kg/day	Kidney	3,000/1	IRIS	7/26/2010
	Subchronic	2.0E-02	mg/kg/day	Generally > 50%	2.0E-02	mg/kg/day	Kidney	300	PPRTV	2/3/2011
delta-BHC	Chronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	Chronic	5.0E-05	mg/kg-day	Generally > 50%	5.0E-05	mg/kg-day	Liver	100 / 1	IRIS	8/30/2010
	Subchronic	5.0E-05	mg/kg-day	Generally > 50%	5.0E-05	mg/kg-day	Liver	100	HEAST	7/1/1997
Heptachlor epoxide	Chronic	1.3E-05	mg/kg-day	Generally > 50%	1.3E-05	mg/kg-day	Liver	1000 / 1	IRIS	8/30/2010
	Subchronic	1.3E-05	mg/kg-day	Generally > 50%	1.3E-05	mg/kg-day	Liver	1000	HEAST	7/1/1997
Indeno(1,2,3-cd)pyrene	Chronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	Chronic	7.0E-01	mg/kg-day	NA	7.0E-01	mg/kg-day	Gastrointestinal	1.5	PPRTV	9/11/2006
	Subchronic	7.0E-01	mg/kg-day	NA	7.0E-01	mg/kg-day	Gastrointestinal	1.5	PPRTV	9/11/2006
Manganese	Chronic	2.4E-02	mg/kg-day	4%	9.6E-04	mg/kg-day	CNS	1/1	IRIS	8/30/2010
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	Chronic	1.0E-02	mg/kg/day	Generally > 50%	1.0E-02	mg/kg/day	Liver, Body Weight	1,000/1	IRIS	8/30/2010
	Subchronic	1.0E-01	mg/kg/day	Generally > 50%	1.0E-01	mg/kg/day	Liver	100	HEAST	7/1/1997
Thallium	Chronic	1.0E-05	mg/kg/day	NA	1.0E-05	mg/kg/day	Skin, Hair follicle atrophy	3000	PPRTV	10/8/2010
	Subchronic	4.0E-05	mg/kg/day	NA	4.0E-05	mg/kg/day	Skin, Hair follicle atrophy	1000	PPRTV	10/8/2010
trans-1,2-Dichloroethene	Chronic	2.0E-02	mg/kg/day	Generally > 50%	2.0E-02	mg/kg/day	Blood	1,000/1	IRIS	8/30/2010
	Subchronic	2.0E-01	mg/kg/day	Generally > 50%	2.0E-01	mg/kg/day	Blood	100	HEAST	7/1/1997
Trichloroethene	Chronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	Chronic	5.0E-03	mg/kg-day	2.6%	1.3E-04	mg/kg-day	Hair, Blood	100	IRIS	8/30/2010
	Subchronic	7.0E-03	mg/kg-day	2.6%	1.8E-04	mg/kg-day	Lifetime	100	HEAST	7/1/1997
Vinyl chloride	Chronic	3.0E-03	mg/kg-day	Generally > 50%	3.0E-03	mg/kg-day	Liver	30/1	IRIS	8/30/2010
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	Chronic	3.0E-01	mg/kg-day	100%	3.0E-01	mg/kg-day	Blood	3 / 1	IRIS	8/30/2010
	Subchronic	3.0E-01	mg/kg-day	100%	3.0E-01	mg/kg-day	Blood	3	HEAST	7/1/1997

TABLE G 5.1

Non-Cancer Toxicity Data -- Oral/Dermal

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor (1)	Adjusted Dermal RfD (2)	Units	Primary Target Organ	Combined Uncertainty/ Modifying Factors	Sources of RfD: Target Organ	Dates of RfD: Target Organ (3) (MM/DD/YY)

Notes:

(1) Source: Risk Assessment Guidance for Superfund. Volume 1: Human Health Evaluation Manual, Part E, Supplemental Guidance for Dermal Risk Assessment (FiNAl).
Section 4.2 and Exhibit 4-1. USEPA recommends that the oral RfD should not be adjusted to estimate the absorbed dose for compounds when the absorption efficiency is greater than 50%.
Constituents that do not have oral absorption efficiencies reported on this table were assumed to have an oral absorption efficiency of 100%.

(2) Adjusted Dermal RfD = RfD (oral) x Absorption Efficiency or ABS_{GI}

(3) For IRIS values, the date IRIS was searched.
For HEAST values, the date of HEAST.
For PPRTV values, the date of the PPRTV toxicity profile.

ATSDR - Agency for Toxic Substances and Disease Registry
HEAST- Health Effects Assessment Summary Tables
IRIS - Integrated Risk Information System
NA - Not applicable
PPRTV - ProvisioNAl Peer Revied Toxicity Value
RSL - Regional Screening Levels
Generated By: T. Carleton/DAY
Checked By: Debbie Stannard/WDC

TABLE G 5.2

Non-Cancer Toxicity Data -- Inhalation

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Chronic/ Subchronic	Value Inhalation RfC	Units	Adjusted Inhalation RfD (1)	Units	Primary Target Organ	Combined Uncertainty/ Modifying Factors	Sources of RfC:RfD: Target Organ	Dates (2) (MM/DD/YY)
1,1,2,2-Tetrachloroethane	Chronic	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	Chronic	2.0E-04	mg/m^3	5.7E-05	mg/kg-day	Nasal	3000	PPRTV	4/1/2011
	Subchronic	2.0E-03	mg/m^3	5.7E-04	mg/kg-day	Nasal	300	PPRTV	4/1/2011
1,2,4-Trichlorobenzene	Chronic	2.0E-03	mg/m^3	5.7E-04	mg/kg-day	Liver	3000	PPRTV	6/16/2009
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	Chronic	7.0E-03	mg/m^3	2.0E-03	mg/kg-day	Liver	3000	PPRTV	10/1/2010
	Subchronic	7.0E-02	mg/m^3	2.0E-02	mg/kg-day	Liver	300	PPRTV	10/1/2010
1,3-Dichlorobenzene	Chronic	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	Chronic	8.0E-01	mg/m^3	2.3E-01	mg/kg-day	Liver	100/1	IRIS	8/30/2010
	Subchronic	2.5E+00	mg/m^3	7.1E-01	mg/kg-day	Liver	30	HEAST	07/01/97
alpha-BHC	Chronic	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	Chronic	5.0E-03	mg/m^3	1.4E-03	mg/kg-day	Neurological	300	PPRTV	10/23/2006
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	Chronic	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	Chronic	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	Chronic	1.5E-05	mg/m^3	4.3E-06	mg/kg-day	Developmental, Cardiovascular, Nervous System	3/1	Cal EPA	3/15/2010
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	Chronic	3.0E-02	mg/m^3	8.6E-03	mg/kg-day	Blood, Immune	300/1	IRIS	8/30/2010
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	Chronic	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	Chronic	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	Chronic	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	Chronic	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
beta-BHC	Chronic	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	Chronic	9.8E-02	mg/m^3	2.8E-02	mg/kg-day	Liver	NA	ATSDR MRL (RSL)	5/19/2009
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	Chronic	1.0E-04	mg/m^3	2.9E-05	mg/kg-day	Respiratory System	300/1	IRIS	8/30/2010
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA

TABLE G 5.2

Non-Cancer Toxicity Data -- Inhalation

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Chronic/ Subchronic	Value Inhalation RfC	Units	Adjusted Inhalation RfD (1)	Units	Primary Target Organ	Combined Uncertainty/ Modifying Factors	Sources of RfC:RfD: Target Organ	Dates (2) (MM/DD/YY)
Chrysene	Chronic	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	Chronic	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
delta-BHC	Chronic	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	Chronic	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	Chronic	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	Chronic	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
Iron	Chronic	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	Chronic	5.0E-05	mg/m^3	1.4E-05	mg/kg-day	CNS	1,000/1	IRIS	8/30/2010
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	Chronic	2.7E-01	mg/m^3	7.7E-02	mg/kg-day	Kidney, Liver	NA	ASTDR	9/97
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	Chronic	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	Chronic	6.0E-02	mg/m^3	1.7E-02	mg/kg-day	Respiratory System	300	PPRTV	10/01/2002
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	Chronic	1.0E-02	mg/m^3	2.9E-03	mg/kg-day	NA	NA	NY (RSL)	10/20/2004
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	Chronic	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	Chronic	1.0E-01	mg/m^3	2.9E-02	mg/kg-day	Liver	30/1	IRIS	8/30/2010
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	Chronic	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA

TABLE G 5.2

Non-Cancer Toxicity Data -- Inhalation

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Chronic/ Subchronic	Value Inhalation RfC	Units	Adjusted Inhalation RfD (1)	Units	Primary Target Organ	Combined Uncertainty/ Modifying Factors	Sources of RfC:RfD: Target Organ	Dates (2) (MM/DD/YY)

Notes:

(1) Provide equation used for derivation in text.

(2) For IRIS values, the date IRIS was searched.
For HEAST values, the date of HEAST.
For CalEPA values, the date CalEPA website was searched.
For NY values, the date of the NY EPA toxicity profile

ATSDR - Agency for Toxic Substances and Disease Registry
CalEPA - California EPA
HEAST - Health Effects Assessment Summary Tables
IRIS - Integrated Risk Information System
MRL - Minimal Risk Level
NA - Not applicable
PPRTV - ProvisioNAl Peer Revied Toxicity Value
RSL - Regional Screening Levels

Generated By: T. Carleton/DAY

Checked By: Debbie Stannard/WDC

TABLE G 6.1

Cancer Toxicity Data -- Oral/Dermal

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Oral Cancer Slope Factor		Oral Absorption Efficiency for Dermal (1)	Absorbed Cancer Slope Factor for Dermal		Weight of Evidence/ Cancer Guideline	Oral CSF	
	Value	Units		Value	Units		Source(s)	Date(s) (MM/DD/YYYY)
1,1,2,2-Tetrachloroethane	2.0E-01	$(mg/kg\text{-}day)^{-1}$	Generally > 50%	2.0E-01	$(mg/kg\text{-}day)^{-1}$	C	IRIS	8/30/2010
1,1,2-Trichloroethane	5.7E-02	$(mg/kg\text{-}day)^{-1}$	Generally > 50%	5.7E-02	$(mg/kg\text{-}day)^{-1}$	C	IRIS	8/30/2010
1,2,4-Trichlorobenzene	2.9E-02	$(mg/kg\text{-}day)^{-1}$	Generally > 50%	2.9E-02	$(mg/kg\text{-}day)^{-1}$	NA	PPRTV	6/16/2009
1,2-Dichloroethane	9.1E-02	$(mg/kg\text{-}day)^{-1}$	Generally > 50%	9.1E-02	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	8/30/2010
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	5.4E-03	$(mg/kg\text{-}day)^{-1}$	Generally > 50%	5.4E-03	$(mg/kg\text{-}day)^{-1}$	NA	CalEPA	8/30/2010
alpha-BHC	6.3E+00	$(mg/kg\text{-}day)^{-1}$	Generally > 50%	6.3E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	8/30/2010
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	2.0E+00	$(mg/kg\text{-}day)^{-1}$	81-96%	NA	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	8/30/2010
Arsenic	1.5E+00	$(mg/kg\text{-}day)^{-1}$	95%	1.5E+00	$(mg/kg\text{-}day)^{-1}$	A	IRIS	8/30/2010
Benzene	5.5E-02	$(mg/kg\text{-}day)^{-1}$	Generally > 50%	5.5E-02	$(mg/kg\text{-}day)^{-1}$	A	IRIS	8/30/2010
Benzo(a)anthracene (3)	7.3E-01	$(mg/kg\text{-}day)^{-1}$	58%-89%	7.3E-01	$(mg/kg\text{-}day)^{-1}$	B2	NCEA	7/1/1993
Benzo(a)pyrene (3)	7.3E+00	$(mg/kg\text{-}day)^{-1}$	58%-89%	7.3E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	8/30/2010
Benzo(b)fluoranthene (3)	7.3E-01	$(mg/kg\text{-}day)^{-1}$	58%-89%	7.3E-01	$(mg/kg\text{-}day)^{-1}$	B2	NCEA	7/1/1993
Benzo(k)fluoranthene (3)	7.3E-02	$(mg/kg\text{-}day)^{-1}$	58%-89%	7.3E-02	$(mg/kg\text{-}day)^{-1}$	B2	NCEA	7/1/1993
beta-BHC	1.8E+00	$(mg/kg\text{-}day)^{-1}$	Generally > 50%	1.8E+00	$(mg/kg\text{-}day)^{-1}$	C	IRIS	8/30/2010
Chloroform	3.1E-02	$(mg/kg\text{-}day)^{-1}$	Generally > 50%	3.1E-02	$(mg/kg\text{-}day)^{-1}$	B2	CalEPA (RSL)	4/21/2010
Chromium (3)	5.0E-01	$(mg/kg\text{-}day)^{-1}$	2.5%	1.3E-02	$(mg/kg\text{-}day)^{-1}$	D	New Jersey	3/10/2010
Chrysene (3)	7.3E-03	$(mg/kg\text{-}day)^{-1}$	58%-89%	7.3E-03	$(mg/kg\text{-}day)^{-1}$	B2	NCEA	7/1/1993
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
delta-BHC	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	1.6E+01	$(mg/kg\text{-}day)^{-1}$	Generally > 50%	1.6E+01	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	8/30/2010
Heptachlor epoxide	9.1E+00	$(mg/kg\text{-}day)^{-1}$	Generally > 50%	9.1E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	8/30/2010
Indeno(1,2,3-cd)pyrene (3)	7.3E-01	$(mg/kg\text{-}day)^{-1}$	58%-89%	7.3E-01	$(mg/kg\text{-}day)^{-1}$	B2	NCEA	7/1/1993
Iron	NA	NA	NA	NA	NA	NA	NA	NA

TABLE G 6.1

Cancer Toxicity Data -- Oral/Dermal

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Oral Cancer Slope Factor		Oral Absorption Efficiency for Dermal (1)	Absorbed Cancer Slope Factor for Dermal		Weight of Evidence/ Cancer Guideline	Oral CSF	
	Value	Units		Value	Units		Source(s)	Date(s) (MM/DD/YYYY)
Manganese	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	5.4E-01	$(mg/kg\text{-}day)^{-1}$	Generally > 50%	5.4E-01	$(mg/kg\text{-}day)^{-1}$	B2	CalEPA	8/30/2010
Thallium	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	5.9E-03	$(mg/kg\text{-}day)^{-1}$	Generally > 50%	5.9E-03	$(mg/kg\text{-}day)^{-1}$	2A	CalEPA	8/30/2010
Vanadium	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride (adulthood) (3)	7.2E-01	$(mg/kg\text{-}day)^{-1}$	Generally > 50%	7.2E-01	$(mg/kg\text{-}day)^{-1}$	A	IRIS	8/30/2010
Vinyl chloride (from birth) (3)	1.5E+00	$(mg/kg\text{-}day)^{-1}$	Generally > 50%	1.5E+00	$(mg/kg\text{-}day)^{-1}$	A	IRIS	8/30/2010
Zinc	NA	NA	NA	NA	NA	D	IRIS	8/30/2010

Notes:

(1) Source: Risk Assessment Guidance for Superfund. Volume 1: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment(Interim). Section 4.2 and Exhibit 4-1. USEPA recommends that the oral RfD should not be adjusted to estimate the absorbed dose for compounds when the absorption efficiency is greater than 50%. Constituents that do not have oral absorption efficiencies reported on this table were assumed to have an oral absorption efficiency of 100%.

(2) See Risk Assessment text for the derivation of the "Absorbed RfD for Dermal"

(3) This chemical operates with a mutagenic mode of action (USEPA 2005).

CalEPA - California EPA
HEAST - Health Effects Assessment Summary Tables
IRIS - Integrated Risk Information System
NA - Not available
NCEA - NAtioNAl Center for Environmental Assessment
New Jersey - New Jersey EPA
RSL = As cited in EPA Regional Screening Level Table
PPRTV = Provisional Peer-Reviewed Toxicity Value

Except for vinyl chloride, chemical-specific data are not available, thus, USEPA (2005) default age-dependant adjustment factors (ADAF) will be applied to the slope factor as follows:

AGE	AGE ADAF
0-<2	10
2-<16	3
16-<30	1

Weight of Evidence definitions:

Group A chemicals (known human carcinogens) are agents for which there is sufficient evidence to support the causal association between exposure to the agents in humans and cancer.
Group B1 chemicals (probable human carcinogens) are agents for which there is limited evidence of possible carcinogenicity in humans.
Group B2 chemicals (probable human carcinogens) are agents for which there is sufficient evidence of carcinogenicity in animals but inadequate or a lack of evidence in humans.
Group C chemicals (possible human carcinogens) are agents for which there is limited evidence of carcinogenicity in animals and iNAdequate or a lack of human data.
Group D chemicals (not classifiable as to human carcinogenicity) are agents with iNAdequate human and animal evidence of carcinogenicity or for which no data are available.
Group E chemicals (evidence of noncarcinogenicity in humans) are agents for which there is no evidence of carcinogenicity from human or animal studies, or both.
2A - Probably carcinogenic to humans
2B - Possibly carcinogenic to humans

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Checked By: Debbie Stannard/WDC

TABLE G 6.2

Cancer Toxicity Data -- Inhalation

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Unit Risk		Weight of Evidence/ Cancer Guideline Description	Unit Risk : Inhalation CSF	
	Value	Units		Source(s)	Date(s) (MM/DD/YYY)
1,1,2,2-Tetrachloroethane	5.8E-05	$(\mu g/m^3)^{-1}$	C	IRIS	8/30/2010
1,1,2-Trichloroethane	1.6E-05	$(\mu g/m^3)^{-1}$	C	IRIS	8/30/2010
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA
1,2-Dichloroethane	2.6E-05	$(\mu g/m^3)^{-1}$	B2	IRIS	8/30/2010
1,3-Dichlorobenzene	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	1.1E-05	$(\mu g/m^3)^{-1}$	NA	CalEPA	8/30/2010
alph-BHC	1.8E-03	$(ug/m3)^{-1}$	B2	IRIS	8/30/2010
Aluminum	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA
Aroclor-1260	5.7E-04	$(\mu g/m^3)^{-1}$	B2	IRIS	8/30/2010
Arsenic	4.3E-03	$(\mu g/m^3)^{-1}$	A	IRIS	8/30/2010
Benzene	7.8E-06	$(\mu g/m^3)^{-1}$	A	IRIS	8/30/2010
Benzo(a)anthracene (1)	1.1E-04	$(\mu g/m^3)^{-1}$	2A	Cal EPA	8/30/2010
Benzo(a)pyrene (1)	1.1E-03	$(\mu g/m^3)^{-1}$	2A	Cal EPA	8/30/2010
Benzo(b)fluoranthene (1)	1.1E-04	$(\mu g/m^3)^{-1}$	2B	Cal EPA	8/30/2010
Benzo(k)fluoranthene (1)	1.1E-04	$(\mu g/m^3)^{-1}$	2B	Cal EPA	8/30/2010
beta-BHC	5.3E-04	$(\mu g/m^3)^{-1}$	NA	IRIS	8/30/2010
Chloroform	2.3E-05	$(\mu g/m^3)^{-1}$	B2	IRIS	8/30/2010
Chromium (1)	8.4E-02	$(\mu g/m^3)^{-1}$	A	IRIS	8/30/2010
Chrysene (1)	1.1E-05	$(\mu g/m^3)^{-1}$	B2	Cal EPA	8/30/2010
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA
delta-BHC	NA	NA	NA	NA	NA
Dieldrin	4.6E-03	$(\mu g/m^3)^{-1}$	B2	IRIS	8/30/2010
Heptachlor epoxide	2.6E-03	$(\mu g/m^3)^{-1}$	B2	IRIS	8/30/2010
Indeno(1,2,3-cd)pyrene (1)	1.1E-04	$(\mu g/m^3)^{-1}$	B2	Cal EPA	8/30/2010
Iron	NA	NA	NA	NA	NA

TABLE G 6.2

Cancer Toxicity Data -- Inhalation

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Unit Risk		Weight of Evidence/ Cancer Guideline Description	Unit Risk : Inhalation CSF	
	Value	Units		Source(s)	Date(s) (MM/DD/YYY)
Manganese	NA	NA	NA	NA	NA
Tetrachloroethene	5.9E-06	$(\mu g/m^3)^{-1}$	2A	CalEPA	8/30/2010
Thallium	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA
Trichloroethene	2.0E-06	$(\mu g/m^3)^{-1}$	2A	Cal EPA	8/30/2010
Vanadium	NA	NA	NA	NA	NA
Vinyl chloride (adulthood) (1)	4.4E-06	$(\mu g/m^3)^{-1}$	A	IRIS	8/30/2010
Vinyl chloride (from birth) (1)	8.8E-06	$(\mu g/m^3)^{-1}$	A	IRIS	8/30/2010
Zinc	NA	NA	D	IRIS	8/30/2010

Notes:

Toxicity values for hexavalent chromium used as surrogate for chromium.

HEAST = Health Effects Assessment Summary Tables

Cal EPA = California EPA

IRIS = Integrated Risk Information System

PPRTV = ProvisioNAl Peer-Reviewed Toxicity Value

(1) This chemical operates with a mutagenic mode of action (USEPA 2005).

Except for vinyl chloride, chemical-specific data are not available, thus, USEPA (2005) default age-dependant adjustment factors (ADAF) will be applied to the slope factor as follows:

AGE	AGE ADAF
0-<2	10
2-<16	3
16-<30	1

Weight of Evidence Definitions:

A - Human carcinogen

A2 - Suspected human carcinogen

B1 - Probable human carcinogen - indicates that limited human data are available

B2 - Probable human carcinogen - indicates sufficient evidence in animals and iNAdequate or no evidence in humans

C - Possible human carcinogen

D - Not classifiable as a human carcinogen

E - Evidence of noncarcinogenicity

2A - Probably carcinogenic to humans

2B - Possibly carcinogenic to humans

Generated By: T. Carleton/DAY

Checked By: Debbie Stannard/WDC

TABLE G 7.1.CTE

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil*	Soil*	Soil*	Ingestion	Aluminum	5.7E+03	mg/kg	NA		NA		NA	2.6E-03	mg/kg/day	1.0E+00	mg/kg/day	2.6E-03
				Arsenic	1.4E+00	mg/kg	NA		NA		NA	6.5E-07	mg/kg/day	3.0E-04	mg/kg/day	2.2E-03
				Chromium	7.5E+00	mg/kg	NA		NA		NA	3.4E-06	mg/kg/day	3.0E-03	mg/kg/day	1.1E-03
				Iron	3.8E+03	mg/kg	NA		NA		NA	1.7E-03	mg/kg/day	7.0E-01	mg/kg/day	2.5E-03
				Manganese	4.9E+01	mg/kg	NA		NA		NA	2.2E-05	mg/kg/day	2.4E-02	mg/kg/day	9.3E-04
				Vanadium	9.7E+00	mg/kg	NA		NA		NA	4.5E-06	mg/kg/day	5.0E-03	mg/kg/day	8.9E-04
			Exp. Route Total								0.0E+00					1.0E-02
			Dermal Absorption[1]	Aluminum	5.7E+03	mg/kg	NA		NA		NA	3.0E-06	mg/kg/day	1.0E+00	mg/kg/day	3.0E-06
				Arsenic	1.4E+00	mg/kg	NA		NA		NA	2.2E-08	mg/kg/day	3.0E-04	mg/kg/day	7.4E-05
				Chromium	7.5E+00	mg/kg	NA		NA		NA	3.9E-09	mg/kg/day	7.5E-05	mg/kg/day	5.2E-05
				Iron	3.8E+03	mg/kg	NA		NA		NA	2.0E-06	mg/kg/day	7.0E-01	mg/kg/day	2.8E-06
				Manganese	4.9E+01	mg/kg	NA		NA		NA	2.5E-08	mg/kg/day	9.6E-04	mg/kg/day	2.6E-05
				Vanadium	9.7E+00	mg/kg	NA		NA		NA	5.1E-09	mg/kg/day	1.3E-04	mg/kg/day	3.9E-05
			Exp. Route Total								0.0E+00					2.0E-04
	Exposure Medium Total										0.0E+00					1.0E-02
Soil* Total											0.0E+00					1.0E-02
Groundwater	Groundwater	Surficial Aquifer - Tap Water	Ingestion	1,1,2,2-Tetrachloroethan	2.2E+00	ug/L	NA		NA		NA	2.9E-05	mg/kg/day	2.0E-02	mg/kg/day	1.4E-03
				1,1,2-Trichloroethane	1.9E+00	ug/L	NA		NA		NA	2.4E-05	mg/kg/day	4.0E-03	mg/kg/day	5.9E-03
				1,2-Dichloroethane	2.8E+00	ug/L	NA		NA		NA	3.6E-05	mg/kg/day	6.0E-03	mg/kg/day	6.0E-03
				1,3-Dichlorobenzene	2.2E-01	ug/L	NA		NA		NA	2.8E-06	mg/kg/day	NA	NA	NA
				1,4-Dichlorobenzene	3.3E+00	ug/L	NA		NA		NA	4.2E-05	mg/kg/day	7.0E-02	mg/kg/day	6.0E-04
				Benzene	5.8E-01	ug/L	NA		NA		NA	7.4E-06	mg/kg/day	4.0E-03	mg/kg/day	1.9E-03
				Chloroform	1.3E+00	ug/L	NA		NA		NA	1.7E-05	mg/kg/day	1.0E-02	mg/kg/day	1.7E-03
				cis-1,2-Dichloroethene	5.1E+01	ug/L	NA		NA		NA	6.5E-04	mg/kg/day	2.0E-03	mg/kg/day	3.2E-01
				Tetrachloroethene	1.9E-01	ug/L	NA		NA		NA	2.4E-06	mg/kg/day	1.0E-02	mg/kg/day	2.4E-04
				trans-1,2-Dichloroethene	4.9E+00	ug/L	NA		NA		NA	6.3E-05	mg/kg/day	2.0E-02	mg/kg/day	3.1E-03
				Trichloroethene	1.2E+00	ug/L	NA		NA		NA	1.5E-05	mg/kg/day	NA	NA	NA
				Vinyl chloride	6.3E+00	ug/L	NA		NA		NA	8.1E-05	mg/kg/day	3.0E-03	mg/kg/day	2.7E-02
				alpha-BHC	7.7E-02	ug/L	NA		NA		NA	9.9E-07	mg/kg/day	8.0E-03	mg/kg/day	1.2E-04
				Aroclor-1260	1.2E+00	ug/L	NA		NA		NA	1.5E-05	mg/kg/day	NA	NA	NA
				beta-BHC	4.2E-02	ug/L	NA		NA		NA	5.3E-07	mg/kg/day	NA	NA	NA
				delta-BHC	2.6E-01	ug/L	NA		NA		NA	3.3E-06	mg/kg/day	NA	NA	NA
				Heptachlor epoxide	7.9E-02	ug/L	NA		NA		NA	1.0E-06	mg/kg/day	1.3E-05	mg/kg/day	7.8E-02
				Iron	9.7E+03	ug/L	NA		NA		NA	1.2E-01	mg/kg/day	7.0E-01	mg/kg/day	1.8E-01
				Manganese	2.1E+02	ug/L	NA		NA		NA	2.7E-03	mg/kg/day	2.4E-02	mg/kg/day	1.1E-01
				Vanadium	8.4E+00	ug/L	NA		NA		NA	1.1E-04	mg/kg/day	5.0E-03	mg/kg/day	2.2E-02
				Zinc	1.9E+03	ug/L	NA		NA		NA	2.5E-02	mg/kg/day	3.0E-01	mg/kg/day	8.3E-02
			Exp. Route Total								0.0E+00					8.5E-01

TABLE G 7.1.CTE

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater (cont'd)	Groundwater (cont'd)	Surficial Aquifer - Tap Water	Dermal Absorption[2]	1,1,2,2-Tetrachloroethan	2.2E+00	ug/L	NA		NA		NA	3.4E-06	mg/kg/day	2.0E-02	mg/kg/day	1.7E-04
				1,1,2-Trichloroethane	1.9E+00	ug/L	NA		NA		NA	2.1E-06	mg/kg/day	4.0E-03	mg/kg/day	5.2E-04
				1,2-Dichloroethane	2.8E+00	ug/L	NA		NA		NA	1.7E-06	mg/kg/day	6.0E-03	mg/kg/day	2.8E-04
				1,3-Dichlorobenzene	2.2E-01	ug/L	NA		NA		NA	2.5E-06	mg/kg/day	NA	NA	NA
				1,4-Dichlorobenzene	3.3E+00	ug/L	NA		NA		NA	2.7E-05	mg/kg/day	7.0E-02	mg/kg/day	3.8E-04
				Benzene	5.8E-01	ug/L	NA		NA		NA	1.1E-06	mg/kg/day	4.0E-03	mg/kg/day	2.7E-04
				Chloroform	1.3E+00	ug/L	NA		NA		NA	1.4E-06	mg/kg/day	1.0E-02	mg/kg/day	1.4E-04
				cis-1,2-Dichloroethene	5.1E+01	ug/L	NA		NA		NA	7.7E-05	mg/kg/day	2.0E-03	mg/kg/day	3.8E-02
				Tetrachloroethene	1.9E-01	ug/L	NA		NA		NA	1.4E-06	mg/kg/day	1.0E-02	mg/kg/day	1.4E-04
				trans-1,2-Dichloroethene	4.9E+00	ug/L	NA		NA		NA	7.5E-06	mg/kg/day	2.0E-02	mg/kg/day	3.7E-04
				Trichloroethene	1.2E+00	ug/L	NA		NA		NA	2.4E-06	mg/kg/day	NA	NA	NA
				Vinyl chloride	6.3E+00	ug/L	NA		NA		NA	3.9E-06	mg/kg/day	3.0E-03	mg/kg/day	1.3E-03
				alpha-BHC	7.7E-02	ug/L	NA		NA		NA	7.6E-07	mg/kg/day	8.0E-03	mg/kg/day	9.6E-05
				Aroclor-1260	1.2E+00	ug/L	NA		NA		NA	4.4E-04	mg/kg/day	NA	NA	NA
				beta-BHC	4.2E-02	ug/L	NA		NA		NA	4.1E-07	mg/kg/day	NA	NA	NA
				delta-BHC	2.6E-01	ug/L	NA		NA		NA	2.6E-06	mg/kg/day	NA	NA	NA
				Heptachlor epoxide	7.9E-02	ug/L	NA		NA		NA	1.5E-06	mg/kg/day	1.3E-05	mg/kg/day	1.2E-01
				Iron	9.7E+03	ug/L	NA		NA		NA	4.0E-04	mg/kg/day	7.0E-01	mg/kg/day	5.7E-04
				Manganese	2.1E+02	ug/L	NA		NA		NA	8.8E-06	mg/kg/day	9.6E-04	mg/kg/day	9.1E-03
				Vanadium	8.4E+00	ug/L	NA		NA		NA	3.5E-07	mg/kg/day	1.3E-04	mg/kg/day	2.7E-03
				Zinc	1.9E+03	ug/L	NA		NA		NA	8.0E-05	mg/kg/day	3.0E-01	mg/kg/day	2.7E-04
			Exp. Route Total								0.0E+00					1.7E-01
		Exposure Point Total									0.0E+00					1.0E+00
	Exposure Medium Total										0.0E+00					1.0E+00
	Air	Surficial Aquifer Water Vapors at Showerhead	Inhalation	1,1,2,2-Tetrachloroethan	1.3E-03	mg/m^3	NA		NA		NA	8.8E-06	mg/m^3	NA	NA	NA
				1,1,2-Trichloroethane	1.6E-03	mg/m^3	NA		NA		NA	1.0E-05	mg/m^3	2.0E-04	mg/m3	5.2E-02
				1,2-Dichloroethane	2.9E-03	mg/m^3	NA		NA		NA	1.9E-05	mg/m^3	7.0E-03	mg/m3	2.8E-03
				1,3-Dichlorobenzene	2.1E-04	mg/m^3	NA		NA		NA	1.4E-06	mg/m^3	NA	NA	NA
				1,4-Dichlorobenzene	3.1E-03	mg/m^3	NA		NA		NA	2.1E-05	mg/m^3	8.0E-01	mg/m3	2.6E-05
				Benzene	7.7E-04	mg/m^3	NA		NA		NA	5.1E-06	mg/m^3	3.0E-02	mg/m3	1.7E-04
				Chloroform	1.4E-03	mg/m^3	NA		NA		NA	9.3E-06	mg/m^3	9.8E-02	mg/m3	9.5E-05
				cis-1,2-Dichloroethene	6.0E-02	mg/m^3	NA		NA		NA	4.0E-04	mg/m^3	NA	NA	NA
				Tetrachloroethene	1.8E-04	mg/m^3	NA		NA		NA	1.2E-06	mg/m^3	2.7E-01	mg/m3	4.5E-06
				trans-1,2-Dichloroethene	5.8E-03	mg/m^3	NA		NA		NA	3.9E-05	mg/m^3	6.0E-02	mg/m3	6.5E-04
				Trichloroethene	1.3E-03	mg/m^3	NA		NA		NA	8.5E-06	mg/m^3	1.0E-02	mg/m3	8.5E-04
				Vinyl chloride	9.6E-03	mg/m^3	NA		NA		NA	6.4E-05	mg/m^3	1.0E-01	mg/m3	6.4E-04
			Exp. Route Total								0.0E+00					5.7E-02
	Exposure Medium Total										0.0E+00					5.7E-02
Groundwater Surficial Aquifer Total											0.0E+00					1.1E+00

TABLE G 7.1.CTE

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater	Groundwater	Castle-Hayne Aquifer - Tap Water	Ingestion	1,2,4-Trichlorobenzene	8.5E+00	ug/L	NA		NA		NA	1.1E-04	mg/kg/day	1.0E-02	mg/kg/day	1.1E-02
				1,2-Dichloroethane	1.7E+00	ug/L	NA		NA		NA	2.2E-05	mg/kg/day	6.0E-03	mg/kg/day	3.6E-03
				1,3-Dichlorobenzene	1.1E+00	ug/L	NA		NA		NA	1.4E-05	mg/kg/day	NA	NA	NA
				1,4-Dichlorobenzene	1.0E+00	ug/L	NA		NA		NA	1.3E-05	mg/kg/day	7.0E-02	mg/kg/day	1.8E-04
				Benzene	1.4E-01	ug/L	NA		NA		NA	1.7E-06	mg/kg/day	4.0E-03	mg/kg/day	4.3E-04
				Chloroform	2.6E+00	ug/L	NA		NA		NA	3.4E-05	mg/kg/day	1.0E-02	mg/kg/day	3.4E-03
				cis-1,2-Dichloroethene	4.1E+03	ug/L	NA		NA		NA	5.2E-02	mg/kg/day	2.0E-03	mg/kg/day	2.6E+01
				trans-1,2-Dichloroethene	6.1E+01	ug/L	NA		NA		NA	7.8E-04	mg/kg/day	2.0E-02	mg/kg/day	3.9E-02
				Trichloroethene	1.4E+01	ug/L	NA		NA		NA	1.8E-04	mg/kg/day	NA	NA	NA
				Vinyl chloride	4.3E+02	ug/L	NA		NA		NA	5.5E-03	mg/kg/day	3.0E-03	mg/kg/day	1.8E+00
				Aroclor-1260	3.4E-01	ug/L	NA		NA		NA	4.4E-06	mg/kg/day	NA	NA	NA
				Dieldrin	2.6E-02	ug/L	NA		NA		NA	3.3E-07	mg/kg/day	5.0E-05	mg/kg/day	6.7E-03
				Heptachlor epoxide	3.8E-02	ug/L	NA		NA		NA	4.8E-07	mg/kg/day	1.3E-05	mg/kg/day	3.7E-02
				Chromium	6.6E+00	ug/L	NA		NA		NA	8.5E-05	mg/kg/day	3.0E-03	mg/kg/day	2.8E-02
				Iron	4.6E+03	ug/L	NA		NA		NA	5.9E-02	mg/kg/day	7.0E-01	mg/kg/day	8.4E-02
				Thallium	5.6E+00	ug/L	NA		NA		NA	7.2E-05	mg/kg/day	1.0E-05	mg/kg/day	7.2E+00
			Exp. Route Total								0.0E+00					3.5E+01
			Dermal Absorption[2]	1,2,4-Trichlorobenzene	8.5E+00	ug/L	NA		NA		NA	1.4E-04	mg/kg/day	1.0E-02	mg/kg/day	1.4E-02
				1,2-Dichloroethane	1.7E+00	ug/L	NA		NA		NA	1.0E-06	mg/kg/day	6.0E-03	mg/kg/day	1.7E-04
				1,3-Dichlorobenzene	1.1E+00	ug/L	NA		NA		NA	1.2E-05	mg/kg/day	NA	NA	NA
				1,4-Dichlorobenzene	1.0E+00	ug/L	NA		NA		NA	8.1E-06	mg/kg/day	7.0E-02	mg/kg/day	1.2E-04
				Benzene	1.4E-01	ug/L	NA		NA		NA	2.5E-07	mg/kg/day	4.0E-03	mg/kg/day	6.2E-05
				Chloroform	2.6E+00	ug/L	NA		NA		NA	2.9E-06	mg/kg/day	1.0E-02	mg/kg/day	2.9E-04
				cis-1,2-Dichloroethene	4.1E+03	ug/L	NA		NA		NA	6.2E-03	mg/kg/day	2.0E-03	mg/kg/day	3.1E+00
				trans-1,2-Dichloroethene	6.1E+01	ug/L	NA		NA		NA	9.2E-05	mg/kg/day	2.0E-02	mg/kg/day	4.6E-03
				Trichloroethene	1.4E+01	ug/L	NA		NA		NA	2.8E-05	mg/kg/day	NA	NA	NA
				Vinyl chloride	4.3E+02	ug/L	NA		NA		NA	2.7E-04	mg/kg/day	3.0E-03	mg/kg/day	9.0E-02
				Aroclor-1260	3.4E-01	ug/L	NA		NA		NA	1.3E-04	mg/kg/day	NA	NA	NA
				Dieldrin	2.6E-02	ug/L	NA		NA		NA	2.8E-07	mg/kg/day	5.0E-05	mg/kg/day	5.5E-03
				Heptachlor epoxide	3.8E-02	ug/L	NA		NA		NA	7.2E-07	mg/kg/day	1.3E-05	mg/kg/day	5.5E-02
				Chromium	6.6E+00	ug/L	NA		NA		NA	2.7E-07	mg/kg/day	7.5E-05	mg/kg/day	3.6E-03
				Iron	4.6E+03	ug/L	NA		NA		NA	1.9E-04	mg/kg/day	7.0E-01	mg/kg/day	2.7E-04
				Thallium	5.6E+00	ug/L	NA		NA		NA	2.3E-07	mg/kg/day	1.0E-05	mg/kg/day	2.3E-02
			Exp. Route Total								0.0E+00					3.3E+00
		Exposure Point Total									0.0E+00					3.9E+01
	Exposure Medium Total										0.0E+00					3.9E+01

TABLE G 7.1.CTE

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater (cont'd)	Groundwater	Castle-Hayne Aquifer Water Vapors at Showerhead	Inhalation	1,2,4-Trichlorobenzene	6.8E-03	mg/m^3	NA		NA		NA	4.5E-05	mg/m^3	2.0E-03	mg/m3	2.3E-02
				1,2-Dichloroethane	1.8E-03	mg/m^3	NA		NA		NA	1.2E-05	mg/m^3	2.4E+00	mg/m3	4.9E-06
				1,3-Dichlorobenzene	1.1E-03	mg/m^3	NA		NA		NA	7.3E-06	mg/m^3	NA	NA	NA
				1,4-Dichlorobenzene	9.4E-04	mg/m^3	NA		NA		NA	6.3E-06	mg/m^3	8.0E-01	mg/m3	7.8E-06
				Benzene	1.8E-04	mg/m^3	NA		NA		NA	1.2E-06	mg/m^3	3.0E-02	mg/m3	4.0E-05
				Chloroform	2.8E-03	mg/m^3	NA		NA		NA	1.9E-05	mg/m^3	9.8E-02	mg/m3	1.9E-04
				cis-1,2-Dichloroethene	4.8E+00	mg/m^3	NA		NA		NA	3.2E-02	mg/m^3	NA	NA	NA
				trans-1,2-Dichloroethene	7.2E-02	mg/m^3	NA		NA		NA	4.8E-04	mg/m^3	6.0E-02	mg/m3	8.0E-03
				Trichloroethene	1.5E-02	mg/m^3	NA		NA		NA	9.9E-05	mg/m^3	1.0E-02	NA	9.9E-03
				Vinyl chloride	6.6E-01	mg/m^3	NA		NA		NA	4.4E-03	mg/m^3	1.0E-01	mg/m3	4.4E-02
			Exp. Route Total								0.0E+00					8.5E-02
	Exposure Medium Total										0.0E+00					8.5E-02
Groundwater Castle-Hayne Aquifer Total											0.0E+00					3.9E+01
										Total of Receptor Risks Across All Media	0.0E+00				Total of Receptor Hazards Across All Media	3.9E+01

Notes:

* Soil = combined surface and subsurface soil

1. Dermal absorption factors (DABs) used to calculated dermal absorption intake from soil are chemical specific as shown in RAGS Part E, Exhibit 3-4. DABS of 0.03 used for arsenic,0.001 for all other metals.
2. DAevent for dermal exposure to groundwater calculated on Tables 7.1.CTE Supplements A and B.
3. Inhalation exposures calculated on Tables 7.1.CTE Supplement C and D.
4. Total receptor risks and hazards includes higher of the Surficial Aquifer or Castle-Hayne Aquifer risks or hazards.

Generated by: Martha White/ATL
Checked by: Debbie Stannard/WDC

TABLE G 7.1.CTE SUPPLEMENT A

Calculation of DAevent - Adult Resident, Surficial Aquifer Groundwater

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Water Concentration (CW) (µg/L)	Permeability Coefficient (Kp) (cm/hr)	B (dimensionless)	Lag Time (τ_{event}) (hr)	t* (hr)	Fraction Absorbed Water (FA) (dimensionless)	Duration of Event (t_{event}) (hr)	DA_{event} (mg/cm^2-event)	Eq
1,1,2,2-Tetrachloroethane	2.2E+00	6.9E-03	3.5E-02	9.3E-01	2.2E+00	1.0E+00	0.25	2.1E-08	2
1,1,2-Trichloroethane	1.9E+00	6.4E-03	2.9E-02	6.0E-01	1.4E+00	1.0E+00	0.25	1.3E-08	2
1,2-Dichloroethane	2.8E+00	4.2E-03	1.6E-02	3.8E-01	9.2E-01	1.0E+00	0.25	1.0E-08	2
1,3-Dichlorobenzene	2.2E-01	5.8E-02	2.7E-01	7.1E-01	1.7E+00	1.0E+00	0.25	1.5E-08	2
1,4-Dichlorobenzene	3.3E+00	4.2E-02	2.0E-01	7.1E-01	1.7E+00	1.0E+00	0.25	1.6E-07	2
Benzene	5.8E-01	1.5E-02	5.1E-02	2.9E-01	7.0E-01	1.0E+00	0.25	6.4E-09	2
Chloroform	1.3E+00	6.8E-03	2.9E-02	5.0E-01	1.2E+00	1.0E+00	0.25	8.7E-09	2
cis-1,2-Dichloroethene[1]	5.1E+01	1.10E-02	4.2E-02	3.7E-01	8.8E-01	1.0E+00	0.25	4.7E-07	2
Tetrachloroethene	1.9E-01	3.3E-02	1.7E-01	9.1E-01	2.2E+00	1.0E+00	0.25	8.4E-09	2
trans-1,2-Dichloroethene[1]	4.9E+00	1.10E-02	4.2E-02	3.7E-01	8.8E-01	1.0E+00	0.25	4.5E-08	2
Trichloroethene	1.2E+00	1.2E-02	5.1E-02	5.8E-01	1.4E+00	1.0E+00	0.25	1.5E-08	2
Vinyl chloride	6.3E+00	5.6E-03	1.7E-02	2.4E-01	5.7E-01	1.0E+00	0.25	2.4E-08	2
alpha-BHC[1]	7.7E-02	2.06E-02	1.4E-01	4.5E+00	1.1E+01	1.0E+00	0.25	4.6E-09	2
Aroclor-1260[2]	1.2E+00	7.5E-01	4.9E+00	4.6E+00	2.0E+01	1.0E+00	0.25	2.7E-06	2
beta-BHC[1]	4.2E-02	2.06E-02	1.4E-01	4.5E+00	1.1E+01	1.0E+00	0.25	2.5E-09	2
delta-BHC[1]	2.6E-01	2.06E-02	1.4E-01	4.5E+00	1.1E+01	1.0E+00	0.25	1.6E-08	2
Heptachlor epoxide[1]	7.9E-02	2.09E-02	1.6E-01	1.6E+01	3.8E+01	1.0E+00	0.25	9.1E-09	2
Iron	9.7E+03	1.0E-03	NA	NA	NA	NA	0.25	2.4E-06	1
Manganese	2.1E+02	1.0E-03	NA	NA	NA	NA	0.25	5.3E-08	1
Vanadium	8.4E+00	1.0E-03	NA	NA	NA	NA	0.25	2.1E-09	1
Zinc	1.9E+03	1.0E-03	NA	NA	NA	NA	0.25	4.9E-07	1

Inorganics: DA_{event} (mg/cm^2-event) =

Kp x CW x t_{event} x 0.001 mg/µg x 0.001 L/cm^3 (eq 1)

Organics: DAevent (mg/cm^2-event) =

If t_{event}<t*, then DA_{event} =

2 x FA x Kp x CW x (sqrt((6 x τ_{event} x t_{event})/π)) x 0.001 mg/µg x 0.001 L/cm^3

If t_{event}>t*, then DA_{event} =

FA x Kp x CW x (t_{event}/(1+B) + 2 x τ_{event} x ((1 + 3xB + 3xB^2)/(1+B)^2) x 0.001 mg/µg x 0.001 L/cm^3 (eq 3)

Notes:

B - Dimensionless ratio of the permeability coefficient of a compound through the stratum corneum relative to its permeability coefficient across the viable epidermis (dimensionless).

NA - Not applicable

t* - Time to reach steady-state

Permeability constants from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005. The default value of 0.001 was assigned to inorganics not listed in this document.

[1] - B calculated using Equation A.1 (B = Kp * MW1/2/2.6) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

t_{event} calculated using Equation A.4 (t_{event} = lsc2/6Dsc = 0.105 × 10^[0.0056 MW]) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

Since B ≤ 0.6, then t* calculated using Equation A.4 (t* = 2.4 t_{event}) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

[2] - PCB-chlorobiphenyl, 4- used as a surrogate for Aroclor-1260.

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 7.1.CTE SUPPLEMENT B

Calculation of DAevent - Adult Resident, Castle Hayne Aquifer Groundwater

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Water Concentration (CW) (µg/L)	Permeability Coefficient (Kp) (cm/hr)	B (dimensionless)	Lag Time (τ_{event}) (hr)	t* (hr)	Fraction Absorbed Water (FA) (dimensionless)	Duration of Event (t_{event}) (hr)	DA_{event} (mg/cm^2-event)	Eq
1,2,4-Trichlorobenzene	8.5E+00	6.6E-02	3.4E-01	1.1E+00	2.7E+00	1.0E+00	0.25	8.2E-07	2
1,2-Dichloroethane	1.7E+00	4.2E-03	1.6E-02	3.8E-01	9.2E-01	1.0E+00	0.25	6.1E-09	2
1,3-Dichlorobenzene	1.1E+00	5.8E-02	2.7E-01	7.1E-01	1.7E+00	1.0E+00	0.25	7.2E-08	2
1,4-Dichlorobenzene	1.0E+00	4.2E-02	2.0E-01	7.1E-01	1.7E+00	1.0E+00	0.25	4.9E-08	2
Benzene	1.4E-01	1.5E-02	5.1E-02	2.9E-01	7.0E-01	1.0E+00	0.25	1.5E-09	2
Chloroform	2.6E+00	6.8E-03	2.9E-02	5.0E-01	1.2E+00	1.0E+00	0.25	1.8E-08	2
cis-1,2-Dichloroethene[1]	4.1E+03	1.10E-02	4.2E-02	3.7E-01	8.8E-01	1.0E+00	0.25	3.8E-05	2
trans-1,2-Dichloroethene[1]	6.1E+01	1.10E-02	4.2E-02	3.7E-01	8.8E-01	1.0E+00	0.25	5.6E-07	2
Trichloroethene	1.4E+01	1.2E-02	5.1E-02	5.8E-01	1.4E+00	1.0E+00	0.25	1.7E-07	2
Vinyl chloride	4.3E+02	5.6E-03	1.7E-02	2.4E-01	5.7E-01	1.0E+00	0.25	1.6E-06	2
Aroclor-1260[2]	3.4E-01	7.5E-01	4.9E+00	4.6E+00	2.0E+01	1.0E+00	0.25	7.6E-07	2
Dieldrin	2.6E-02	1.2E-02	9.2E-02	1.5E+01	3.5E+01	1.0E+00	0.25	1.7E-09	2
Heptachlor epoxide[1]	3.8E-02	2.09E-02	1.6E-01	1.6E+01	3.8E+01	1.0E+00	0.25	4.4E-09	2
Chromium	6.6E+00	1.0E-03	NA	NA	NA	NA	0.25	1.7E-09	1
Iron	4.6E+03	1.0E-03	NA	NA	NA	NA	0.25	1.1E-06	1
Thallium	5.6E+00	1.0E-03	NA	NA	NA	NA	0.25	1.4E-09	1

Inorganics: DA_{event} (mg/cm^2-event) =

Kp x CW x t_{event} x 0.001 mg/µg x 0.001 L/cm^3 (eq 1)

Organics: DAevent (mg/cm^2-event) =

If t_{event}<t*, then DA_{event} =

2 x FA x Kp x CW x (sqrt((6 x τ_{event} x t_{event})/π)) x 0.001 mg/µg x 0.001 L/cm^3

If t_{event}>t*, then DA_{event} =

FA x Kp x CW x (t_{event}/(1+B) + 2 x τ_{event} x ((1 + 3xB + 3xB^2)/(1+B)^2) x 0.001 mg/µg x 0.001 L/cm^3 (eq 3)

Notes:

B - Dimensionless ratio of the permeability coefficient of a compound through the stratum corneum relative to its permeability coefficient across the viable epidermis (dimensionless).

NA - Not applicable

t* - Time to reach steady-state

Permeability constants from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005. The default value of 0.001 was assigned to inorganics not listed in this document.

[1] - B calculated using Equation A.1 (B = Kp * MW1/2/2.6) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

t_{event} calculated using Equation A.4 (t_{event} = lsc2/6Dsc = 0.105 × 10^[0.0056 MW]) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

Since B ≤ 0.6, then t* calculated using Equation A.4 (t* = 2.4 t_{event}) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

[2] - PCB-chlorobiphenyl, 4- used as a surrogate for Aroclor-1260.

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 7.1.CTE SUPPLEMENT C

Inhalation Exposure Concentrations from Foster and Chrostowski Shower Model—Surficial Groundwater Air, Adult Resident

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Exposure Point Concentration Cwo (µg/L)	Molecular weight (MW) (g/mole)	Henry's Law Constant (H) (atm-m^3/mole)	Kg (VOC) (cm/hr)	Kl (VOC) (cm/hr)	KL (cm/hr)	Kal (cm/hr)	Cwd (µg/L)	S (µg/m^3 -min)	Ca (mg/m^3)
1,1,2,2-Tetrachloroethane	2.2E+00	1.7E+02	3.7E-04	9.8E+02	1.0E+01	6.1E+00	8.2E+00	1.5E-01	1.2E-01	1.3E-03
1,1,2-Trichloroethane	1.9E+00	1.3E+02	8.2E-04	1.1E+03	1.1E+01	8.8E+00	1.2E+01	1.7E-01	1.5E-01	1.6E-03
1,2-Dichloroethane	2.8E+00	9.9E+01	1.2E-03	1.3E+03	1.3E+01	1.1E+01	1.5E+01	3.3E-01	2.7E-01	2.9E-03
1,3-Dichlorobenzene	2.2E-01	1.5E+02	2.4E-03	1.0E+03	1.1E+01	9.9E+00	1.3E+01	2.3E-02	2.0E-02	2.1E-04
1,4-Dichlorobenzene	3.3E+00	1.5E+02	2.4E-03	1.0E+03	1.1E+01	9.9E+00	1.3E+01	3.5E-01	2.9E-01	3.1E-03
Benzene	5.8E-01	7.8E+01	5.6E-03	1.4E+03	1.5E+01	1.4E+01	1.9E+01	8.7E-02	7.2E-02	7.7E-04
Chloroform	1.3E+00	1.2E+02	3.7E-03	1.2E+03	1.2E+01	1.1E+01	1.5E+01	1.6E-01	1.3E-01	1.4E-03
cis-1,2-Dichloroethene	5.1E+01	9.7E+01	4.1E-03	1.3E+03	1.3E+01	1.3E+01	1.7E+01	6.7E+00	5.6E+00	6.0E-02
Tetrachloroethene	1.9E-01	1.7E+02	1.8E-02	9.9E+02	1.0E+01	1.0E+01	1.4E+01	2.1E-02	1.7E-02	1.8E-04
trans-1,2-Dichloroethene	4.9E+00	9.7E+01	4.1E-03	1.3E+03	1.3E+01	1.3E+01	1.7E+01	6.5E-01	5.5E-01	5.8E-03
Trichloroethene	1.2E+00	1.3E+02	9.9E-03	1.1E+03	1.2E+01	1.1E+01	1.5E+01	1.4E-01	1.2E-01	1.3E-03
Vinyl chloride	6.3E+00	6.3E+01	2.8E-02	1.6E+03	1.7E+01	1.7E+01	2.2E+01	1.1E+00	9.0E-01	9.6E-03

Variables	Units	Exposure Assumptions
Kg(VOC) = gas-film mass transfer coefficient	cm/hr	Solved by Eq 1
Kl(VOC) = liquid-film mass transfer coefficient	cm/hr	Solved by Eq 2
KL = overall mass transfer coefficient	cm/hr	Solved by Eq 3
Kal = adjusted overall mass transfer coeff.	cm/hr	Solved by Eq 4
Tl = Calibration temp. of water	K (20C +273)	293
Ts = Shower water temperature	k (45C)	318
Us = water viscosity at Ts	centipoise	0.596
Ul = water viscosity at Tl	cp	1.002
Cwd = conc. leaving droplets after time sdt	µg/l	Solved by Eq 5
sdt = shower droplet drop time	sec	0.5
d = shower droplet diameter	mm	1
FR = shower water flow rate	l/min	10
SV = shower room air volume	m^3	12
S = indoor VOC generation rate	µg/m^3-min	Solved by Eq 6
Ds = duration of shower	min	15
Dt = total duration in shower room	min	40
R = air exchange rate	min^{-1}	0.0083
Ca = indoor air concentration of VOCs	µg/m^3	Solved by Eq 7

Equation 1:	Kg(VOC) =	3000 * (18 / MW)$^{0.5}$	
Equation 2:	Kl(VOC) =	20 * (44 / MW)$^{0.5}$	
Equation 3:	KL =	((1 / Kl(VOC)) + (0.024 / (Kg (VOC) * H)))$^{-1}$	
Equation 4:	Kal =	(KL * (((Tl * Us) / (Ts * Ul))$^{-0.5}$))	
Equation 5:	Cwd =	(Cwo * (1-EXP((-1 * Kal * sdt)/(60 * d))))	
Equation 6:	S =	(Cwd * FR / SV)	
Equation 7:	Ca =	If t>Ds	[(S / R) * (Ds + (EXP(-R * Dt) / R) -(EXP(R *(Ds - Dt)) / R)] / Dt * 1/1000
Equation 8:	Einh =	If t>Ds	(((VR * S) / (BW * R * 1000000)) * ((Ds + (EXP(-R * Dt) / R)-(EXP(R * (Ds - Dt))) / R)))

Notes:

MW and log Kow from Oak Ridge National Laboratory (ORNL). May 2010. [Online]. Available: http://epa-prgs.ornl.gov/chemicals/index.shtml

1,4-dichlorobenzene used as surrogate for 1,3-dichlorobenzene.

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 7.1.CTE SUPPLEMENT D

Inhalation Exposure Concentrations from Foster and Chrostowski Shower Model—Castle-Hayne Groundwater Air, Adult Resident

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Exposure Point Concentration Cwo (µg/L)	Molecular weight (MW) (g/mole)	Henry's Law Constant (H) (atm-m^3/mole)	Kg (VOC) (cm/hr)	Kl (VOC) (cm/hr)	KL (cm/hr)	Kal (cm/hr)	Cwd (µg/L)	S (µg/m^3 -min)	Ca (mg/m^3)
1,2,4-Trichlorobenzene	8.5E+00	1.8E+02	1.4E-03	9.4E+02	9.8E+00	8.4E+00	1.1E+01	7.6E-01	6.4E-01	6.8E-03
1,2-Dichloroethane	1.7E+00	9.9E+01	1.2E-03	1.3E+03	1.3E+01	1.1E+01	1.5E+01	2.0E-01	1.7E-01	1.8E-03
1,3-Dichlorobenzene	1.1E+00	1.5E+02	1.9E-01	1.0E+03	1.1E+01	1.1E+01	1.5E+01	1.2E-01	1.0E-01	1.1E-03
1,4-Dichlorobenzene	1.0E+00	1.5E+02	2.4E-03	1.0E+03	1.1E+01	9.9E+00	1.3E+01	1.1E-01	8.8E-02	9.4E-04
Benzene	1.4E-01	7.8E+01	5.6E-03	1.4E+03	1.5E+01	1.4E+01	1.9E+01	2.0E-02	1.7E-02	1.8E-04
Chloroform	2.6E+00	1.2E+02	3.7E-03	1.2E+03	1.2E+01	1.1E+01	1.5E+01	3.2E-01	2.6E-01	2.8E-03
cis-1,2-Dichloroethene	4.1E+03	9.7E+01	4.1E-03	1.3E+03	1.3E+01	1.3E+01	1.7E+01	5.4E+02	4.5E+02	4.8E+00
trans-1,2-Dichloroethene	6.1E+01	9.7E+01	4.1E-03	1.3E+03	1.3E+01	1.3E+01	1.7E+01	8.1E+00	6.8E+00	7.2E-02
Trichloroethene	1.4E+01	1.3E+02	9.9E-03	1.1E+03	1.2E+01	1.1E+01	1.5E+01	1.7E+00	1.4E+00	1.5E-02
Vinyl chloride	4.3E+02	6.3E+01	2.8E-02	1.6E+03	1.7E+01	1.7E+01	2.2E+01	7.4E+01	6.2E+01	6.6E-01

Variables	Units	Exposure Assumptions
Kg(VOC) = gas-film mass transfer coefficient	cm/hr	Solved by Eq 1
Kl(VOC) = liquid-film mass transfer coefficient	cm/hr	Solved by Eq 2
KL = overall mass transfer coefficient	cm/hr	Solved by Eq 3
Kal = adjusted overall mass transfer coeff.	cm/hr	Solved by Eq 4
Tl = Calibration temp. of water	K (20C +273)	293
Ts = Shower water temperature	k (45C)	318
Us = water viscosity at Ts	centipoise	0.596
Ul = water viscosity at Tl	cp	1.002
Cwd = conc. leaving droplets after time sdt	µg/l	Solved by Eq 5
sdt = shower droplet drop time	sec	0.5
d = shower droplet diameter	mm	1
FR = shower water flow rate	l/min	10
SV = shower room air volume	m^3	12
S = indoor VOC generation rate	µg/m^3-min	Solved by Eq 6
Ds = duration of shower	min	15
Dt = total duration in shower room	min	40
R = air exchange rate	min^{-1}	0.0083
Ca = indoor air concentration of VOCs	µg/m^3	Solved by Eq 7

Equation 1:	Kg(VOC) =	3000 * (18 / MW)$^{0.5}$	
Equation 2:	Kl(VOC) =	20 * (44 / MW)$^{0.5}$	
Equation 3:	KL =	((1 / Kl(VOC)) + (0.024 / (Kg (VOC) * H)))$^{-1}$	
Equation 4:	Kal =	(KL * (((Tl * Us) / (Ts * Ul))$^{-0.3}$))	
Equation 5:	Cwd =	(Cwo * (1-EXP((-1 * Kal * sdt)/(60 * d))))	
Equation 6:	S =	(Cwd * FR / SV)	
Equation 7:	Ca =	If t>Ds	[(S / R) * (Ds + (EXP(-R * Dt) / R) -(EXP(R *(Ds - Dt)) / R)] / Dt * 1/1000
Equation 8:	Einh =	If t>Ds	(((VR * S) / (BW * R * 1000000)) * ((Ds + (EXP(-R * Dt) / R)-(EXP(R * (Ds - Dt))) / R)))

Notes:

MW and log Kow from Oak Ridge National Laboratory (ORNL). May 2010. [Online]. Available: http://epa-prgs.ornl.gov/chemicals/index.shtml

1,4-dichlorobenzene used as surrogate for 1,3-dichlorobenzene.

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 7.2.CTE

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil*	Soil*	Soil*	Ingestion	Aluminum	5.7E+03	mg/kg	NA		NA		NA	2.4E-02	mg/kg/day	1.0E+00	mg/kg/day	2.4E-02
				Arsenic	1.4E+00	mg/kg	NA		NA		NA	6.1E-06	mg/kg/day	3.0E-04	mg/kg/day	2.0E-02
				Chromium	7.5E+00	mg/kg	NA		NA		NA	3.2E-05	mg/kg/day	3.0E-03	mg/kg/day	1.1E-02
				Iron	3.8E+03	mg/kg	NA		NA		NA	1.6E-02	mg/kg/day	7.0E-01	mg/kg/day	2.3E-02
				Manganese	4.9E+01	mg/kg	NA		NA		NA	2.1E-04	mg/kg/day	2.4E-02	mg/kg/day	8.7E-03
				Vanadium	9.7E+00	mg/kg	NA		NA		NA	4.2E-05	mg/kg/day	5.0E-03	mg/kg/day	8.3E-03
			Exp. Route Total								0.0E+00					9.5E-02
			Dermal Absorption[1]	Aluminum	5.7E+03	mg/kg	NA		NA		NA	2.7E-05	mg/kg/day	1.0E+00	mg/kg/day	2.7E-05
				Arsenic	1.4E+00	mg/kg	NA		NA		NA	2.0E-07	mg/kg/day	3.0E-04	mg/kg/day	6.8E-04
				Chromium	7.5E+00	mg/kg	NA		NA		NA	3.6E-08	mg/kg/day	7.5E-05	mg/kg/day	4.8E-04
				Iron	3.8E+03	mg/kg	NA		NA		NA	1.8E-05	mg/kg/day	7.0E-01	mg/kg/day	2.6E-05
				Manganese	4.9E+01	mg/kg	NA		NA		NA	2.3E-07	mg/kg/day	9.6E-04	mg/kg/day	2.4E-04
				Vanadium	9.7E+00	mg/kg	NA		NA		NA	4.7E-08	mg/kg/day	1.3E-04	mg/kg/day	3.6E-04
			Exp. Route Total								0.0E+00					1.8E-03
	Exposure Medium Total										0.0E+00					9.7E-02
Soil* Total											0.0E+00					9.7E-02
Groundwater	Groundwater	Surficial Aquifer - Tap Water	Ingestion	1,1,2,2-Tetrachloroethan	2.2E+00	ug/L	NA		NA		NA	9.5E-05	mg/kg/day	2.0E-02	mg/kg/day	4.8E-03
				1,1,2-Trichloroethane	1.9E+00	ug/L	NA		NA		NA	7.9E-05	mg/kg/day	4.0E-03	mg/kg/day	2.0E-02
				1,2-Dichloroethane	2.8E+00	ug/L	NA		NA		NA	1.2E-04	mg/kg/day	6.0E-03	mg/kg/day	2.0E-02
				1,3-Dichlorobenzene	2.2E-01	ug/L	NA		NA		NA	9.5E-06	mg/kg/day	NA	NA	NA
				1,4-Dichlorobenzene	3.3E+00	ug/L	NA		NA		NA	1.4E-04	mg/kg/day	7.0E-02	mg/kg/day	2.0E-03
				Benzene	5.8E-01	ug/L	NA		NA		NA	2.5E-05	mg/kg/day	4.0E-03	mg/kg/day	6.2E-03
				Chloroform	1.3E+00	ug/L	NA		NA		NA	5.6E-05	mg/kg/day	1.0E-02	mg/kg/day	5.6E-03
				cis-1,2-Dichloroethene	5.1E+01	ug/L	NA		NA		NA	2.2E-03	mg/kg/day	2.0E-03	mg/kg/day	1.1E+00
				Tetrachloroethene	1.9E-01	ug/L	NA		NA		NA	8.1E-06	mg/kg/day	1.0E-02	mg/kg/day	8.1E-04
				trans-1,2-Dichloroethene	4.9E+00	ug/L	NA		NA		NA	2.1E-04	mg/kg/day	2.0E-02	mg/kg/day	1.0E-02
				Trichloroethene	1.2E+00	ug/L	NA		NA		NA	5.1E-05	mg/kg/day	NA	NA	NA
				Vinyl chloride	6.3E+00	ug/L	NA		NA		NA	2.7E-04	mg/kg/day	3.0E-03	mg/kg/day	9.0E-02
				alpha-BHC	7.7E-02	ug/L	NA		NA		NA	3.3E-06	mg/kg/day	8.0E-03	mg/kg/day	4.1E-04
				Aroclor-1260	1.2E+00	ug/L	NA		NA		NA	5.1E-05	mg/kg/day	NA	NA	NA
				beta-BHC	4.2E-02	ug/L	NA		NA		NA	1.8E-06	mg/kg/day	NA	NA	NA
				delta-BHC	2.6E-01	ug/L	NA		NA		NA	1.1E-05	mg/kg/day	NA	NA	NA
				Heptachlor epoxide	7.9E-02	ug/L	NA		NA		NA	3.4E-06	mg/kg/day	1.3E-05	mg/kg/day	2.6E-01
				Iron	9.7E+03	ug/L	NA		NA		NA	4.2E-01	mg/kg/day	7.0E-01	mg/kg/day	5.9E-01
				Manganese	2.1E+02	ug/L	NA		NA		NA	9.1E-03	mg/kg/day	2.4E-02	mg/kg/day	3.8E-01
				Vanadium	8.4E+00	ug/L	NA		NA		NA	3.6E-04	mg/kg/day	5.0E-03	mg/kg/day	7.2E-02
				Zinc	1.9E+03	ug/L	NA		NA		NA	8.3E-02	mg/kg/day	3.0E-01	mg/kg/day	2.8E-01
			Exp. Route Total								0.0E+00					2.8E+00

TABLE G 7.2.CTE

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater (cont'd)	Groundwater (cont'd)	Surficial Aquifer - Tap Water (cont'd)	Dermal Absorption[2]	1,1,2,2-Tetrachloroethan	2.2E+00	ug/L	NA		NA		NA	6.7E-06	mg/kg/day	2.0E-02	mg/kg/day	3.3E-04
				1,1,2-Trichloroethane	1.9E+00	ug/L	NA		NA		NA	4.1E-06	mg/kg/day	4.0E-03	mg/kg/day	1.0E-03
				1,2-Dichloroethane	2.8E+00	ug/L	NA		NA		NA	3.3E-06	mg/kg/day	6.0E-03	mg/kg/day	5.5E-04
				1,3-Dichlorobenzene	2.2E-01	ug/L	NA		NA		NA	4.9E-06	mg/kg/day	NA	NA	NA
				1,4-Dichlorobenzene	3.3E+00	ug/L	NA		NA		NA	5.2E-05	mg/kg/day	7.0E-02	mg/kg/day	7.5E-04
				Benzene	5.8E-01	ug/L	NA		NA		NA	2.1E-06	mg/kg/day	4.0E-03	mg/kg/day	5.2E-04
				Chloroform	1.3E+00	ug/L	NA		NA		NA	2.8E-06	mg/kg/day	1.0E-02	mg/kg/day	2.8E-04
				cis-1,2-Dichloroethene	5.1E+01	ug/L	NA		NA		NA	1.5E-04	mg/kg/day	2.0E-03	mg/kg/day	7.6E-02
				Tetrachloroethene	1.9E-01	ug/L	NA		NA		NA	2.7E-06	mg/kg/day	1.0E-02	mg/kg/day	2.7E-04
				trans-1,2-Dichloroethene	4.9E+00	ug/L	NA		NA		NA	1.5E-05	mg/kg/day	2.0E-02	mg/kg/day	7.3E-04
				Trichloroethene	1.2E+00	ug/L	NA		NA		NA	4.8E-06	mg/kg/day	NA	NA	NA
				Vinyl chloride	6.3E+00	ug/L	NA		NA		NA	7.7E-06	mg/kg/day	3.0E-03	mg/kg/day	2.6E-03
				alpha-BHC	7.7E-02	ug/L	NA		NA		NA	1.5E-06	mg/kg/day	8.0E-03	mg/kg/day	1.9E-04
				Aroclor-1260	1.2E+00	ug/L	NA		NA		NA	8.7E-04	mg/kg/day	NA	NA	NA
				beta-BHC	4.2E-02	ug/L	NA		NA		NA	8.1E-07	mg/kg/day	NA	NA	NA
				delta-BHC	2.6E-01	ug/L	NA		NA		NA	5.1E-06	mg/kg/day	NA	NA	NA
				Heptachlor epoxide	7.9E-02	ug/L	NA		NA		NA	3.0E-06	mg/kg/day	1.3E-05	mg/kg/day	2.3E-01
				Iron	9.7E+03	ug/L	NA		NA		NA	9.1E-04	mg/kg/day	7.0E-01	mg/kg/day	1.3E-03
				Manganese	2.1E+02	ug/L	NA		NA		NA	2.0E-05	mg/kg/day	9.6E-04	mg/kg/day	2.1E-02
				Vanadium	8.4E+00	ug/L	NA		NA		NA	7.8E-07	mg/kg/day	1.3E-04	mg/kg/day	6.0E-03
				Zinc	1.9E+03	ug/L	NA		NA		NA	1.8E-04	mg/kg/day	3.0E-01	mg/kg/day	6.0E-04
			Exp. Route Total								0.0E+00					3.4E-01
		Exposure Point Total									0.0E+00					3.2E+00
	Exposure Medium Total										0.0E+00					3.2E+00
	Air	Surficial Aquifer Water Vapors at Showerhead	Inhalation	1,1,2,2-Tetrachloroethan	1.5E-03	mg/m^3	NA		NA		NA	1.3E-05	mg/m^3	NA	NA	NA
				1,1,2-Trichloroethane	1.8E-03	mg/m^3	NA		NA		NA	1.6E-05	mg/m^3	2.0E-04	mg/m3	7.8E-02
				1,2-Dichloroethane	3.3E-03	mg/m^3	NA		NA		NA	2.9E-05	mg/m^3	7.0E-03	mg/m3	4.2E-03
				1,3-Dichlorobenzene	2.4E-04	mg/m^3	NA		NA		NA	2.1E-06	mg/m^3	NA	NA	NA
				1,4-Dichlorobenzene	3.5E-03	mg/m^3	NA		NA		NA	3.1E-05	mg/m^3	8.0E-01	mg/m3	3.9E-05
				Benzene	8.8E-04	mg/m^3	NA		NA		NA	7.8E-06	mg/m^3	3.0E-02	mg/m3	2.6E-04
				Chloroform	1.6E-03	mg/m^3	NA		NA		NA	1.4E-05	mg/m^3	9.8E-02	mg/m3	1.4E-04
				cis-1,2-Dichloroethene	6.9E-02	mg/m^3	NA		NA		NA	6.0E-04	mg/m^3	NA	NA	NA
				Tetrachloroethene	2.1E-04	mg/m^3	NA		NA		NA	1.8E-06	mg/m^3	2.7E-01	mg/m3	6.8E-06
				trans-1,2-Dichloroethene	6.7E-03	mg/m^3	NA		NA		NA	5.9E-05	mg/m^3	6.0E-02	mg/m3	9.8E-04
				Trichloroethene	1.5E-03	mg/m^3	NA		NA		NA	1.3E-05	mg/m^3	1.0E-02	mg/m3	1.3E-03
				Vinyl chloride	1.1E-02	mg/m^3	NA		NA		NA	9.7E-05	mg/m^3	1.0E-01	mg/m3	9.7E-04
			Exp. Route Total								0.0E+00					8.6E-02
	Exposure Medium Total										0.0E+00					8.6E-02
Groundwater Surficial Aquifer Total											0.0E+00					3.2E+00

TABLE G 7.2.CTE

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater	Groundwater	Castle-Hayne Aquifer - Tap Water	Ingestion	1,2,4-Trichlorobenzene	8.5E+00	ug/L	NA		NA		NA	3.6E-04	mg/kg/day	1.0E-02	mg/kg/day	3.6E-02
				1,2-Dichloroethane	1.7E+00	ug/L	NA		NA		NA	7.3E-05	mg/kg/day	6.0E-03	mg/kg/day	1.2E-02
				1,3-Dichlorobenzene	1.1E+00	ug/L	NA		NA		NA	4.5E-05	mg/kg/day	NA	NA	NA
				1,4-Dichlorobenzene	1.0E+00	ug/L	NA		NA		NA	4.3E-05	mg/kg/day	7.0E-02	mg/kg/day	6.1E-04
				Benzene	1.4E-01	ug/L	NA		NA		NA	5.8E-06	mg/kg/day	4.0E-03	mg/kg/day	1.4E-03
				Chloroform	2.6E+00	ug/L	NA		NA		NA	1.1E-04	mg/kg/day	1.0E-02	mg/kg/day	1.1E-02
				cis-1,2-Dichloroethene	4.1E+03	ug/L	NA		NA		NA	1.7E-01	mg/kg/day	2.0E-03	mg/kg/day	8.7E+01
				trans-1,2-Dichloroethene	6.1E+01	ug/L	NA		NA		NA	2.6E-03	mg/kg/day	2.0E-02	mg/kg/day	1.3E-01
				Trichloroethene	1.4E+01	ug/L	NA		NA		NA	5.9E-04	mg/kg/day	NA	NA	NA
				Vinyl chloride	4.3E+02	ug/L	NA		NA		NA	1.8E-02	mg/kg/day	3.0E-03	mg/kg/day	6.2E+00
				Aroclor-1260	3.4E-01	ug/L	NA		NA		NA	1.5E-05	mg/kg/day	NA	NA	NA
				Dieldrin	2.6E-02	ug/L	NA		NA		NA	1.1E-06	mg/kg/day	5.0E-05	mg/kg/day	2.2E-02
				Heptachlor epoxide	3.8E-02	ug/L	NA		NA		NA	1.6E-06	mg/kg/day	1.3E-05	mg/kg/day	1.2E-01
				Chromium	6.6E+00	ug/L	NA		NA		NA	2.8E-04	mg/kg/day	3.0E-03	mg/kg/day	9.4E-02
				Iron	4.6E+03	ug/L	NA		NA		NA	2.0E-01	mg/kg/day	7.0E-01	mg/kg/day	2.8E-01
				Thallium	5.6E+00	ug/L	NA		NA		NA	2.4E-04	mg/kg/day	1.0E-05	mg/kg/day	2.4E+01
			Exp. Route Total								0.0E+00					1.2E+02
			Dermal Absorption[2]	1,2,4-Trichlorobenzene	8.5E+00	ug/L	NA		NA		NA	2.7E-04	mg/kg/day	1.0E-02	mg/kg/day	2.7E-02
				1,2-Dichloroethane	1.7E+00	ug/L	NA		NA		NA	2.0E-06	mg/kg/day	6.0E-03	mg/kg/day	3.3E-04
				1,3-Dichlorobenzene	1.1E+00	ug/L	NA		NA		NA	2.3E-05	mg/kg/day	NA	NA	NA
				1,4-Dichlorobenzene	1.0E+00	ug/L	NA		NA		NA	1.6E-05	mg/kg/day	7.0E-02	mg/kg/day	2.3E-04
				Benzene	1.4E-01	ug/L	NA		NA		NA	4.9E-07	mg/kg/day	4.0E-03	mg/kg/day	1.2E-04
				Chloroform	2.6E+00	ug/L	NA		NA		NA	5.7E-06	mg/kg/day	1.0E-02	mg/kg/day	5.7E-04
				cis-1,2-Dichloroethene	4.1E+03	ug/L	NA		NA		NA	1.2E-02	mg/kg/day	2.0E-03	mg/kg/day	6.1E+00
				trans-1,2-Dichloroethene	6.1E+01	ug/L	NA		NA		NA	1.8E-04	mg/kg/day	2.0E-02	mg/kg/day	9.1E-03
				Trichloroethene	1.4E+01	ug/L	NA		NA		NA	5.5E-05	mg/kg/day	NA	NA	NA
				Vinyl chloride	4.3E+02	ug/L	NA		NA		NA	5.3E-04	mg/kg/day	3.0E-03	mg/kg/day	1.8E-01
				Aroclor-1260	3.4E-01	ug/L	NA		NA		NA	2.5E-04	mg/kg/day	NA	NA	NA
				Dieldrin	2.6E-02	ug/L	NA		NA		NA	5.4E-07	mg/kg/day	5.0E-05	mg/kg/day	1.1E-02
				Heptachlor epoxide	3.8E-02	ug/L	NA		NA		NA	1.4E-06	mg/kg/day	1.3E-05	mg/kg/day	1.1E-01
				Chromium	6.6E+00	ug/L	NA		NA		NA	6.2E-07	mg/kg/day	7.5E-05	mg/kg/day	8.2E-03
				Iron	4.6E+03	ug/L	NA		NA		NA	4.3E-04	mg/kg/day	7.0E-01	mg/kg/day	6.1E-04
				Thallium	5.6E+00	ug/L	NA		NA		NA	5.2E-07	mg/kg/day	1.0E-05	mg/kg/day	5.2E-02
			Exp. Route Total								0.0E+00					6.4E+00
		Exposure Point Total									0.0E+00					1.2E+02
	Exposure Medium Total										0.0E+00					1.2E+02

TABLE G 7.2.CTE

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater (cont'd)	Air	Castle-Hayne Aquifer Water Vapors at Showerhead	Inhalation	1,2,4-Trichlorobenzene	7.8E-03	mg/m^3	NA		NA		NA	6.9E-05	mg/m^3	2.0E-03	mg/m3	3.4E-02
				1,2-Dichloroethane	2.0E-03	mg/m^3	NA		NA		NA	1.8E-05	mg/m^3	2.4E+00	mg/m3	7.4E-06
				1,3-Dichlorobenzene	1.3E-03	mg/m^3	NA		NA		NA	1.1E-05	mg/m^3	NA	NA	NA
				1,4-Dichlorobenzene	1.1E-03	mg/m^3	NA		NA		NA	9.5E-06	mg/m^3	8.0E-01	mg/m3	1.2E-05
				Benzene	2.1E-04	mg/m^3	NA		NA		NA	1.8E-06	mg/m^3	3.0E-02	mg/m3	6.0E-05
				Chloroform	3.2E-03	mg/m^3	NA		NA		NA	2.8E-05	mg/m^3	9.8E-02	mg/m3	2.9E-04
				cis-1,2-Dichloroethene	5.5E+00	mg/m^3	NA		NA		NA	4.9E-02	mg/m^3	NA	NA	NA
				trans-1,2-Dichloroethene	8.2E-02	mg/m^3	NA		NA		NA	7.3E-04	mg/m^3	6.0E-02	mg/m3	1.2E-02
				Trichloroethene	1.7E-02	mg/m^3	NA		NA		NA	1.5E-04	mg/m^3	1.0E-02	mg/m3	1.5E-02
				Vinyl chloride	7.5E-01	mg/m^3	NA		NA		NA	6.6E-03	mg/m^3	1.0E-01	mg/m3	6.6E-02
			Exp. Route Total								0.0E+00					1.3E-01
	Exposure Medium Total										0.0E+00					1.3E-01
Groundwater Castle-Hayne Aquifer Total											0.0E+00					1.2E+02
Total of Receptor Risks Across All Media											0.0E+00	Total of Receptor Hazards Across All Media				1.2E+02

Notes:

* Soil = combined surface and subsurface soil

1. Dermal absorption factors (DABs) used to calculated dermal absorption intake from soil are chemical specific as shown in RAGS Part E, Exhibit 3-4. DABS of 0.03 used for arsenic,0.001 for all other metals.

2. DAevent for dermal exposure to groundwater calculated on Tables 7.2.CTE Supplements A and B.

3. Inhalation exposures calculated on Tables 7.2.CTE Supplement C and D.

4. Total receptor risks and hazards includes higher of the Surficial Aquifer or Castle-Hayne Aquifer risks or hazards.

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 7.2.CTE SUPPLEMENT A

Calculation of DAevent - Child Resident, Surficial Aquifer Groundwater

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Water Concentration (CW) (µg/L)	Permeability Coefficient (Kp) (cm/hr)	B (dimensionless)	Lag Time (τ_{event}) (hr)	t* (hr)	Fraction Absorbed Water (FA) (dimensionless)	Duration of Event (t_{event}) (hr)	DA_{event} (mg/cm^2-event)	Eq
1,1,2,2-Tetrachloroethane	2.2E+00	6.9E-03	3.5E-02	9.3E-01	2.2E+00	1.0E+00	0.33	2.4E-08	2
1,1,2-Trichloroethane	1.9E+00	6.4E-03	2.9E-02	6.0E-01	1.4E+00	1.0E+00	0.33	1.5E-08	2
1,2-Dichloroethane	2.8E+00	4.2E-03	1.6E-02	3.8E-01	9.2E-01	1.0E+00	0.33	1.2E-08	2
1,3-Dichlorobenzene	2.2E-01	5.8E-02	2.7E-01	7.1E-01	1.7E+00	1.0E+00	0.33	1.7E-08	2
1,4-Dichlorobenzene	3.3E+00	4.2E-02	2.0E-01	7.1E-01	1.7E+00	1.0E+00	0.33	1.9E-07	2
Benzene	5.8E-01	1.5E-02	5.1E-02	2.9E-01	7.0E-01	1.0E+00	0.33	7.4E-09	2
Chloroform	1.3E+00	6.8E-03	2.9E-02	5.0E-01	1.2E+00	1.0E+00	0.33	9.9E-09	2
cis-1,2-Dichloroethene[1]	5.1E+01	1.10E-02	4.2E-02	3.7E-01	8.8E-01	1.0E+00	0.33	5.4E-07	2
Tetrachloroethene	1.9E-01	3.3E-02	1.7E-01	9.1E-01	2.2E+00	1.0E+00	0.33	9.6E-09	2
trans-1,2-Dichloroethene[1]	4.9E+00	1.10E-02	4.2E-02	3.7E-01	8.8E-01	1.0E+00	0.33	5.2E-08	2
Trichloroethene	1.2E+00	1.2E-02	5.1E-02	5.8E-01	1.4E+00	1.0E+00	0.33	1.7E-08	2
Vinyl chloride	6.3E+00	5.6E-03	1.7E-02	2.4E-01	5.7E-01	1.0E+00	0.33	2.7E-08	2
alpha-BHC[1]	7.7E-02	2.06E-02	1.4E-01	4.5E+00	1.1E+01	1.0E+00	0.33	5.3E-09	2
Aroclor-1260[2]	1.2E+00	7.5E-01	4.9E+00	4.6E+00	2.0E+01	1.0E+00	0.33	3.1E-06	2
beta-BHC[1]	4.2E-02	2.06E-02	1.4E-01	4.5E+00	1.1E+01	1.0E+00	0.33	2.9E-09	2
delta-BHC[1]	2.6E-01	2.06E-02	1.4E-01	4.5E+00	1.1E+01	1.0E+00	0.33	1.8E-08	2
Heptachlor epoxide[1]	7.9E-02	2.09E-02	1.6E-01	1.6E+01	3.8E+01	1.0E+00	0.33	1.0E-08	2
Iron	9.7E+03	1.0E-03	NA	NA	NA	NA	0.33	3.2E-06	1
Manganese	2.1E+02	1.0E-03	NA	NA	NA	NA	0.33	7.0E-08	1
Vanadium	8.4E+00	1.0E-03	NA	NA	NA	NA	0.33	2.8E-09	1
Zinc	1.9E+03	1.0E-03	NA	NA	NA	NA	0.33	6.4E-07	1

Inorganics: DA_{event} (mg/cm^2-event) =

Kp x CW x t_{event} x 0.001 mg/µg x 0.001 L/cm^3 (eq 1)

Organics: DAevent (mg/cm^2-event) =

If t_{event}<t*, then DA_{event} =

2 x FA x Kp x CW x (sqrt((6 x τ_{event} x t_{event})/π)) x 0.001 mg/µg x 0.001

If t_{event}>t*, then DA_{event} =

FA x Kp x CW x (t_{event}/(1+B) + 2 x τ_{event} x ((1 + 3xB + 3xB^2)/(1+B)^2) x 0.001 mg/µg x 0.001 L/cm^3 (eq 3)

Notes:

B - Dimensionless ratio of the permeability coefficient of a compound through the stratum corneum relative to its permeability coefficient across the viable epidermis (dimensionless).

NA - Not applicable

t* - Time to reach steady-state

Permeability constants from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005. The default value of 0.001 was assigned to inorganics not listed in this document.

[1] - B calculated using Equation A.1 (B = Kp * MW1/2/2.6) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

t_{event} calculated using Equation A.4 (t_{event} = lsc2/6Dsc = 0.105 × 10^[0.0056 MW]) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

Since B ≤ 0.6, then t* calculated using Equation A.4 (t* = 2.4 t_{event}) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

[2] - PCB-chlorobiphenyl, 4- used as a surrogate for Aroclor-1260.

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 7.2.CTE SUPPLEMENT B

Calculation of DAevent - Child Resident, Castle Hayne Aquifer Groundwater

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Water Concentration (CW) (µg/L)	Permeability Coefficient (Kp) (cm/hr)	B (dimensionless)	Lag Time (τ_{event}) (hr)	t* (hr)	Fraction Absorbed Water (FA) (dimensionless)	Duration of Event (t_{event}) (hr)	DA_{event} (mg/cm^2-event)	Eq
1,2,4-Trichlorobenzene	8.5E+00	6.6E-02	3.4E-01	1.1E+00	2.7E+00	1.0E+00	0.33	9.4E-07	2
1,2-Dichloroethane	1.7E+00	4.2E-03	1.6E-02	3.8E-01	9.2E-01	1.0E+00	0.33	7.0E-09	2
1,3-Dichlorobenzene	1.1E+00	5.8E-02	2.7E-01	7.1E-01	1.7E+00	1.0E+00	0.33	8.2E-08	2
1,4-Dichlorobenzene	1.0E+00	4.2E-02	2.0E-01	7.1E-01	1.7E+00	1.0E+00	0.33	5.6E-08	2
Benzene	1.4E-01	1.5E-02	5.1E-02	2.9E-01	7.0E-01	1.0E+00	0.33	1.7E-09	2
Chloroform	2.6E+00	6.8E-03	2.9E-02	5.0E-01	1.2E+00	1.0E+00	0.33	2.0E-08	2
cis-1,2-Dichloroethene[1]	4.1E+03	1.10E-02	4.2E-02	3.7E-01	8.8E-01	1.0E+00	0.33	4.3E-05	2
trans-1,2-Dichloroethene[1]	6.1E+01	1.10E-02	4.2E-02	3.7E-01	8.8E-01	1.0E+00	0.33	6.4E-07	2
Trichloroethene	1.4E+01	1.2E-02	5.1E-02	5.8E-01	1.4E+00	1.0E+00	0.33	2.0E-07	2
Vinyl chloride	4.3E+02	5.6E-03	1.7E-02	2.4E-01	5.7E-01	1.0E+00	0.33	1.9E-06	2
Aroclor-1260[2]	3.4E-01	7.5E-01	4.9E+00	4.6E+00	2.0E+01	1.0E+00	0.33	8.7E-07	2
Dieldrin	2.6E-02	1.2E-02	9.2E-02	1.5E+01	3.5E+01	1.0E+00	0.33	1.9E-09	2
Heptachlor epoxide[1]	3.8E-02	2.09E-02	1.6E-01	1.6E+01	3.8E+01	1.0E+00	0.33	5.0E-09	2
Chromium	6.6E+00	1.0E-03	NA	NA	NA	1.0E+00	0.33	2.2E-09	1
Iron	4.6E+03	1.0E-03	NA	NA	NA	1.0E+00	0.33	1.5E-06	1
Thallium	5.6E+00	1.0E-03	NA	NA	NA	1.0E+00	0.33	1.8E-09	1

Inorganics: DA_{event} (mg/cm^2-event) =

Kp x CW x t_{event} x 0.001 mg/µg x 0.001 L/cm^3 (eq 1)

Organics: DAevent (mg/cm^2-event) =

If t_{event}<t*, then DA_{event} =

2 x FA x Kp x CW x (sqrt((6 x τ_{event} x t_{event})/π)) x 0.001 mg/µg x 0.001

If t_{event}>t*, then DA_{event} =

FA x Kp x CW x (t_{event}/(1+B) + 2 x τ_{event} x ((1 + 3xB + 3xB^2)/(1+B)^2) x 0.001 mg/µg x 0.001 L/cm^3 (eq 3)

Notes:

B - Dimensionless ratio of the permeability coefficient of a compound through the stratum corneum relative to its permeability coefficient across the viable epidermis (dimensionless).

NA - Not applicable

t* - Time to reach steady-state

Permeability constants from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005. The default value of 0.001 was assigned to inorganics not listed in this document.

[1] - B calculated using Equation A.1 (B = Kp * MW1/2/2.6) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

t_{event} calculated using Equation A.4 (t_{event} = lsc2/6Dsc = 0.105 × 10^[0.0056 MW]) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

Since B ≤ 0.6, then t* calculated using Equation A.4 (t* = 2.4 t_{event}) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

[2] - PCB-chlorobiphenyl, 4- used as a surrogate for Aroclor-1260.

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 7.2.CTE SUPPLEMENT C

Inhalation Exposure Concentrations from Foster and Chrostowski Shower Model—Surficial Groundwater Air, Child Resident

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Exposure Point Concentration Cwo (µg/L)	Molecular weight (MW) (g/mole)	Henry's Law Constant (H) (atm-m^3/mole)	Kg (VOC) (cm/hr)	Kl (VOC) (cm/hr)	KL (cm/hr)	Kal (cm/hr)	Cwd (µg/L)	S (µg/m^3 -min)	Ca (mg/m^3)
1,1,2,2-Tetrachloroethane	2.2E+00	1.7E+02	3.7E-04	9.8E+02	1.0E+01	6.1E+00	8.2E+00	1.5E-01	1.2E-01	1.5E-03
1,1,2-Trichloroethane	1.9E+00	1.3E+02	8.2E-04	1.1E+03	1.1E+01	8.8E+00	1.2E+01	1.7E-01	1.5E-01	1.8E-03
1,2-Dichloroethane	2.8E+00	9.9E+01	1.2E-03	1.3E+03	1.3E+01	1.1E+01	1.5E+01	3.3E-01	2.7E-01	3.3E-03
1,3-Dichlorobenzene	2.2E-01	1.5E+02	2.4E-03	1.0E+03	1.1E+01	9.9E+00	1.3E+01	2.3E-02	2.0E-02	2.4E-04
1,4-Dichlorobenzene	3.3E+00	1.5E+02	2.4E-03	1.0E+03	1.1E+01	9.9E+00	1.3E+01	3.5E-01	2.9E-01	3.5E-03
Benzene	5.8E-01	7.8E+01	5.6E-03	1.4E+03	1.5E+01	1.4E+01	1.9E+01	8.7E-02	7.2E-02	8.8E-04
Chloroform	1.3E+00	1.2E+02	3.7E-03	1.2E+03	1.2E+01	1.1E+01	1.5E+01	1.6E-01	1.3E-01	1.6E-03
cis-1,2-Dichloroethene	5.1E+01	9.7E+01	4.1E-03	1.3E+03	1.3E+01	1.3E+01	1.7E+01	6.7E+00	5.6E+00	6.9E-02
Tetrachloroethene	1.9E-01	1.7E+02	1.8E-02	9.9E+02	1.0E+01	1.0E+01	1.4E+01	2.1E-02	1.7E-02	2.1E-04
trans-1,2-Dichloroethene	4.9E+00	9.7E+01	4.1E-03	1.3E+03	1.3E+01	1.3E+01	1.7E+01	6.5E-01	5.5E-01	6.7E-03
Trichloroethene	1.2E+00	1.3E+02	9.9E-03	1.1E+03	1.2E+01	1.1E+01	1.5E+01	1.4E-01	1.2E-01	1.5E-03
Vinyl chloride	6.3E+00	6.3E+01	2.8E-02	1.6E+03	1.7E+01	1.7E+01	2.2E+01	1.1E+00	9.0E-01	1.1E-02

Variables	Units	Exposure Assumptions
Kg(VOC) = gas-film mass transfer coefficient	cm/hr	Solved by Eq 1
Kl(VOC) = liquid-film mass transfer coefficient	cm/hr	Solved by Eq 2
KL = overall mass transfer coefficient	cm/hr	Solved by Eq 3
Kal = adjusted overall mass transfer coeff.	cm/hr	Solved by Eq 4
Tl = Calibration temp. of water	K (20C +273)	293
Ts = Shower water temperature	k (45C)	318
Us = water viscosity at Ts	centipoise	0.596
Ul = water viscosity at Tl	cp	1.002
Cwd = conc. leaving droplets after time sdt	µg/l	Solved by Eq 5
sdt = shower droplet drop time	sec	0.5
d = shower droplet diameter	mm	1
FR = shower water flow rate	l/min	10
SV = shower room air volume	m^3	12
S = indoor VOC generation rate	µg/m^3-min	Solved by Eq 6
Ds = duration of shower	min	20
Dt = total duration in shower room	min	30
R = air exchange rate	min^{-1}	0.0083
Ca = indoor air concentration of VOCs	µg/m^3	Solved by Eq 7

Equation 1:	Kg(VOC) =	$3000 * (18 / MW)^{0.5}$
Equation 2:	Kl(VOC) =	$20 * (44 / MW)^{0.5}$
Equation 3:	KL =	$((1 / Kl(VOC)) + (0.024 / (Kg (VOC) * H)))^{-1}$
Equation 4:	Kal =	$(KL * (((Tl * Us) / (Ts * Ul))^{-0.5}))$
Equation 5:	Cwd =	(Cwo * (1-EXP((-1 * Kal * sdt)/(60 * d))))
Equation 6:	S =	(Cwd * FR / SV)
Equation 7:	Ca =	If t>Ds [(S / R) * (Ds + (EXP(-R * Dt) / R) -(EXP(R *(Ds - Dt)) / R)] / Dt * 1/1000

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 7.2.CTE SUPPLEMENT D

Inhalation Exposure Concentrations from Foster and Chrostowski Shower Model—Castle Hayne Aquifer Groundwater Air, Child Resident

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Exposure Point Concentration Cwo (µg/L)	Molecular weight (MW) (g/mole)	Henry's Law Constant (H) (atm-m^3/mole)	Kg (VOC) (cm/hr)	Kl (VOC) (cm/hr)	KL (cm/hr)	Kal (cm/hr)	Cwd (µg/L)	S (µg/m^3 -min)	Ca (mg/m^3)
1,2,4-Trichlorobenzene	8.5E+00	1.8E+02	1.4E-03	9.4E+02	9.8E+00	8.4E+00	1.1E+01	7.6E-01	6.4E-01	7.8E-03
1,2-Dichloroethane	1.7E+00	9.9E+01	1.2E-03	1.3E+03	1.3E+01	1.1E+01	1.5E+01	2.0E-01	1.7E-01	2.0E-03
1,3-Dichlorobenzene	1.1E+00	1.5E+02	1.9E-01	1.0E+03	1.1E+01	1.1E+01	1.5E+01	1.2E-01	1.0E-01	1.3E-03
1,4-Dichlorobenzene	1.0E+00	1.5E+02	2.4E-03	1.0E+03	1.1E+01	9.9E+00	1.3E+01	1.1E-01	8.8E-02	1.1E-03
Benzene	1.4E-01	7.8E+01	5.6E-03	1.4E+03	1.5E+01	1.4E+01	1.9E+01	2.0E-02	1.7E-02	2.1E-04
Chloroform	2.6E+00	1.2E+02	3.7E-03	1.2E+03	1.2E+01	1.1E+01	1.5E+01	3.2E-01	2.6E-01	3.2E-03
cis-1,2-Dichloroethene	4.1E+03	9.7E+01	4.1E-03	1.3E+03	1.3E+01	1.3E+01	1.7E+01	5.4E+02	4.5E+02	5.5E+00
trans-1,2-Dichloroethene	6.1E+01	9.7E+01	4.1E-03	1.3E+03	1.3E+01	1.3E+01	1.7E+01	8.1E+00	6.8E+00	8.2E-02
Trichloroethene	1.4E+01	1.3E+02	9.9E-03	1.1E+03	1.2E+01	1.1E+01	1.5E+01	1.7E+00	1.4E+00	1.7E-02
Vinyl chloride	4.3E+02	6.3E+01	2.8E-02	1.6E+03	1.7E+01	1.7E+01	2.2E+01	7.4E+01	6.2E+01	7.5E-01

Variables	Units	Exposure Assumptions
Kg(VOC) = gas-film mass transfer coefficient	cm/hr	Solved by Eq 1
Kl(VOC) = liquid-film mass transfer coefficient	cm/hr	Solved by Eq 2
KL = overall mass transfer coefficient	cm/hr	Solved by Eq 3
Kal = adjusted overall mass transfer coeff.	cm/hr	Solved by Eq 4
Tl = Calibration temp. of water	K (20C +273)	293
Ts = Shower water temperature	k (45C)	318
Us = water viscosity at Ts	centipoise	0.596
Ul = water viscosity at Tl	cp	1.002
Cwd = conc. leaving droplets after time sdt	µg/l	Solved by Eq 5
sdt = shower droplet drop time	sec	0.5
d = shower droplet diameter	mm	1
FR = shower water flow rate	l/min	10
SV = shower room air volume	m^3	12
S = indoor VOC generation rate	µg/m^3-min	Solved by Eq 6
Ds = duration of shower	min	20
Dt = total duration in shower room	min	30
R = air exchange rate	min^{-1}	0.0083
Ca = indoor air concentration of VOCs	µg/m^3	Solved by Eq 7

Equation 1:	Kg(VOC) =	3000 * (18 / MW)$^{0.5}$	
Equation 2:	Kl(VOC) =	20 * (44 / MW)$^{0.5}$	
Equation 3:	KL =	((1 / Kl(VOC)) + (0.024 / (Kg (VOC) * H)))$^{-1}$	
Equation 4:	Kal =	(KL * (((Tl * Us) / (Ts * Ul))$^{-0.5}$))	
Equation 5:	Cwd =	(Cwo * (1-EXP((-1 * Kal * sdt)/(60 * d))))	
Equation 6:	S =	(Cwd * FR / SV)	
Equation 7:	Ca =	If t>Ds	[(S / R) * (Ds + (EXP(-R * Dt) / R) -(EXP(R *(Ds - Dt)) / R)] / Dt * 1/1000

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 7.3.CTE

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil*	Soil*	Soil*	Ingestion	Aluminum	5.7E+03	mg/kg	2.4E-03	mg/kg/day	NA	NA	NA	NA		NA		NA
				Arsenic	1.4E+00	mg/kg	6.1E-07	mg/kg/day	1.5E+00	mg/kg/day	9.1E-07	NA		NA		NA
				Chromium[4]	7.5E+00	mg/kg			5.0E-01	mg/kg/day	8.4E-06	NA		NA		NA
				Iron	3.8E+03	mg/kg	1.6E-03	mg/kg/day	NA	NA	NA	NA		NA		NA
				Manganese	4.9E+01	mg/kg	2.1E-05	mg/kg/day	NA	NA	NA	NA		NA		NA
				Vanadium	9.7E+00	mg/kg	4.1E-06	mg/kg/day	NA	NA	NA	NA		NA		NA
			Exp. Route Total								9.3E-06					0.0E+00
			Dermal Absorption[1]	Aluminum	5.7E+03	mg/kg	2.7E-06	mg/kg/day	NA	NA	NA	NA		NA		NA
				Arsenic	1.4E+00	mg/kg	2.0E-08	mg/kg/day	1.5E+00	mg/kg/day	3.1E-08	NA		NA		NA
				Chromium[4]	7.5E+00	mg/kg			1.3E-02	mg/kg/day	8.2E-09	NA		NA		NA
				Iron	3.8E+03	mg/kg	1.8E-06	mg/kg/day	NA	NA	NA	NA		NA		NA
				Manganese	4.9E+01	mg/kg	2.3E-08	mg/kg/day	NA	NA	NA	NA		NA		NA
				Vanadium	9.7E+00	mg/kg	4.7E-09	mg/kg/day	NA	NA	NA	NA		NA		NA
			Exp. Route Total								3.9E-08					0.0E+00
	Exposure Medium Total										9.4E-06					0.0E+00
Soil* Total											9.4E-06					0.0E+00
Groundwater	Groundwater	Surficial Aquifer - Tap Water	Ingestion	1,1,2,2-Tetrachloroethane	2.2E+00	ug/L	1.2E-05	mg/kg/day	2.0E-01	mg/kg/day	2.4E-06	NA		NA		NA
				1,1,2-Trichloroethane	1.9E+00	ug/L	9.8E-06	mg/kg/day	5.7E-02	mg/kg/day	5.6E-07	NA		NA		NA
				1,2-Dichloroethane	2.8E+00	ug/L	1.5E-05	mg/kg/day	9.1E-02	mg/kg/day	1.4E-06	NA		NA		NA
				1,3-Dichlorobenzene	2.2E-01	ug/L	1.2E-06	mg/kg/day	NA	NA	NA	NA		NA		NA
				1,4-Dichlorobenzene	3.3E+00	ug/L	1.8E-05	mg/kg/day	5.4E-03	mg/kg/day	9.5E-08	NA		NA		NA
				Benzene	5.8E-01	ug/L	3.1E-06	mg/kg/day	5.5E-02	mg/kg/day	1.7E-07	NA		NA		NA
				Chloroform	1.3E+00	ug/L	6.9E-06	mg/kg/day	3.1E-02	mg/kg/day	2.1E-07	NA		NA		NA
				cis-1,2-Dichloroethene	5.1E+01	ug/L	2.7E-04	mg/kg/day	NA	NA	NA	NA		NA		NA
				Tetrachloroethene	1.9E-01	ug/L	1.0E-06	mg/kg/day	5.4E-01	mg/kg/day	5.5E-07	NA		NA		NA
				trans-1,2-Dichloroethene	4.9E+00	ug/L	2.6E-05	mg/kg/day	NA	NA	NA	NA		NA		NA
				Trichloroethene	1.2E+00	ug/L	6.4E-06	mg/kg/day	5.9E-03	mg/kg/day	3.8E-08	NA		NA		NA
				Vinyl chloride[4]	6.3E+00	ug/L			7.2E-01	mg/kg/day	6.3E-05	NA		NA		NA
				alpha-BHC	7.7E-02	ug/L	4.1E-07	mg/kg/day	6.3E+00	mg/kg/day	2.6E-06	NA		NA		NA
				Aroclor-1260	1.2E+00	ug/L	6.4E-06	mg/kg/day	2.0E+00	mg/kg/day	1.3E-05	NA		NA		NA
				beta-BHC	4.2E-02	ug/L	2.2E-07	mg/kg/day	1.8E+00	mg/kg/day	4.0E-07	NA		NA		NA
				delta-BHC	2.6E-01	ug/L	1.4E-06	mg/kg/day	NA	NA	NA	NA		NA		NA
				Heptachlor epoxide	7.9E-02	ug/L	4.2E-07	mg/kg/day	9.1E+00	mg/kg/day	3.8E-06	NA		NA		NA
				Iron	9.7E+03	ug/L	5.2E-02	mg/kg/day	NA	NA	NA	NA		NA		NA
				Manganese	2.1E+02	ug/L	1.1E-03	mg/kg/day	NA	NA	NA	NA		NA		NA
				Vanadium	8.4E+00	ug/L	4.5E-05	mg/kg/day	NA	NA	NA	NA		NA		NA
				Zinc	1.9E+03	ug/L	1.0E-02	mg/kg/day	NA	NA	NA	NA		NA		NA
			Exp. Route Total								8.8E-05					0.0E+00

TABLE G 7.3.CTE

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater (cont'd)	Groundwater (cont'd)	Surficial Aquifer - Tap Water (cont'd)	Dermal Absorption[2]	1,1,2,2-Tetrachloroethane	2.2E+00	ug/L	1.0E-06	mg/kg/day	2.0E-01	mg/kg/day	2.0E-07	NA		NA		NA
				1,1,2-Trichloroethane	1.9E+00	ug/L	6.2E-07	mg/kg/day	5.7E-02	mg/kg/day	3.5E-08	NA		NA		NA
				1,2-Dichloroethane	2.8E+00	ug/L	4.9E-07	mg/kg/day	9.1E-02	mg/kg/day	4.5E-08	NA		NA		NA
				1,3-Dichlorobenzene	2.2E-01	ug/L	7.3E-07	mg/kg/day	NA	NA	NA	NA		NA		NA
				1,4-Dichlorobenzene	3.3E+00	ug/L	7.9E-06	mg/kg/day	5.4E-03	mg/kg/day	4.3E-08	NA		NA		NA
				Benzene	5.8E-01	ug/L	3.2E-07	mg/kg/day	5.5E-02	mg/kg/day	1.7E-08	NA		NA		NA
				Chloroform	1.3E+00	ug/L	4.2E-07	mg/kg/day	3.1E-02	mg/kg/day	1.3E-08	NA		NA		NA
				cis-1,2-Dichloroethene	5.1E+01	ug/L	2.3E-05	mg/kg/day	NA	NA	NA	NA		NA		NA
				Tetrachloroethene	1.9E-01	ug/L	4.1E-07	mg/kg/day	5.4E-01	mg/kg/day	2.2E-07	NA		NA		NA
				trans-1,2-Dichloroethene	4.9E+00	ug/L	2.2E-06	mg/kg/day	NA	NA	NA	NA		NA		NA
				Trichloroethene	1.2E+00	ug/L	7.2E-07	mg/kg/day	5.9E-03	mg/kg/day	4.3E-09	NA		NA		NA
				Vinyl chloride[4]	6.3E+00	ug/L			7.2E-01	mg/kg/day	2.0E-06	NA		NA		NA
				alpha-BHC	7.7E-02	ug/L	2.3E-07	mg/kg/day	6.3E+00	mg/kg/day	1.4E-06	NA		NA		NA
				Aroclor-1260	1.2E+00	ug/L	1.3E-04	mg/kg/day	NA	NA	NA	NA		NA		NA
				beta-BHC	4.2E-02	ug/L	1.2E-07	mg/kg/day	1.8E+00	mg/kg/day	2.2E-07	NA		NA		NA
				delta-BHC	2.6E-01	ug/L	7.7E-07	mg/kg/day	NA	NA	NA	NA		NA		NA
				Heptachlor epoxide	7.9E-02	ug/L	4.5E-07	mg/kg/day	9.1E+00	mg/kg/day	4.1E-06	NA		NA		NA
				Iron	9.7E+03	ug/L	1.3E-04	mg/kg/day	NA	NA	NA	NA		NA		NA
				Manganese	2.1E+02	ug/L	2.8E-06	mg/kg/day	NA	NA	NA	NA		NA		NA
				Vanadium	8.4E+00	ug/L	1.1E-07	mg/kg/day	NA	NA	NA	NA		NA		NA
				Zinc	1.9E+03	ug/L	2.6E-05	mg/kg/day	NA	NA	NA	NA		NA		NA
			Exp. Route Total								8.3E-06					0.0E+00
		Exposure Point Total									9.6E-05					0.0E+00
	Exposure Medium Total										9.6E-05					0.0E+00
	Air	Surficial Aquifer Water Vapors at Showerhead	Inhalation	1,1,2,2-Tetrachloroethane	5.9E+00	$\mu g/m^3$	2.3E-03	$\mu g/m^3$	5.8E-05	$(\mu g/m^3)^{-1}$	1.3E-07	NA		NA		NA
				1,1,2-Trichloroethane	7.0E+00	$\mu g/m^3$	2.7E-03	$\mu g/m^3$	1.6E-05	$(\mu g/m^3)^{-1}$	4.3E-08	NA		NA		NA
				1,2-Dichloroethane	1.3E+01	$\mu g/m^3$	5.0E-03	$\mu g/m^3$	2.6E-05	$(\mu g/m^3)^{-1}$	1.3E-07	NA		NA		NA
				1,3-Dichlorobenzene	9.4E-01	$\mu g/m^3$	3.6E-04	$\mu g/m^3$	NA	$(\mu g/m^3)^{-1}$	NA	NA		NA		NA
				1,4-Dichlorobenzene	1.4E+01	$\mu g/m^3$	5.3E-03	$\mu g/m^3$	1.1E-05	$(\mu g/m^3)^{-1}$	5.9E-08	NA		NA		NA
				Benzene	3.5E+00	$\mu g/m^3$	1.3E-03	$\mu g/m^3$	7.8E-06	$(\mu g/m^3)^{-1}$	1.0E-08	NA		NA		NA
				Chloroform	6.3E+00	$\mu g/m^3$	2.4E-03	$\mu g/m^3$	2.3E-05	$(\mu g/m^3)^{-1}$	5.5E-08	NA		NA		NA
				cis-1,2-Dichloroethene	2.7E+02	$\mu g/m^3$	1.0E-01	$\mu g/m^3$	NA	$(\mu g/m^3)^{-1}$	NA	NA		NA		NA
				Tetrachloroethene	8.2E-01	$\mu g/m^3$	3.1E-04	$\mu g/m^3$	5.9E-06	$(\mu g/m^3)^{-1}$	1.9E-09	NA		NA		NA
				trans-1,2-Dichloroethene	2.6E+01	$\mu g/m^3$	1.0E-02	$\mu g/m^3$	NA	$(\mu g/m^3)^{-1}$	NA	NA		NA		NA
				Trichloroethene	5.8E+00	$\mu g/m^3$	2.2E-03	$\mu g/m^3$	2.0E-06	$(\mu g/m^3)^{-1}$	4.4E-09	NA		NA		NA
				Vinyl chloride	4.3E+01	$\mu g/m^3$	1.6E-02	$\mu g/m^3$	4.4E-06	$(\mu g/m^3)^{-1}$	7.3E-08	NA		NA		NA
			Exp. Route Total								5.1E-07					0.0E+00
	Exposure Medium Total										9.7E-05					0.0E+00
Groundwater Surficial Aquifer Total											9.6E-05					0.0E+00

TABLE G 7.3.CTE

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater	Groundwater	Castle-Hayne Aquifer - Tap Water	Ingestion	1,2,4-Trichlorobenzene	8.5E+00	ug/L	4.5E-05	mg/kg/day	2.9E-02	mg/kg/day	1.3E-06	NA		NA		NA
				1,2-Dichloroethane	1.7E+00	ug/L	9.0E-06	mg/kg/day	9.1E-02	mg/kg/day	8.2E-07	NA		NA		NA
				1,3-Dichlorobenzene	1.1E+00	ug/L	5.6E-06	mg/kg/day	NA	NA	NA	NA		NA		NA
				1,4-Dichlorobenzene	1.0E+00	ug/L	5.3E-06	mg/kg/day	5.4E-03	mg/kg/day	2.9E-08	NA		NA		NA
				Benzene	1.4E-01	ug/L	7.2E-07	mg/kg/day	5.5E-02	mg/kg/day	3.9E-08	NA		NA		NA
				Chloroform	2.6E+00	ug/L	1.4E-05	mg/kg/day	3.1E-02	mg/kg/day	4.4E-07	NA		NA		NA
				cis-1,2-Dichloroethene	4.1E+03	ug/L	2.2E-02	mg/kg/day	NA	NA	NA	NA		NA		NA
				trans-1,2-Dichloroethene	6.1E+01	ug/L	3.2E-04	mg/kg/day	NA	NA	NA	NA		NA		NA
				Trichloroethene	1.4E+01	ug/L	7.4E-05	mg/kg/day	5.9E-03	mg/kg/day	4.4E-07	NA		NA		NA
				Vinyl chloride[4]	4.3E+02	ug/L			7.2E-01	mg/kg/day	4.3E-03	NA		NA		NA
				Aroclor-1260	3.4E-01	ug/L	1.8E-06	mg/kg/day	2.0E+00	mg/kg/day	3.6E-06	NA		NA		NA
				Dieldrin	2.6E-02	ug/L	1.4E-07	mg/kg/day	1.6E+01	mg/kg/day	2.2E-06	NA		NA		NA
				Heptachlor epoxide	3.8E-02	ug/L	2.0E-07	mg/kg/day	9.1E+00	mg/kg/day	1.8E-06	NA		NA		NA
				Chromium[4]	6.6E+00	ug/L			5.0E-01	mg/kg/day	1.0E-04	NA		NA		NA
				Iron	4.6E+03	ug/L	2.4E-02	mg/kg/day	NA	NA	NA	NA		NA		NA
				Thallium	5.6E+00	ug/L	3.0E-05	mg/kg/day	NA	NA	NA					
			Exp. Route Total								4.4E-03					0.0E+00
			Dermal Absorption[2]	1,2,4-Trichlorobenzene	8.5E+00	ug/L	4.0E-05	mg/kg/day	2.9E-02	mg/kg/day	1.2E-06	NA		NA		NA
				1,2-Dichloroethane	1.7E+00	ug/L	3.0E-07	mg/kg/day	9.1E-02	mg/kg/day	2.7E-08	NA		NA		NA
				1,3-Dichlorobenzene	1.1E+00	ug/L	3.5E-06	mg/kg/day	NA	NA	NA	NA		NA		NA
				1,4-Dichlorobenzene	1.0E+00	ug/L	2.4E-06	mg/kg/day	5.4E-03	mg/kg/day	1.3E-08	NA		NA		NA
				Benzene	1.4E-01	ug/L	7.3E-08	mg/kg/day	5.5E-02	mg/kg/day	4.0E-09	NA		NA		NA
				Chloroform	2.6E+00	ug/L	8.6E-07	mg/kg/day	3.1E-02	mg/kg/day	2.7E-08	NA		NA		NA
				cis-1,2-Dichloroethene	4.1E+03	ug/L	1.8E-03	mg/kg/day	NA	NA	NA	NA		NA		NA
				trans-1,2-Dichloroethene	6.1E+01	ug/L	2.7E-05	mg/kg/day	NA	NA	NA	NA		NA		NA
				Trichloroethene	1.4E+01	ug/L	8.4E-06	mg/kg/day	5.9E-03	mg/kg/day	4.9E-08	NA		NA		NA
				Vinyl chloride[4]	4.3E+02	ug/L			7.2E-01	mg/kg/day	5.0E-05	NA		NA		NA
				Aroclor-1260	3.4E-01	ug/L	3.7E-05	mg/kg/day	NA	NA	NA	NA		NA		NA
				Dieldrin	2.6E-02	ug/L	8.2E-08	mg/kg/day	1.6E+01	mg/kg/day	1.3E-06	NA		NA		NA
				Heptachlor epoxide	3.8E-02	ug/L	2.1E-07	mg/kg/day	9.1E+00	mg/kg/day	1.9E-06	NA		NA		NA
				Chromium[4]	6.6E+00	ug/L			1.3E-02	mg/kg/day	2.4E-06	NA		NA		NA
				Iron	4.6E+03	ug/L	6.1E-05	mg/kg/day	NA	NA	NA	NA		NA		NA
				Thallium	5.6E+00	ug/L	7.4E-08	mg/kg/day	NA	NA	NA					
			Exp. Route Total								5.7E-05					0.0E+00
		Exposure Point Total									4.5E-03					0.0E+00
	Exposure Medium Total										4.5E-03					0.0E+00

TABLE G 7.3.CTE

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater (cont'd)	Air	Castle-Hayne Aquifer Water Vapors at Showerhead	Inhalation	1,2,4-Trichlorobenzene	3.1E+01	µg/m^3	1.2E-02	µg/m^3	NA	NA	NA	NA		NA		NA
				1,2-Dichloroethane	8.0E+00	µg/m^3	3.0E-03	µg/m^3	2.6E-05	(µg/m^3)$^{-1}$	7.9E-08	NA		NA		NA
				1,3-Dichlorobenzene	4.9E+00	µg/m^3	1.9E-03	µg/m^3	NA	NA	NA	NA		NA		NA
				1,4-Dichlorobenzene	4.2E+00	µg/m^3	1.6E-03	µg/m^3	1.1E-05	(µg/m^3)$^{-1}$	1.8E-08	NA		NA		NA
				Benzene	8.1E-01	µg/m^3	3.1E-04	µg/m^3	7.8E-06	(µg/m^3)$^{-1}$	2.4E-09	NA		NA		NA
				Chloroform	1.3E+01	µg/m^3	4.9E-03	µg/m^3	2.3E-05	(µg/m^3)$^{-1}$	1.1E-07	NA		NA		NA
				cis-1,2-Dichloroethene	2.2E+04	µg/m^3	8.3E+00	µg/m^3	NA	NA	NA	NA		NA		NA
				trans-1,2-Dichloroethene	3.3E+02	µg/m^3	1.2E-01	µg/m^3	NA	NA	NA	NA		NA		NA
				Trichloroethene	6.7E+01	µg/m^3	2.5E-02	µg/m^3	2.0E-06	(µg/m^3)$^{-1}$	5.1E-08	NA		NA		NA
				Vinyl chloride	3.0E+03	µg/m^3	1.1E+00	µg/m^3	4.4E-06	(µg/m^3)$^{-1}$	5.0E-06	NA		NA		NA
			Exp. Route Total								5.2E-06					0.0E+00
	Exposure Medium Total										4.5E-03					0.0E+00
Groundwater Castle-Hayne Aquifer Total											4.5E-03					0.0E+00
										Total of Receptor Risks Across All Media	4.5E-03				Total of Receptor Hazards Across All Media	0.0E+00

Notes:

* Soil = combined surface and subsurface soil

1. Dermal absorption factors (DABs) used to calculated dermal absorption intake from soil are chemical specific as shown in RAGS Part E, Exhibit 3-4. DABS of 0.03 used for arsenic,0.001 for all other metals.
2. DAevent for dermal exposure to groundwater calculated on Tables 7.1.CTE and 7.2.CTE Supplements A and B.
3. Inhalation exposures calculated on Tables 7.1.CTE and 7.2.CTE Supplements C and D.
4. See Table 7.3.CTE Supplement A for calculation of intake and cancer risk following MMOA method.
5. Total receptor risks and hazards includes higher of the Surficial Aquifer or Castle-Hayne Aquifer risks or hazards.

Generated by: Martha White/ATL
Checked by: Debbie Stannard/WDC

TABLE G 7.3.CTE SUPPLEMENT A

Calculation of Chemical Cancer Risks for COPC With Mutagenic Mode of Action—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations										
							Intake					CSF/Unit Risk					Cancer Risk
							Value				Units	Value				Units	
					Value	Units	0-2 years	2-6 years	6-16 years	16-30 years		0-2 years (ADAF=10)	2-6 years (ADAF=3)	6-16 years (ADAF=3)	16-30 years (ADAF=1)		
Soil	Soil	Soil*	Ingestion	Chromium	7.5E+00	mg/kg	9.2E-07	1.8E-06	4.9E-07	6.9E-07	mg/kg/day	5.0E+00	1.5E+00	1.5E+00	5.0E-01	1/(mg/kg-day)	8.4E-06
			Dermal	Chromium	7.5E+00	mg/kg	2.6E-08	5.1E-08	5.6E-08	7.8E-08	mg/kg/day	1.3E-01	3.8E-02	3.8E-02	1.3E-02	1/(mg/kg-day)	8.2E-09
Groundwater	Groundwater	Surficial Aquifer - Tap Water	Ingestion	Vinyl Chloride	6.3E+00	ug/L	2.3E-05		4.0E-05		mg/kg/day	1.5E+00		7.2E-01		1/(mg/kg-day)	6.3E-05
			Dermal	Vinyl Chloride	6.3E+00	ug/L	6.6E-07		1.3E-06		mg/kg/day	1.5E+00		7.2E-01		1/(mg/kg-day)	2.0E-06
		Castle-Hayne Aquifer - Tap Water	Ingestion	Vinyl Chloride	4.3E+02	ug/L	1.6E-03		2.7E-03		mg/kg/day	1.5E+00		7.2E-01		1/(mg/kg-day)	4.3E-03
				Chromium	6.6E+00	ug/L	8.1E-06	1.6E-05	1.7E-05	2.4E-05	mg/kg/day	5.0E+00	1.5E+00	1.5E+00	5.0E-01	1/(mg/kg-day)	1.0E-04
			Dermal	Vinyl Chloride	4.3E+02	ug/L	1.5E-05		3.8E-05		mg/kg/day	1.5E+00		7.2E-01		1/(mg/kg-day)	5.0E-05
				Chromium	6.6E+00	ug/L	7.0E-06	1.4E-05	1.8E-05	2.5E-05	mg/kg/day	1.3E-01	3.8E-02	3.8E-02	1.3E-02	1/(mg/kg-day)	2.4E-06

Generated by: Martha White/ATL
Checked by: Debbie Stannard/WDC

TABLE G 7.4.CTE

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil*	Soil*	Soil*	Ingestion	Aluminum	5.7E+03	mg/kg	3.1E-04	mg/kg/day	NA	NA	NA	2.4E-03	mg/kg/day	1.0E+00	mg/kg/day	2.4E-03
				Arsenic	1.4E+00	mg/kg	7.9E-08	mg/kg/day	1.5E+00	mg/kg/day	1.2E-07	6.1E-07	mg/kg/day	3.0E-04	mg/kg/day	2.0E-03
				Chromium	7.5E+00	mg/kg	4.1E-07	mg/kg/day	5.0E-01	mg/kg/day	2.1E-07	3.2E-06	mg/kg/day	3.0E-03	mg/kg/day	1.1E-03
				Iron	3.8E+03	mg/kg	2.1E-04	mg/kg/day	NA	NA	NA	1.6E-03	mg/kg/day	7.0E-01	mg/kg/day	2.3E-03
				Manganese	4.9E+01	mg/kg	2.7E-06	mg/kg/day	NA	NA	NA	2.1E-05	mg/kg/day	2.4E-02	mg/kg/day	8.7E-04
				Vanadium	9.7E+00	mg/kg	5.4E-07	mg/kg/day	NA	NA	NA	4.2E-06	mg/kg/day	5.0E-03	mg/kg/day	8.4E-04
			Exp. Route Total								3.2E-07					9.6E-03
			Dermal Absorption[1]	Aluminum	5.7E+03	mg/kg	4.1E-07	mg/kg/day	NA	NA	NA	3.2E-06	mg/kg/day	1.0E+00	mg/kg/day	3.2E-06
				Arsenic	1.4E+00	mg/kg	3.1E-09	mg/kg/day	1.5E+00	mg/kg/day	4.7E-09	2.4E-08	mg/kg/day	3.0E-04	mg/kg/day	8.1E-05
				Chromium	7.5E+00	mg/kg	5.5E-10	mg/kg/day	1.3E-02	mg/kg/day	6.8E-12	4.3E-09	mg/kg/day	7.5E-05	mg/kg/day	5.7E-05
				Iron	3.8E+03	mg/kg	2.7E-07	mg/kg/day	NA	NA	NA	2.1E-06	mg/kg/day	7.0E-01	mg/kg/day	3.0E-06
				Manganese	4.9E+01	mg/kg	3.5E-09	mg/kg/day	NA	NA	NA	2.8E-08	mg/kg/day	9.6E-04	mg/kg/day	2.9E-05
				Vanadium	9.7E+00	mg/kg	7.1E-10	mg/kg/day	NA	NA	NA	5.5E-09	mg/kg/day	1.3E-04	mg/kg/day	4.2E-05
			Exp. Route Total								4.7E-09					2.1E-04
	Exposure Medium Total										3.3E-07					9.8E-03
Soil* Total											3.3E-07					9.8E-03
Groundwater	Groundwater	Surficial Aquifer - Tap Water	Ingestion	1,1,2,2-Tetrachloroethane	2.2E+00	ug/L	2.5E-06	mg/kg/day	2.0E-01	mg/kg/day	4.9E-07	1.9E-05	mg/kg/day	2.0E-02	mg/kg/day	9.6E-04
				1,1,2-Trichloroethane	1.9E+00	ug/L	2.0E-06	mg/kg/day	5.7E-02	mg/kg/day	1.2E-07	1.6E-05	mg/kg/day	4.0E-03	mg/kg/day	4.0E-03
				1,2-Dichloroethane	2.8E+00	ug/L	3.1E-06	mg/kg/day	9.1E-02	mg/kg/day	2.8E-07	2.4E-05	mg/kg/day	6.0E-03	mg/kg/day	4.0E-03
				1,3-Dichlorobenzene	2.2E-01	ug/L	2.4E-07	mg/kg/day	NA	NA	NA	1.9E-06	mg/kg/day	NA	NA	NA
				1,4-Dichlorobenzene	3.3E+00	ug/L	3.6E-06	mg/kg/day	5.4E-03	mg/kg/day	2.0E-08	2.8E-05	mg/kg/day	7.0E-02	mg/kg/day	4.0E-04
				Benzene	5.8E-01	ug/L	6.4E-07	mg/kg/day	5.5E-02	mg/kg/day	3.5E-08	5.0E-06	mg/kg/day	4.0E-03	mg/kg/day	1.2E-03
				Chloroform	1.3E+00	ug/L	1.4E-06	mg/kg/day	3.1E-02	mg/kg/day	4.4E-08	1.1E-05	mg/kg/day	1.0E-02	mg/kg/day	1.1E-03
				cis-1,2-Dichloroethene	5.1E+01	ug/L	5.6E-05	mg/kg/day	NA	NA	NA	4.3E-04	mg/kg/day	2.0E-03	mg/kg/day	2.2E-01
				Tetrachloroethene	1.9E-01	ug/L	2.1E-07	mg/kg/day	5.4E-01	mg/kg/day	1.1E-07	1.6E-06	mg/kg/day	1.0E-02	mg/kg/day	1.6E-04
				trans-1,2-Dichloroethene	4.9E+00	ug/L	5.4E-06	mg/kg/day	NA	NA	NA	4.2E-05	mg/kg/day	2.0E-02	mg/kg/day	2.1E-03
				Trichloroethene	1.2E+00	ug/L	1.3E-06	mg/kg/day	5.9E-03	mg/kg/day	7.8E-09	1.0E-05	mg/kg/day	NA	NA	NA
				Vinyl chloride	6.3E+00	ug/L	6.9E-06	mg/kg/day	7.2E-01	mg/kg/day	5.0E-06	5.4E-05	mg/kg/day	3.0E-03	mg/kg/day	1.8E-02
				alpha-BHC	7.7E-02	ug/L	8.5E-08	mg/kg/day	6.3E+00	mg/kg/day	5.3E-07	6.6E-07	mg/kg/day	8.0E-03	mg/kg/day	8.3E-05
				Aroclor-1260	1.2E+00	ug/L	1.3E-06	mg/kg/day	2.0E+00	mg/kg/day	2.6E-06	1.0E-05	mg/kg/day	NA	NA	NA
				beta-BHC	4.2E-02	ug/L	4.6E-08	mg/kg/day	1.8E+00	mg/kg/day	8.3E-08	3.6E-07	mg/kg/day	NA	NA	NA
				delta-BHC	2.6E-01	ug/L	2.9E-07	mg/kg/day	NA	NA	NA	2.2E-06	mg/kg/day	NA	NA	NA
				Heptachlor epoxide	7.9E-02	ug/L	8.7E-08	mg/kg/day	9.1E+00	mg/kg/day	7.9E-07	6.8E-07	mg/kg/day	1.3E-05	mg/kg/day	5.2E-02
				Iron	9.7E+03	ug/L	1.1E-02	mg/kg/day	NA	NA	NA	8.3E-02	mg/kg/day	7.0E-01	mg/kg/day	1.2E-01
				Manganese	2.1E+02	ug/L	2.3E-04	mg/kg/day	NA	NA	NA	1.8E-03	mg/kg/day	2.4E-02	mg/kg/day	7.6E-02
				Vanadium	8.4E+00	ug/L	9.3E-06	mg/kg/day	NA	NA	NA	7.2E-05	mg/kg/day	5.0E-03	mg/kg/day	1.4E-02
				Zinc	1.9E+03	ug/L	2.1E-03	mg/kg/day	NA	NA	NA	1.7E-02	mg/kg/day	3.0E-01	mg/kg/day	5.5E-02
			Exp. Route Total								1.0E-05					5.7E-01
Groundwater Surficial Aquifer Total											1.0E-05					5.7E-01

TABLE G 7.4.CTE

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater	Groundwater	Castle-Hayne Aquifer - Tap Water	Ingestion	1,2,4-Trichlorobenzene	8.5E+00	ug/L	9.4E-06	mg/kg/day	2.9E-02	mg/kg/day	2.7E-07	7.3E-05	mg/kg/day	1.0E-02	mg/kg/day	7.3E-03
				1,2-Dichloroethane	1.7E+00	ug/L	1.9E-06	mg/kg/day	9.1E-02	mg/kg/day	1.7E-07	1.5E-05	mg/kg/day	6.0E-03	mg/kg/day	2.4E-03
				1,3-Dichlorobenzene	1.1E+00	ug/L	1.2E-06	mg/kg/day	NA	NA	NA	9.1E-06	mg/kg/day	NA	NA	NA
				1,4-Dichlorobenzene	1.0E+00	ug/L	1.1E-06	mg/kg/day	5.4E-03	mg/kg/day	6.0E-09	8.6E-06	mg/kg/day	7.0E-02	mg/kg/day	1.2E-04
				Benzene	1.4E-01	ug/L	1.5E-07	mg/kg/day	5.5E-02	mg/kg/day	8.2E-09	1.2E-06	mg/kg/day	4.0E-03	mg/kg/day	2.9E-04
				Chloroform	2.6E+00	ug/L	2.9E-06	mg/kg/day	3.1E-02	mg/kg/day	9.0E-08	2.3E-05	mg/kg/day	1.0E-02	mg/kg/day	2.3E-03
				cis-1,2-Dichloroethene	4.1E+03	ug/L	4.5E-03	mg/kg/day	NA	NA	NA	3.5E-02	mg/kg/day	2.0E-03	mg/kg/day	1.8E+01
				trans-1,2-Dichloroethene	6.1E+01	ug/L	6.7E-05	mg/kg/day	NA	NA	NA	5.2E-04	mg/kg/day	2.0E-02	mg/kg/day	2.6E-02
				Trichloroethene	1.4E+01	ug/L	1.5E-05	mg/kg/day	5.9E-03	mg/kg/day	9.1E-08	1.2E-04	mg/kg/day	NA	NA	NA
				Vinyl chloride	4.3E+02	ug/L	4.8E-04	mg/kg/day	7.2E-01	mg/kg/day	3.4E-04	3.7E-03	mg/kg/day	3.0E-03	mg/kg/day	1.2E+00
				Aroclor-1260	3.4E-01	ug/L	3.7E-07	mg/kg/day	2.0E+00	mg/kg/day	7.5E-07	2.9E-06	mg/kg/day	NA	NA	NA
				Dieldrin	2.6E-02	ug/L	2.9E-08	mg/kg/day	1.6E+01	mg/kg/day	4.6E-07	2.2E-07	mg/kg/day	5.0E-05	mg/kg/day	4.5E-03
				Heptachlor epoxide	3.8E-02	ug/L	4.2E-08	mg/kg/day	9.1E+00	mg/kg/day	3.8E-07	3.2E-07	mg/kg/day	1.3E-05	mg/kg/day	2.5E-02
				Chromium	6.6E+00	ug/L	7.3E-06	mg/kg/day	5.0E-01	mg/kg/day	3.6E-06	5.7E-05	mg/kg/day	3.0E-03	mg/kg/day	1.9E-02
				Iron	4.6E+03	ug/L	5.1E-03	mg/kg/day	NA	NA	NA	3.9E-02	mg/kg/day	7.0E-01	mg/kg/day	5.6E-02
				Thalium	5.6E+00	ug/L	6.2E-06	mg/kg/day	NA	NA	NA	4.8E-05	mg/kg/day	1.0E-05	mg/kg/day	4.8E+00
			Exp. Route Total								3.5E-04					2.4E+01
Groundwater Castle Hayne Aquifer Total											3.5E-04					2.4E+01
										Total of Receptor Risks Across All Media	3.5E-04				Total of Receptor Hazards Across All Media	2.4E+01

Notes:

1. Dermal absorption factors (DABs) used to calculated dermal absorption intake from soil are chemical specific as shown in RAGS Part E, Exhibit 3-4. DABS of 0.03 used for arsenic,0.001 for all other metals.

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Checked by: Debbie Stannard/WDC

TABLE G 7.1.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Receptor Population: Military Personnel
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Surface Soil	Surface Soil	Surface Soil	Ingestion	Arsenic	6.9E-01	mg/kg	3.9E-08	mg/kg/day	1.5E+00	mg/kg/day	5.8E-08	6.7E-07	mg/kg/day	3.0E-04	mg/kg/day	2.2E-03
				Chromium	3.5E+00	mg/kg	2.0E-07	mg/kg/day	5.0E-01	mg/kg/day	9.8E-08	3.4E-06	mg/kg/day	3.0E-03	mg/kg/day	1.1E-03
				Manganese	1.2E+02	mg/kg	6.7E-06	mg/kg/day	NA	NA	NA	1.2E-04	mg/kg/day	2.4E-02	mg/kg/day	4.9E-03
			Exp. Route Total								1.6E-07					8.3E-03
			Dermal Absorption[2]	Arsenic	6.9E-01	mg/kg	7.6E-09	mg/kg/day	1.5E+00	mg/kg/day	1.1E-08	1.3E-07	mg/kg/day	3.0E-04	mg/kg/day	4.4E-04
				Chromium	3.5E+00	mg/kg	1.3E-09	mg/kg/day	1.3E-02	mg/kg/day	1.6E-11	2.3E-08	mg/kg/day	7.5E-05	mg/kg/day	3.0E-04
				Manganese	1.2E+02	mg/kg	4.4E-08	mg/kg/day	NA	NA	NA	7.7E-07	mg/kg/day	9.6E-04	mg/kg/day	8.0E-04
			Exp. Route Total								1.1E-08					1.6E-03
	Exposure Medium Total										1.7E-07					9.8E-03
Surface Soil Total											1.7E-07					9.8E-03
Surface Water	Surface Water	Drainage Ditches/Marshy Area	Ingestion	Iron	7.5E+02	ug/L	4.0E-07	mg/kg/day	NA	NA	NA	7.1E-06	mg/kg/day	7.0E-01	mg/kg/day	1.0E-05
				Thallium	6.9E+00	ug/L	3.7E-09	mg/kg/day	NA	NA	NA	6.5E-08	mg/kg/day	1.0E-05	mg/kg/day	6.5E-03
			Exp. Route Total								0.0E+00					6.5E-03
			Dermal Absorption[1]	Iron	7.5E+02	ug/L	2.3E-07	mg/kg/day	NA	NA	NA	4.0E-06	mg/kg/day	7.0E-01	mg/kg/day	5.8E-06
				Thallium	6.9E+00	ug/L	2.1E-09	mg/kg/day	NA	NA	NA	3.7E-08	mg/kg/day	1.0E-05	mg/kg/day	3.7E-03
			Exp. Route Total								0.0E+00					3.7E-03
		Exposure Point Total									0.0E+00					1.0E-02
	Exposure Medium Total										0.0E+00					1.0E-02
Surface Water in Drainage Ditches/Marshy Area Total											0.0E+00					1.0E-02

TABLE G 7.1.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Receptor Population: Military Personnel
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Sediment	Sediment	Drainage Ditches/Marshy Area	Ingestion	Benzo(a)anthracene	1.7E-02	mg/kg	4.6E-11	mg/kg/day	7.3E-01	mg/kg/day	3.3E-11	8.0E-10	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	3.7E-02	mg/kg	9.9E-11	mg/kg/day	7.3E+00	mg/kg/day	7.2E-10	1.7E-09	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	2.4E-02	mg/kg	6.4E-11	mg/kg/day	7.3E-01	mg/kg/day	4.7E-11	1.1E-09	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.7E-02	mg/kg	4.6E-11	mg/kg/day	7.3E-02	mg/kg/day	3.3E-12	8.0E-10	mg/kg/day	NA	NA	NA
				Chrysene	1.8E-02	mg/kg	4.8E-11	mg/kg/day	7.3E-03	mg/kg/day	3.5E-13	8.5E-10	mg/kg/day	NA	NA	NA
				Indeno(1,2,3-cd)pyrene	3.1E-03	mg/kg	8.3E-12	mg/kg/day	7.3E-01	mg/kg/day	6.1E-12	1.5E-10	mg/kg/day	NA	NA	NA
				Aluminum	8.7E+03	mg/kg	2.3E-05	mg/kg/day	NA	NA	NA	4.1E-04	mg/kg/day	1.0E+00	mg/kg/day	4.1E-04
				Antimony	5.3E+00	mg/kg	1.4E-08	mg/kg/day	NA	NA	NA	2.5E-07	mg/kg/day	4.0E-04	mg/kg/day	6.2E-04
				Chromium	9.0E+00	mg/kg	2.4E-08	mg/kg/day	5.0E-01	mg/kg/day	1.2E-08	4.2E-07	mg/kg/day	3.0E-03	mg/kg/day	1.4E-04
			Exp. Route Total								1.3E-08					1.2E-03
			Dermal Absorption	Benzo(a)anthracene	1.7E-02	mg/kg	2.0E-10	mg/kg/day	7.3E-01	mg/kg/day	1.5E-10	3.5E-09	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	3.7E-02	mg/kg	4.4E-10	mg/kg/day	7.3E+00	mg/kg/day	3.2E-09	7.7E-09	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	2.4E-02	mg/kg	2.9E-10	mg/kg/day	7.3E-01	mg/kg/day	2.1E-10	5.0E-09	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.7E-02	mg/kg	2.0E-10	mg/kg/day	7.3E-02	mg/kg/day	1.5E-11	3.5E-09	mg/kg/day	NA	NA	NA
				Chrysene	1.8E-02	mg/kg	2.1E-10	mg/kg/day	7.3E-03	mg/kg/day	1.6E-12	3.8E-09	mg/kg/day	NA	NA	NA
				Indeno(1,2,3-cd)pyrene	3.1E-03	mg/kg	3.7E-11	mg/kg/day	7.3E-01	mg/kg/day	2.7E-11	6.5E-10	mg/kg/day	NA	NA	NA
				Aluminum	8.7E+03	mg/kg	7.9E-07	mg/kg/day	NA	NA	NA	1.4E-05	mg/kg/day	1.0E+00	mg/kg/day	1.4E-05
				Antimony	5.3E+00	mg/kg	4.9E-10	mg/kg/day	NA	NA	NA	8.5E-09	mg/kg/day	6.0E-05	mg/kg/day	1.4E-04
				Chromium	9.0E+00	mg/kg	8.3E-10	mg/kg/day	1.3E-02	mg/kg/day	1.0E-11	1.4E-08	mg/kg/day	7.5E-05	mg/kg/day	1.9E-04
			Exp. Route Total								3.6E-09					3.5E-04
		Exposure Point Total									1.7E-08					1.5E-03
	Exposure Medium Total										1.7E-08					1.5E-03
Sediment in Drainage Ditches/Marshy Area Total											1.7E-08					1.5E-03
										Total of Receptor Risks Across All Media	1.8E-07				Total of Receptor Hazards Across All Media	2.2E-02

Notes:

1. Dermal absorption from surface water calculated on Table 7.1.RME Supplement A.
2. Dermal absorption factors (DABs) used to calculated dermal absorption intake are chemical specific. DABS of 0.13 used for the PAHs, DABS of 0.03 used for arsenic, and DABS of 0.001 used for other metals.

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Checked by: D. Stannard/WDC

TABLE G 7.1.RME SUPPLEMENT A

Calculation of DAevent—Military Personnel and Trespasser/Visitor, Surface Water

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	**Water Concentration (CW)** (µg/L)	**Permeability Coefficient (Kp)** (cm/hr)	**B** (dimensionless)	**Lag Time (τ_{event})** (hr)	**t*** (hr)	**Fraction Absorbed Water (FA)** (dimensionless)	**Duration of Event (t_{event})** (hr)	**DA_{event}** (mg/cm^2-event)	**Eq**
Iron	7.5E+02	1.0E-03	NA	NA	NA	NA	2	1.5E-06	1
Thallium	6.9E+00	1.0E-03	NA	NA	NA	NA	2	1.4E-08	1

Inorganics: DA_{event} (mg/cm^2-event) =

$Kp \times CW \times t_{event} \times 0.001\ mg/\mu g \times 0.001\ L/cm^3$ (eq 1)

Organics: DAevent (mg/cm^2-event) =

If $t_{event} < t^*$, then DA_{event} =

$2 \times FA \times Kp \times CW \times (\mathrm{sqrt}((6 \times \tau_{event} \times t_{event})/\pi)) \times 0.001\ mg/\mu g \times 0.001\ L/cm^3$

If $t_{event} > t^*$, then DA_{event} =

$FA \times Kp \times CW \times (t_{event}/(1+B) + 2 \times \tau_{event} \times ((1 + 3xB + 3xB^2)/(1+B)^2) \times 0.001\ mg/\mu g \times 0.001\ L/cm^3$ (eq 3)

Notes:

B - Dimensionless ratio of the permeability coefficient of a compound through the stratum corneum relative to its permeability coefficient across the viable epidermis (dimensionless).

NA - Not applicable

t* - Time to reach steady-state

Permeability constants from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005. The default value of 0.001 was assigned to inorganics not listed in this document.

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Checked by: D. Stannard/WDC

TABLE G 7.2.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Surface Soil	Surface Soil	Surface Soil	Ingestion	Arsenic	6.9E-01	mg/kg	4.8E-08	mg/kg/day	1.5E+00	mg/kg/day	7.2E-08	1.4E-07	mg/kg/day	3.0E-04	mg/kg/day	4.7E-04
				Chromium	3.5E+00	mg/kg	2.5E-07	mg/kg/day	5.0E-01	mg/kg/day	1.2E-07	7.2E-07	mg/kg/day	3.0E-03	mg/kg/day	2.4E-04
				Manganese	1.2E+02	mg/kg	8.3E-06	mg/kg/day	NA	NA	NA	2.4E-05	mg/kg/day	2.4E-02	mg/kg/day	1.0E-03
			Exp. Route Total								1.9E-07					1.7E-03
			Dermal Absorption[2]	Arsenic	6.9E-01	mg/kg	5.8E-09	mg/kg/day	1.5E+00	mg/kg/day	8.6E-09	1.7E-08	mg/kg/day	3.0E-04	mg/kg/day	5.6E-05
				Chromium	3.5E+00	mg/kg	9.8E-10	mg/kg/day	1.3E-02	mg/kg/day	1.2E-11	2.9E-09	mg/kg/day	7.5E-05	mg/kg/day	3.8E-05
				Manganese	1.2E+02	mg/kg	3.3E-08	mg/kg/day	NA	NA	NA	9.7E-08	mg/kg/day	9.6E-04	mg/kg/day	1.0E-04
			Exp. Route Total								8.6E-09					2.0E-04
	Exposure Medium Total										2.0E-07					1.9E-03
Surface Soil Total											2.0E-07					1.9E-03
Surface Water	Surface Water	Drainage Ditches/Marshy Area	Ingestion	Iron	7.5E+02	ug/L	1.0E-05	mg/kg/day	NA	NA	NA	3.1E-05	mg/kg/day	7.0E-01	mg/kg/day	4.4E-05
				Thallium	6.9E+00	ug/L	9.6E-08	mg/kg/day	NA	NA	NA	2.8E-07	mg/kg/day	1.0E-05	mg/kg/day	2.8E-02
			Exp. Route Total								0.0E+00					2.8E-02
			Dermal Absorption[1]	Iron	7.5E+02	ug/L	6.0E-06	mg/kg/day	NA	NA	NA	1.7E-05	mg/kg/day	7.0E-01	mg/kg/day	2.5E-05
				Thallium	6.9E+00	ug/L	5.5E-08	mg/kg/day	NA	NA	NA	1.6E-07	mg/kg/day	1.0E-05	mg/kg/day	1.6E-02
			Exp. Route Total								0.0E+00					1.6E-02
		Exposure Point Total									0.0E+00					4.4E-02
	Exposure Medium Total										0.0E+00					4.4E-02
Surface Water in Drainage Ditches/Marshy Area Total											0.0E+00					4.4E-02

TABLE G 7.2.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Sediment	Sediment	Drainage Ditches/Marshy Area	Ingestion	Benzo(a)anthracene	1.7E-02	mg/kg	1.2E-09	mg/kg/day	7.3E-01	mg/kg/day	8.7E-10	3.5E-09	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	3.7E-02	mg/kg	2.6E-09	mg/kg/day	7.3E+00	mg/kg/day	1.9E-08	7.5E-09	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	2.4E-02	mg/kg	1.7E-09	mg/kg/day	7.3E-01	mg/kg/day	1.2E-09	4.9E-09	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.7E-02	mg/kg	1.2E-09	mg/kg/day	7.3E-02	mg/kg/day	8.7E-11	3.5E-09	mg/kg/day	NA	NA	NA
				Chrysene	1.8E-02	mg/kg	1.3E-09	mg/kg/day	7.3E-03	mg/kg/day	9.2E-12	3.7E-09	mg/kg/day	NA	NA	NA
				Indeno(1,2,3-cd)pyrene	3.1E-03	mg/kg	2.2E-10	mg/kg/day	7.3E-01	mg/kg/day	1.6E-10	6.3E-10	mg/kg/day	NA	NA	NA
				Aluminum	8.7E+03	mg/kg	6.0E-04	mg/kg/day	NA	NA	NA	1.8E-03	mg/kg/day	1.0E+00	mg/kg/day	1.8E-03
				Antimony	5.3E+00	mg/kg	3.7E-07	mg/kg/day	NA	NA	NA	1.1E-06	mg/kg/day	4.0E-04	mg/kg/day	2.7E-03
				Chromium	9.0E+00	mg/kg	6.3E-07	mg/kg/day	5.0E-01	mg/kg/day	3.1E-07	1.8E-06	mg/kg/day	3.0E-03	mg/kg/day	6.1E-04
			Exp. Route Total								3.4E-07					5.1E-03
			Dermal Absorption[2]	Benzo(a)anthracene	1.7E-02	mg/kg	5.3E-09	mg/kg/day	7.3E-01	mg/kg/day	3.9E-09	1.5E-08	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	3.7E-02	mg/kg	1.1E-08	mg/kg/day	7.3E+00	mg/kg/day	8.4E-08	3.3E-08	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	2.4E-02	mg/kg	7.4E-09	mg/kg/day	7.3E-01	mg/kg/day	5.4E-09	2.2E-08	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.7E-02	mg/kg	5.3E-09	mg/kg/day	7.3E-02	mg/kg/day	3.9E-10	1.5E-08	mg/kg/day	NA	NA	NA
				Chrysene	1.8E-02	mg/kg	5.6E-09	mg/kg/day	7.3E-03	mg/kg/day	4.1E-11	1.6E-08	mg/kg/day	NA	NA	NA
				Indeno(1,2,3-cd)pyrene	3.1E-03	mg/kg	7.4E-12	mg/kg/day	7.3E-01	mg/kg/day	5.4E-12	2.2E-11	mg/kg/day	NA	NA	NA
				Aluminum	8.7E+03	mg/kg	2.1E-05	mg/kg/day	NA	NA	NA	6.0E-05	mg/kg/day	1.0E+00	mg/kg/day	6.0E-05
				Antimony	5.3E+00	mg/kg	1.3E-08	mg/kg/day	NA	NA	NA	3.7E-08	mg/kg/day	6.0E-05	mg/kg/day	6.1E-04
				Chromium	9.0E+00	mg/kg	2.1E-08	mg/kg/day	1.3E-02	mg/kg/day	2.7E-10	6.3E-08	mg/kg/day	7.5E-05	mg/kg/day	8.4E-04
			Exp. Route Total								9.4E-08					1.5E-03
		Exposure Point Total									4.3E-07					6.6E-03
Sediment in Drainage Ditches/Marshy Area Total											4.3E-07					6.6E-03
										Total of Receptor Risks Across All Media	6.3E-07				Total of Receptor Hazards Across All Media	5.3E-02

Notes:

1. Dermal absorption from surface water calculated on Table 7.1.RME Supplement A.
2. Dermal absorption factors (DABs) used to calculated dermal absorption intake are chemical specific. DABS of 0.13 used for the PAHs, DABS of 0.03 used for arsenic, and DABS of 0.001 used for other metals.

Generated by: Martha White/ATL
Checked by: D. Stannard/WDC

TABLE G 7.3.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Receptor Population: Trespasser/Visitor
Receptor Age: Youth

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Surface Soil	Surface Soil	Surface Soil	Ingestion	Arsenic	6.9E-01	mg/kg	3.1E-08	mg/kg/day	1.5E+00	mg/kg/day	4.7E-08	2.2E-07	mg/kg/day	3.0E-04	mg/kg/day	7.3E-04
				Chromium	3.5E+00	mg/kg	1.6E-07	mg/kg/day	5.0E-01	mg/kg/day	7.9E-08	1.1E-06	mg/kg/day	3.0E-03	mg/kg/day	3.7E-04
				Manganese	1.2E+02	mg/kg	5.4E-06	mg/kg/day	NA	NA	NA	3.8E-05	mg/kg/day	2.4E-02	mg/kg/day	1.6E-03
			Exp. Route Total								1.3E-07					2.7E-03
			Dermal Absorption[2]	Arsenic	6.9E-01	mg/kg	1.6E-09	mg/kg/day	1.5E+00	mg/kg/day	2.4E-09	1.1E-08	mg/kg/day	3.0E-04	mg/kg/day	3.7E-05
				Chromium	3.5E+00	mg/kg	2.7E-10	mg/kg/day	1.3E-02	mg/kg/day	3.3E-12	1.9E-09	mg/kg/day	7.5E-05	mg/kg/day	2.5E-05
				Manganese	1.2E+02	mg/kg	9.1E-09	mg/kg/day	NA	NA	NA	6.4E-08	mg/kg/day	9.6E-04	mg/kg/day	6.6E-05
			Exp. Route Total								2.4E-09					1.3E-04
	Exposure Medium Total										1.3E-07					2.8E-03
Surface Soil											1.3E-07					2.8E-03
Surface Water	Surface Water	Drainage Ditches/Marshy Area	Ingestion	Iron	7.5E+02	ug/L	6.8E-06	mg/kg/day	NA	NA	NA	4.8E-05	mg/kg/day	7.0E-01	mg/kg/day	6.8E-05
				Thallium	6.9E+00	ug/L	6.2E-08	mg/kg/day	NA	NA	NA	4.4E-07	mg/kg/day	1.0E-05	mg/kg/day	4.4E-02
			Exp. Route Total								0.0E+00					4.4E-02
			Dermal Absorption[1]	Iron	7.5E+02	ug/L	2.7E-06	mg/kg/day	NA	NA	NA	1.9E-05	mg/kg/day	7.0E-01	mg/kg/day	2.7E-05
				Thallium	6.9E+00		2.5E-08	mg/kg/day	NA	NA	NA	1.7E-07	mg/kg/day	1.0E-05	mg/kg/day	1.7E-02
			Exp. Route Total								0.0E+00					1.8E-02
		Exposure Point Total									0.0E+00					6.1E-02
	Exposure Medium Total										0.0E+00					6.1E-02
Surface Water in Drainage Ditches/Marshy Area Total											0.0E+00					6.1E-02

TABLE G 7.3.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Receptor Population: Trespasser/Visitor
Receptor Age: Youth

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Sediment	Sediment	Drainage Ditches/Marshy Area	Ingestion	Benzo(a)anthracene	1.7E-02	mg/kg	7.7E-10	mg/kg/day	7.3E-01	mg/kg/day	5.6E-10	5.4E-09	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	3.7E-02	mg/kg	1.7E-09	mg/kg/day	7.3E+00	mg/kg/day	1.2E-08	1.2E-08	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	2.4E-02	mg/kg	1.1E-09	mg/kg/day	7.3E-01	mg/kg/day	7.9E-10	7.6E-09	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.7E-02	mg/kg	7.7E-10	mg/kg/day	7.3E-02	mg/kg/day	5.6E-11	5.4E-09	mg/kg/day	NA	NA	NA
				Chrysene	1.8E-02	mg/kg	8.1E-10	mg/kg/day	7.3E-03	mg/kg/day	5.9E-12	5.7E-09	mg/kg/day	NA	NA	NA
				Indeno(1,2,3-cd)pyrene	3.1E-03	mg/kg	1.4E-10	mg/kg/day	7.3E-01	mg/kg/day	1.0E-10	9.8E-10	mg/kg/day	NA	NA	NA
				Aluminum	8.7E+03	mg/kg	3.9E-04	mg/kg/day	NA	NA	NA	2.7E-03	mg/kg/day	1.0E+00	mg/kg/day	2.7E-03
				Antimony	5.3E+00	mg/kg	2.4E-07	mg/kg/day	NA	NA	NA	1.7E-06	mg/kg/day	4.0E-04	mg/kg/day	4.2E-03
				Chromium	9.0E+00	mg/kg	4.1E-07	mg/kg/day	5.0E-01	mg/kg/day	2.0E-07	2.8E-06	mg/kg/day	3.0E-03	mg/kg/day	9.5E-04
			Exp. Route Total								2.2E-07					7.9E-03
			Dermal Absorption[2]	Benzo(a)anthracene	1.7E-02	mg/kg	8.0E-10	mg/kg/day	7.3E-01	mg/kg/day	5.8E-10	5.6E-09	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	3.7E-02	mg/kg	1.7E-09	mg/kg/day	7.3E+00	mg/kg/day	1.3E-08	1.2E-08	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	2.4E-02	mg/kg	1.1E-09	mg/kg/day	7.3E-01	mg/kg/day	8.2E-10	7.9E-09	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.7E-02	mg/kg	8.0E-10	mg/kg/day	7.3E-02	mg/kg/day	5.8E-11	5.6E-09	mg/kg/day	NA	NA	NA
				Chrysene	1.8E-02	mg/kg	8.5E-10	mg/kg/day	7.3E-03	mg/kg/day	6.2E-12	5.9E-09	mg/kg/day	NA	NA	NA
				Indeno(1,2,3-cd)pyrene	3.1E-03	mg/kg	1.1E-12	mg/kg/day	7.3E-01	mg/kg/day	8.2E-13	7.9E-12	mg/kg/day	NA	NA	NA
				Aluminum	8.7E+03	mg/kg	3.1E-06	mg/kg/day	NA	NA	NA	2.2E-05	mg/kg/day	1.0E+00	mg/kg/day	2.2E-05
				Antimony	5.3E+00	mg/kg	1.9E-09	mg/kg/day	NA	NA	NA	1.3E-08	mg/kg/day	6.0E-05	mg/kg/day	2.2E-04
				Chromium	9.0E+00	mg/kg	3.3E-09	mg/kg/day	1.3E-02	mg/kg/day	4.1E-11	2.3E-08	mg/kg/day	7.5E-05	mg/kg/day	3.0E-04
			Exp. Route Total								1.4E-08					5.5E-04
		Exposure Point Total									2.3E-07					8.4E-03
Sediment in Drainage Ditches/Marshy Area Total											2.3E-07					8.4E-03
										Total of Receptor Risks Across All Media	3.6E-07				Total of Receptor Hazards Across All Media	7.2E-02

Notes:

1. Dermal absorption from surface water calculated on Table 7.1.RME Supplement A.
2. Dermal absorption factors (DABs) used to calculated dermal absorption intake are chemical specific. DABS of 0.13 used for the PAHs, DABS of 0.03 used for arsenic, and DABS of 0.001 used for other metals.

Generated by: Martha White/ATL
Checked by: D. Stannard/WDC

TABLE G 7.4.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Surface Water	Surface Water	Drainage Ditches/Marshy Area	Ingestion	Iron	7.5E+02	ug/L	3.4E-07	mg/kg/day	NA	NA	NA	2.4E-05	mg/kg/day	7.0E-01	mg/kg/day	3.4E-05
				Thallium	6.9E+00	ug/L	3.1E-09	mg/kg/day	NA	NA	NA	2.2E-07	mg/kg/day	4.0E-05	mg/kg/day	5.4E-03
			Exp. Route Total								0.0E+00					5.4E-03
			Dermal Absorption[1]	Iron	7.5E+02	ug/L	1.9E-07	mg/kg/day	NA	NA	NA	1.3E-05	mg/kg/day	7.0E-01	mg/kg/day	1.9E-05
				Thallium	6.9E+00	ug/L	1.8E-09	mg/kg/day	NA	NA	NA	1.2E-07	mg/kg/day	4.0E-05	mg/kg/day	3.1E-03
			Exp. Route Total								0.0E+00					3.1E-03
		Exposure Point Total									0.0E+00					8.5E-03
	Exposure Medium Total										0.0E+00					8.5E-03
Surface Water in Drainage Ditches/Marshy Area Total											0.0E+00					8.5E-03
Sediment	Sediment	Drainage Ditches/Marshy Area	Ingestion	Benzo(a)anthracene	1.7E-02	mg/kg	1.9E-11	mg/kg/day	7.3E-01	mg/kg/day	1.4E-11	1.3E-09	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	3.7E-02	mg/kg	4.1E-11	mg/kg/day	7.3E+00	mg/kg/day	3.0E-10	2.9E-09	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	2.4E-02	mg/kg	2.7E-11	mg/kg/day	7.3E-01	mg/kg/day	2.0E-11	1.9E-09	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.7E-02	mg/kg	1.9E-11	mg/kg/day	7.3E-02	mg/kg/day	1.4E-12	1.3E-09	mg/kg/day	NA	NA	NA
				Chrysene	1.8E-02	mg/kg	2.0E-11	mg/kg/day	7.3E-03	mg/kg/day	1.5E-13	1.4E-09	mg/kg/day	NA	NA	NA
				Indeno(1,2,3-cd)pyrene	3.1E-03	mg/kg	3.5E-12	mg/kg/day	7.3E-01	mg/kg/day	2.5E-12	2.4E-10	mg/kg/day	NA	NA	NA
				Aluminum	8.7E+03	mg/kg	9.7E-06	mg/kg/day	NA	NA	NA	6.8E-04	mg/kg/day	1.0E+00	mg/kg/day	6.8E-04
				Antimony	5.3E+00	mg/kg	5.9E-09	mg/kg/day	NA	NA	NA	4.1E-07	mg/kg/day	4.0E-04	mg/kg/day	1.0E-03
				Chromium	9.0E+00	mg/kg	1.0E-08	mg/kg/day	5.0E-01	mg/kg/day	5.0E-09	7.0E-07	mg/kg/day	2.0E-02	mg/kg/day	3.5E-05
			Exp. Route Total								5.4E-09					1.7E-03
			Dermal Absorption[2]	Benzo(a)anthracene	1.7E-02	mg/kg	4.9E-11	mg/kg/day	7.3E-01	mg/kg/day	3.6E-11	3.4E-09	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	3.7E-02	mg/kg	1.1E-10	mg/kg/day	7.3E+00	mg/kg/day	7.8E-10	7.5E-09	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	2.4E-02	mg/kg	6.9E-11	mg/kg/day	7.3E-01	mg/kg/day	5.0E-11	4.8E-09	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.7E-02	mg/kg	4.9E-11	mg/kg/day	7.3E-02	mg/kg/day	3.6E-12	3.4E-09	mg/kg/day	NA	NA	NA
				Chrysene	1.8E-02	mg/kg	5.2E-11	mg/kg/day	7.3E-03	mg/kg/day	3.8E-13	3.6E-09	mg/kg/day	NA	NA	NA
				Indeno(1,2,3-cd)pyrene	3.1E-03	mg/kg	6.9E-14	mg/kg/day	7.3E-01	mg/kg/day	5.0E-14	4.8E-12	mg/kg/day	NA	NA	NA
				Aluminum	8.7E+03	mg/kg	1.9E-07	mg/kg/day	NA	NA	NA	1.3E-05	mg/kg/day	1.0E+00	mg/kg/day	1.3E-05
				Antimony	5.3E+00	mg/kg	1.2E-10	mg/kg/day	NA	NA	NA	8.2E-09	mg/kg/day	6.0E-05	mg/kg/day	1.4E-04
				Chromium	9.0E+00	mg/kg	2.0E-10	mg/kg/day	1.3E-02	mg/kg/day	2.5E-12	1.4E-08	mg/kg/day	5.0E-04	mg/kg/day	2.8E-05
			Exp. Route Total								8.7E-10					1.8E-04
		Exposure Point Total									6.2E-09					1.9E-03
Sediment in Drainage Ditches/Marshy Area Total											6.2E-09					1.9E-03

TABLE G 7.4.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil*	Soil*	Soil*	Ingestion													
				Aluminum	9.1E+03	mg/kg	6.1E-04	mg/kg/day	NA	NA	NA	4.3E-02	mg/kg/day	1.0E+00	mg/kg/day	4.3E-02
				Arsenic	3.9E+00	mg/kg	2.6E-07	mg/kg/day	1.5E+00	mg/kg/day	3.9E-07	1.8E-05	mg/kg/day	3.0E-04	mg/kg/day	6.1E-02
				Chromium	1.7E+01	mg/kg	1.2E-06	mg/kg/day	5.0E-01	mg/kg/day	5.8E-07	8.1E-05	mg/kg/day	2.0E-02	mg/kg/day	4.0E-03
				Iron	8.8E+03	mg/kg	5.9E-04	mg/kg/day	NA	NA	NA	4.1E-02	mg/kg/day	7.0E-01	mg/kg/day	5.9E-02
				Manganese	8.2E+01	mg/kg	5.5E-06	mg/kg/day	NA	NA	NA	3.9E-04	mg/kg/day	2.4E-02	mg/kg/day	1.6E-02
				Vanadium	2.1E+01	mg/kg	1.4E-06	mg/kg/day	NA	NA	NA	1.0E-04	mg/kg/day	7.0E-03	mg/kg/day	1.4E-02
			Exp. Route Total								9.7E-07					2.0E-01
			Dermal Absorption[2]	Aluminum	9.1E+03	mg/kg	8.4E-07	mg/kg/day	NA	NA	NA	5.9E-05	mg/kg/day	1.0E+00	mg/kg/day	5.9E-05
				Arsenic	3.9E+00	mg/kg	1.1E-08	mg/kg/day	1.5E+00	mg/kg/day	1.6E-08	7.5E-07	mg/kg/day	3.0E-04	mg/kg/day	2.5E-03
				Chromium	1.7E+01	mg/kg	1.6E-09	mg/kg/day	1.3E-02	mg/kg/day	2.0E-11	1.1E-07	mg/kg/day	5.0E-04	mg/kg/day	2.2E-04
				Iron	8.8E+03	mg/kg	8.1E-07	mg/kg/day	NA	NA	NA	5.7E-05	mg/kg/day	7.0E-01	mg/kg/day	8.1E-05
				Manganese	8.2E+01	mg/kg	7.6E-09	mg/kg/day	NA	NA	NA	5.3E-07	mg/kg/day	9.6E-04	mg/kg/day	5.5E-04
				Vanadium	2.1E+01	mg/kg	2.0E-09	mg/kg/day	NA	NA	NA	1.4E-07	mg/kg/day	1.8E-04	mg/kg/day	7.6E-04
			Exp. Route Total								1.6E-08					4.2E-03
		Exposure Point Total									9.8E-07					2.0E-01
	Exposure Medium Total										9.8E-07					2.0E-01
	Air	Emissions from Soil*	Inhalation	Chromium	1.3E-08	mg/m^3	4.1E-11	mg/m3	8.4E-02	mg/m3	3.5E-09	2.9E-09	mg/m3	1.0E-04	mg/m3	2.9E-05
			Exp. Route Total								3.5E-09					2.9E-05
	Exposure Medium Total										3.5E-09					2.9E-05
Soil* Total											9.9E-07					2.0E-01

TABLE G 7.4.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater	Groundwater	Surficial Aquifer Water in Excavation Pit	Dermal Absorption[1]	1,1,2,2-Tetrachloroethane	5.6E+00	µg/L	2.1E-08	mg/kg/day	2.0E-01	mg/kg/day	4.3E-09	1.5E-06	mg/kg-day	2.0E-02	mg/kg/day	7.5E-05
				1,1,2-Trichloroethane	4.5E+00	µg/L	1.4E-08	mg/kg/day	5.7E-02	mg/kg/day	8.2E-10	1.0E-06	mg/kg-day	4.0E-02	mg/kg/day	2.5E-05
				1,2-Dichloroethane	6.9E+00	µg/L	1.3E-08	mg/kg/day	9.1E-02	mg/kg/day	1.2E-09	9.2E-07	mg/kg-day	2.0E-02	mg/kg/day	4.6E-05
				1,3-Dichlorobenzene	4.3E-01	µg/L	1.2E-08	mg/kg/day	NA	NA	NA	8.2E-07	mg/kg-day	NA	NA	NA
				1,4-Dichlorobenzene	3.3E+00	µg/L	6.7E-08	mg/kg/day	5.4E-03	mg/kg/day	3.6E-10	4.7E-06	mg/kg-day	7.0E-02	mg/kg/day	6.7E-05
				Benzene	5.8E-01	µg/L	3.6E-09	mg/kg/day	5.5E-02	mg/kg/day	2.0E-10	2.6E-07	mg/kg-day	4.0E-03	mg/kg/day	6.4E-05
				Chloroform	1.3E+00	µg/L	4.2E-09	mg/kg/day	3.1E-02	mg/kg/day	1.3E-10	2.9E-07	mg/kg-day	1.0E-02	mg/kg/day	2.9E-05
				cis-1,2-Dichloroethene	1.1E+02	µg/L	5.6E-07	mg/kg/day	NA	NA	NA	3.9E-05	mg/kg-day	2.0E-02	mg/kg/day	1.9E-03
				Tetrachloroethene	1.9E-01	µg/L	3.4E-09	mg/kg/day	5.4E-01	mg/kg/day	1.8E-09	2.4E-07	mg/kg-day	1.0E-01	mg/kg/day	2.4E-06
				trans-1,2-Dichloroethene	2.1E+01	µg/L	1.0E-07	mg/kg/day	NA	NA	NA	7.2E-06	mg/kg-day	2.0E-02	mg/kg/day	3.6E-04
				Trichloroethene	2.4E+00	µg/L	1.3E-08	mg/kg/day	5.9E-03	mg/kg/day	7.8E-11	9.2E-07	mg/kg-day	NA	NA	NA
				Vinyl chloride	1.3E+01	µg/L	3.2E-08	mg/kg/day	7.2E-01	mg/kg/day	2.3E-08	2.2E-06	mg/kg-day	3.0E-03	mg/kg/day	7.4E-04
				alpha-BHC	7.7E-02	µg/L	2.1E-09	mg/kg/day	6.3E+00	mg/kg/day	1.3E-08	1.5E-07	mg/kg-day	8.0E-03	mg/kg/day	1.8E-05
				Aroclor-1260	1.2E+00	µg/L	2.1E-06	mg/kg/day	NA	NA	NA	1.5E-04	mg/kg-day	NA	NA	NA
				beta-BHC	1.9E-01	µg/L	5.1E-09	mg/kg/day	1.8E+00	mg/kg/day	9.2E-09	3.6E-07	mg/kg-day	NA	NA	NA
				delta-BHC	1.5E+00	µg/L	4.0E-08	mg/kg/day	NA	NA	NA	2.8E-06	mg/kg-day	NA	NA	NA
				Heptachlor epoxide	7.9E-02	µg/L	6.4E-09	mg/kg/day	9.1E+00	mg/kg/day	5.8E-08	4.4E-07	mg/kg-day	1.3E-05	mg/kg/day	3.4E-02
				Iron	1.8E+04	µg/L	7.0E-06	mg/kg/day	NA	NA	NA	4.9E-04	mg/kg-day	7.0E-01	mg/kg/day	7.0E-04
				Manganese	8.0E+02	µg/L	3.1E-07	mg/kg/day	NA	NA	NA	2.1E-05	mg/kg-day	9.6E-04	mg/kg/day	2.2E-02
				Vanadium	2.3E+01	µg/L	8.6E-09	mg/kg/day	NA	NA	NA	6.1E-07	mg/kg-day	1.3E-04	mg/kg/day	4.7E-03
				Zinc	4.6E+03	µg/L	1.8E-06	mg/kg/day	NA	NA	NA	1.2E-04	mg/kg-day	3.0E-01	mg/kg/day	4.1E-04
			Exp. Route Total								1.1E-07					6.6E-02
		Exposure Point Total									1.1E-07					6.6E-02
	Exposure Medium Total										1.1E-07					6.6E-02

TABLE G 7.4.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater	Air	Surficial Aquifer - Water Vapors in Excavation Pit	Inhalation	1,1,2,2-Tetrachloroethane	5.6E+00	µg/L	1.4E-05	µg/m^3	5.8E-05	(µg/m^3)$^{-1}$	8.2E-10	9.9E-07	mg/m^3	NA	NA	NA
				1,1,2-Trichloroethane	4.5E+00	µg/L	2.2E-05	µg/m^3	1.6E-05	(µg/m^3)$^{-1}$	3.6E-10	1.6E-06	mg/m^3	2.0E-03	mg/m^3	7.8E-04
				1,2-Dichloroethane	6.9E+00	µg/L	4.6E-05	µg/m^3	2.6E-05	(µg/m^3)$^{-1}$	1.2E-09	3.2E-06	mg/m^3	7.0E-02	mg/m^3	4.6E-05
				1,3-Dichlorobenzene	4.3E-01	µg/L	6.1E-06	µg/m^3	NA	NA	NA	4.3E-07	mg/m^3	NA	NA	NA
				1,4-Dichlorobenzene	3.3E+00	µg/L	2.8E-05	µg/m^3	1.1E-05	(µg/m^3)$^{-1}$	3.1E-10	2.0E-06	mg/m^3	2.5E+00	mg/m^3	7.9E-07
				Benzene	5.8E-01	µg/L	7.5E-06	µg/m^3	7.8E-06	(µg/m^3)$^{-1}$	5.8E-11	5.2E-07	mg/m^3	3.0E-02	mg/m^3	1.7E-05
				Chloroform	1.3E+00	µg/L	1.4E-05	µg/m^3	2.3E-05	(µg/m^3)$^{-1}$	3.1E-10	9.5E-07	mg/m^3	9.8E-02	mg/m^3	9.7E-06
				cis-1,2-Dichloroethene	1.1E+02	µg/L	1.3E-03	µg/m^3	NA	NA	NA	9.1E-05	mg/m^3	NA	NA	NA
				Tetrachloroethene	1.9E-01	µg/L	2.4E-06	µg/m^3	5.9E-06	(µg/m^3)$^{-1}$	1.4E-11	1.7E-07	mg/m^3	2.7E-01	mg/m^3	6.3E-07
				trans-1,2-Dichloroethene	2.1E+01	µg/L	2.4E-04	µg/m^3	NA	NA	NA	1.7E-05	mg/m^3	6.0E-02	mg/m^3	2.8E-04
				Trichloroethene	2.4E+00	µg/L	3.0E-05	µg/m^3	2.0E-06	(µg/m^3)$^{-1}$	5.9E-11	2.1E-06	mg/m^3	1.0E-02	mg/m^3	2.1E-04
				Vinyl chloride	1.3E+01	µg/L	2.2E-04	µg/m^3	4.4E-06	(µg/m^3)$^{-1}$	9.9E-10	1.6E-05	mg/m^3	1.0E-01	mg/m^3	1.6E-04
			Exp. Route Total								4.1E-09					1.5E-03
		Exposure Point Total									4.1E-09					1.5E-03
	Exposure Medium Total										4.1E-09					1.5E-03
Groundwater Surficial Aquifer Total											1.2E-07					6.7E-02
										Total of Receptor Risks Across All Media	1.1E-06				Total of Receptor Hazards Across All Media	2.8E-01

Notes:

* Soil = combined surface and subsurface soil

1. Dermal absorption from surface water and groundwater calculated on Tables 7.4.RME Supplement A and Table 7.4.RME Supplement B, respectively.
2. Dermal absorption factors (DABs) used to calculated dermal absorption intake are chemical specific. DABS of 0.13 used for the PAHs, DABS of 0.03 used for arsenic, and DABS of 0.001 used for other metals.
3. Air concentration above excavation calculated on Table 7.4.RME Supplement D

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Checked by: D. Stannard/WDC

TABLE G 7.4.RME SUPPLEMENT A

Calculation of DAevent - Adult Construction Worker, Surface Water (Drainage Ditches/Marshy Area)

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Water Concentration (CW) (µg/L)	Permeability Coefficient (Kp) (cm/hr)	B (dimensionless)	Lag Time (τ_{event}) (hr)	t* (hr)	Fraction Absorbed Water (FA) (dimensionless)	Duration of Event (t_{event}) (hr)	DA_{event} (mg/cm^2-event)	Eq
Iron	7.5E+02	1.0E-03	NA	NA	NA	NA	4	3.0E-06	1
Thallium	6.9E+00	1.0E-03	NA	NA	NA	NA	4	2.8E-08	1

Inorganics: DA_{event} (mg/cm^2-event) =

Kp x CW x t_{event} x 0.001 mg/µg x 0.001 L/cm^3 (eq 1)

Organics: DAevent (mg/cm^2-event) =

If t_{event}<t*, then DA_{event} =

2 x FA x Kp x CW x (sqrt((6 xτ_{event} x t_{event})/π)) x 0.001 mg/µg x 0.001 L/cm^3 (eq 2)

If t_{event}>t*, then DA_{event} =

FA x Kp x CW x (t_{event}/(1+B) + 2 x τ_{event} x ((1 + 3xB + 3xB^2)/(1+B)^2) x 0.001 mg/µg x 0.001 L/cm^3 (eq 3)

Notes:

B - Dimensionless ratio of the permeability coefficient of a compound through the stratum corneum relative to its permeability coefficient across the viable epidermis (dimensionless).

NA - Not applicable

t* - Time to reach steady-state

Permeability constants from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005. The default value of 0.001 was assigned to inorganics not listed in this document.

* Permeability constants calculated using Equation 3.8 (log Kp = 2.80 + 0.66 log Kow - 0.0056 MW, where r2 = 0.66) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

B calculated using Equation A.1 (B = Kp * MW1/2/2.6) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

t_{event} calculated using Equation A.4 (t_{event} = lsc2/6Dsc = 0.105 × 10^[0.0056 MW]) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

Since B ≤ 0.6, then t* calculated using Equation A.4 (t* = 2.4 t_{event}) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

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Checked by: Debbie Stannard/WDC

TABLE G 7.4.RME SUPPLEMENT B

Calculation of DAevent - Adult Construction Worker, Surficial Groundwater

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Water Concentration (CW) (µg/L)	Permeability Coefficient (Kp) (cm/hr)	B (dimensionless)	Lag Time (τ_{event}) (hr)	t* (hr)	Fraction Absorbed Water (FA) (dimensionless)	Duration of Event (t_{event}) (hr)	DA_{event} (mg/cm^2-event)	Eq
1,1,2,2-Tetrachloroethane	5.6E+00	6.9E-03	3.5E-02	9.3E-01	2.2E+00	1.0E+00	4	2.2E-07	3
1,1,2-Trichloroethane	4.5E+00	6.4E-03	2.9E-02	6.0E-01	1.4E+00	1.0E+00	4	1.5E-07	3
1,2-Dichloroethane	6.9E+00	4.2E-03	1.6E-02	3.8E-01	9.2E-01	1.0E+00	4	1.4E-07	3
1,3-Dichlorobenzene	4.3E-01	5.8E-02	2.7E-01	7.1E-01	1.7E+00	1.0E+00	4	1.2E-07	3
1,4-Dichlorobenzene	3.3E+00	4.2E-02	2.0E-01	7.1E-01	1.7E+00	1.0E+00	4	7.0E-07	3
Benzene	5.8E-01	1.5E-02	5.1E-02	2.9E-01	7.0E-01	1.0E+00	4	3.8E-08	3
Chloroform	1.3E+00	6.8E-03	2.9E-02	5.0E-01	1.2E+00	1.0E+00	4	4.4E-08	3
cis-1,2-Dichloroethene[1]	1.1E+02	1.10E-02	4.2E-02	3.7E-01	8.8E-01	1.0E+00	4	5.8E-06	3
Tetrachloroethene	1.9E-01	3.3E-02	1.7E-01	9.1E-01	2.2E+00	1.0E+00	4	3.5E-08	3
trans-1,2-Dichloroethene[1]	2.1E+01	1.10E-02	4.2E-02	3.7E-01	8.8E-01	1.0E+00	4	1.1E-06	3
Trichloroethene	2.4E+00	1.2E-02	5.1E-02	5.8E-01	1.4E+00	1.0E+00	4	1.4E-07	3
Vinyl chloride	1.3E+01	5.6E-03	1.7E-02	2.4E-01	5.7E-01	1.0E+00	4	3.3E-07	3
alpha-BHC[1]	7.7E-02	2.06E-02	1.4E-01	4.5E+00	1.1E+01	1.0E+00	4	2.2E-08	2
Aroclor-1260[2]	1.2E+00	7.5E-01	4.9E+00	4.6E+00	2.0E+01	1.0E+00	4	2.2E-05	2
beta-BHC[1]	1.9E-01	2.06E-02	1.4E-01	4.5E+00	1.1E+01	1.0E+00	4	5.3E-08	2
delta-BHC[1]	1.5E+00	2.06E-02	1.4E-01	4.5E+00	1.1E+01	1.0E+00	4	4.2E-07	2
Heptachlor epoxide[1]	7.9E-02	2.09E-02	1.6E-01	1.6E+01	3.8E+01	1.0E+00	4	6.6E-08	2
Iron	1.8E+04	1.0E-03	NA	NA	NA	NA	4	7.3E-05	1
Manganese	8.0E+02	1.0E-03	NA	NA	NA	NA	4	3.2E-06	1
Vanadium	2.3E+01	1.0E-03	NA	NA	NA	NA	4	9.0E-08	1
Zinc	4.6E+03	1.0E-03	NA	NA	NA	NA	4	1.8E-05	1

Inorganics: DA_{event} (mg/cm^2-event) =

Kp x CW x t_{event} x 0.001 mg/µg x 0.001 L/cm^3 (eq 1)

Organics: DAevent (mg/cm^2-event) =

If t_{event}<t*, then DA_{event} =

2 x FA x Kp x CW x (sqrt((6 xτ_{event} x t_{event})/π)) x 0.001 mg/µg x 0.001 L/cm^3 (eq 2)

If t_{event}>t*, then DA_{event} =

FA x Kp x CW x (t_{event}/(1+B) + 2 x τ_{event} x ((1 + 3xB + 3xB^2)/(1+B)^2) x 0.001 mg/µg x 0.001 L/cm^3 (eq 3)

Notes:

B - Dimensionless ratio of the permeability coefficient of a compound through the stratum corneum relative to its permeability coefficient across the viable epidermis (dimensionless).

NA - Not applicable

t* - Time to reach steady-state

Permeability constants from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005. The default value of 0.001 was assigned to inorganics not listed in this document.

[1] - B calculated using Equation A.1 (B = Kp * MW1/2/2.6) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

t_{event} calculated using Equation A.4 (t_{event} = lsc2/6Dsc = 0.105 × 10^[0.0056 MW]) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

Since B ≤ 0.6, then t* calculated using Equation A.4 (t* = 2.4 t_{event}) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

[2] - PCB-chlorobiphenyl, 4- used as a surrogate for Aroclor-1260.

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Checked by: Debbie Stannard/WDC

TABLE G 7.4.RME SUPPLEMENT C

Calculation of DAevent

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical	MW	Kp (cm/hr)	B[1]	log D_{sc}/l_{sc}[1]	D_{sc}/l_{sc}[1]	l_{sc} (cm)	D_{sc} (cm^2/hr)	τ_{event}[1] (hr)	c[1]	b[1]	t*[1] (hr)
cis-1,2-Dichloroethene	9.69E+01	1.10E-02	4.16E-02	-3.34E+00	4.54E-04	1.00E-03	4.54E-07	3.67E-01	3.62E-01	3.29E-01	8.80E-01
trans-1,2-Dichloroethene	9.69E+01	1.10E-02	4.17E-02	-3.34E+00	4.54E-04	1.00E-03	4.54E-07	3.67E-01	3.62E-01	3.29E-01	8.81E-01
alpha-BHC	2.91E+02	2.06E-02	1.35E-01	-4.43E+00	3.73E-05	1.00E-03	3.73E-08	4.47E+00	4.29E-01	3.92E-01	1.07E+01
beta-BHC	2.91E+02	2.06E-02	1.35E-01	-4.43E+00	3.73E-05	1.00E-03	3.73E-08	4.47E+00	4.29E-01	3.92E-01	1.07E+01
delta-BHC	2.91E+02	2.06E-02	1.35E-01	-4.43E+00	3.73E-05	1.00E-03	3.73E-08	4.47E+00	4.29E-01	3.92E-01	1.07E+01
Heptachlor epoxide	3.89E+02	2.09E-02	1.59E-01	-4.98E+00	1.05E-05	1.00E-03	1.05E-08	1.59E+01	4.46E-01	4.08E-01	3.82E+01

Notes:

[1] Equations from Risk Assessment Guidance for Superfund Volume 1; Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment, EPA/540/R/99/005. July 2004.

MW from EPA, 2010 and Kp from RAIS (http://rais.ornl.gov/).

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 7.4.RME SUPPLEMENT D

Inhalation of Volatiles from Surficial Groundwater During Construction—Inhalation Exposure Concentrations Calcultated Using a Two-Film Volatilization Model

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical	Cw (µg/L)	MW (gram/mol)	KH (unitless)	kl (cm/hr)	kg (cm/hr)	Kv (cm/hr)	ER (mg/hr)	ERa (g/sec-m^2)	Ca (µg/m^3)	Ca (mg/m^3)
1,1,2,2-Tetrachloroethane	5.6E+00	1.7E+02	3.7E-04	2.9E+00	1.8E+03	5.3E-01	3.0E+00	3.0E-10	8.6E-03	8.6E-06
1,1,2-Trichloroethane	4.5E+00	1.3E+02	8.2E-04	3.1E+00	1.9E+03	1.0E+00	4.7E+00	4.8E-10	1.4E-02	1.4E-05
1,2-Dichloroethane	6.9E+00	9.9E+01	1.2E-03	3.3E+00	2.0E+03	1.4E+00	9.6E+00	9.9E-10	2.8E-02	2.8E-05
1,3-Dichlorobenzene	4.3E-01	1.5E+02	1.9E-01	3.0E+00	1.8E+03	3.0E+00	1.3E+00	1.3E-10	3.8E-03	3.8E-06
1,4-Dichlorobenzene	3.3E+00	1.5E+02	2.4E-03	3.0E+00	1.8E+03	1.8E+00	5.9E+00	6.1E-10	1.7E-02	1.7E-05
Benzene	5.8E-01	7.8E+01	5.6E-03	3.5E+00	2.1E+03	2.7E+00	1.6E+00	1.6E-10	4.6E-03	4.6E-06
Chloroform	1.3E+00	1.2E+02	3.7E-03	3.2E+00	1.9E+03	2.2E+00	2.8E+00	2.9E-10	8.3E-03	8.3E-06
cis-1,2-Dichloroethene	1.1E+02	9.7E+01	4.1E-03	3.3E+00	2.0E+03	2.4E+00	2.7E+02	2.8E-08	8.0E-01	8.0E-04
Tetrachloroethene	1.9E-01	1.7E+02	1.8E-02	2.9E+00	1.8E+03	2.7E+00	5.1E-01	5.2E-11	1.5E-03	1.5E-06
trans-1,2-Dichloroethene	2.1E+01	9.7E+01	4.1E-03	3.3E+00	2.0E+03	2.4E+00	5.0E+01	5.2E-09	1.5E-01	1.5E-04
Trichloroethene	2.4E+00	1.3E+02	9.9E-03	3.1E+00	1.9E+03	2.6E+00	6.2E+00	6.4E-10	1.8E-02	1.8E-05
Vinyl chloride	1.3E+01	6.3E+01	2.8E-02	3.7E+00	2.3E+03	3.5E+00	4.7E+01	4.8E-09	1.4E-01	1.4E-04

Equations

Equation 1	$Kv = 1/(1/k_l + 1/K_H{*}K_g)$
Equation 2	$k_g = 700(18/MW)^{1/4}V$
Equation 3	$k_l = (32/MW)^{1/4}Ka'$
Equation 4	ER = Kv * Cw * L/1000 cm^3 * mg/1000 µg
Equation 5	ERa = ER * g/1000 mg * hr/60 min * min/60 sec * 1/A

Variables	Units	Exposure Assumptions
Cw = groundwater concentration	(µg/L)	chem-specific
MW = molecular weight	(mol/gram)	chem-specific
K_H - Henry's Law Constant	(unitless)	chem-specific
Kv = volatilization rate	(cm/hr)	Solved by Eq 1
k_g = gas phase transfer coefficient	(cm/hr)	Solved by Eq 2
k_l = liquid phase transfer coefficient	(cm/hr)	Solved by Eq 3
V = wind speed	(m/s)	4.4
Ka' = aeration rate	(cm/hr)	0.0633
ER = emission rate	(mg/hr)	Solved by Eq 4
A = area of excavation (based on utility ditch)	(m^2)	2,700
Era = area emission rate	(g/sec-m^2)	Solved by Eq 5
Ca = air concentration	(mg/m^3)	Solved using SCREEN3 model

Note: aeration rate based on aeration rate for small surface water body (0.1/day) multiplied by depth of water in excavation (1/2 ft)

MW and log Kow from Oak Ridge National Laboratory (ORNL). June 2011. [Online]. Available: http://epa-prgs.ornl.gov/chemicals/index.shtml

1,4-dichlorobenzene used as surrogate for 1,3-dichlorobenzene.

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 7.5.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil*	Soil*	Soil*	Ingestion	Aluminum	9.1E+03	mg/kg	NA		NA		NA	1.2E-02	mg/kg/day	1.0E+00	mg/kg/day	1.2E-02
				Arsenic	3.9E+00	mg/kg	NA		NA		NA	5.3E-06	mg/kg/day	3.0E-04	mg/kg/day	1.8E-02
				Chromium	1.7E+01	mg/kg	NA		NA		NA	2.4E-05	mg/kg/day	3.0E-03	mg/kg/day	7.8E-03
				Iron	8.8E+03	mg/kg	NA		NA		NA	1.2E-02	mg/kg/day	7.0E-01	mg/kg/day	1.7E-02
				Manganese	8.2E+01	mg/kg	NA		NA		NA	1.1E-04	mg/kg/day	2.4E-02	mg/kg/day	4.7E-03
				Vanadium	2.1E+01	mg/kg	NA		NA		NA	2.9E-05	mg/kg/day	5.0E-03	mg/kg/day	5.9E-03
			Exp. Route Total								0.0E+00					6.6E-02
			Dermal Absorption[1]	Aluminum	9.1E+03	mg/kg	NA		NA		NA	5.0E-05	mg/kg/day	1.0E+00	mg/kg/day	5.0E-05
				Arsenic	3.9E+00	mg/kg	NA		NA		NA	6.4E-07	mg/kg/day	3.0E-04	mg/kg/day	2.1E-03
				Chromium	1.7E+01	mg/kg	NA		NA		NA	9.4E-08	mg/kg/day	7.5E-05	mg/kg/day	1.3E-03
				Iron	8.8E+03	mg/kg	NA		NA		NA	4.8E-05	mg/kg/day	7.0E-01	mg/kg/day	6.8E-05
				Manganese	8.2E+01	mg/kg	NA		NA		NA	4.5E-07	mg/kg/day	9.6E-04	mg/kg/day	4.7E-04
				Vanadium	2.1E+01	mg/kg	NA		NA		NA	1.2E-07	mg/kg/day	1.3E-04	mg/kg/day	9.0E-04
			Exp. Route Total								0.0E+00					4.9E-03
	Exposure Medium Total										0.0E+00					7.1E-02
	Air	Emissions from Soil*	Inhalation	Chromium	1.3E-08	mg/m^3	NA		NA		NA	1.2E-08	mg/kg/day	1.0E-04	mg/m3	1.2E-04
			Exp. Route Total								0.0E+00					1.2E-04
	Exposure Medium Total										0.0E+00					1.2E-04
Soil* Total											0.0E+00					7.1E-02
Groundwater	Groundwater	Surficial Aquifer - Tap Water	Ingestion	1,1,2,2-Tetrachloroethane	5.6E+00	ug/L	NA		NA		NA	1.5E-04	mg/kg/day	2.0E-02	mg/kg/day	7.6E-03
				1,1,2-Trichloroethane	4.5E+00	ug/L	NA		NA		NA	1.2E-04	mg/kg/day	4.0E-03	mg/kg/day	3.1E-02
				1,2-Dichloroethane	6.9E+00	ug/L	NA		NA		NA	1.9E-04	mg/kg/day	6.0E-03	mg/kg/day	3.2E-02
				1,3-Dichlorobenzene	4.3E-01	ug/L	NA		NA		NA	1.2E-05	mg/kg/day	NA	NA	NA
				1,4-Dichlorobenzene	3.3E+00	ug/L	NA		NA		NA	9.0E-05	mg/kg/day	7.0E-02	mg/kg/day	1.3E-03
				Benzene	5.8E-01	ug/L	NA		NA		NA	1.6E-05	mg/kg/day	4.0E-03	mg/kg/day	4.0E-03
				Chloroform	1.3E+00	ug/L	NA		NA		NA	3.6E-05	mg/kg/day	1.0E-02	mg/kg/day	3.6E-03
				cis-1,2-Dichloroethene	1.1E+02	ug/L	NA		NA		NA	3.1E-03	mg/kg/day	2.0E-03	mg/kg/day	1.6E+00
				Tetrachloroethene	1.9E-01	ug/L	NA		NA		NA	5.2E-06	mg/kg/day	1.0E-02	mg/kg/day	5.2E-04
				trans-1,2-Dichloroethene	2.1E+01	ug/L	NA		NA		NA	5.8E-04	mg/kg/day	2.0E-02	mg/kg/day	2.9E-02
				Trichloroethene	2.4E+00	ug/L	NA		NA		NA	6.4E-05	mg/kg/day	NA	NA	NA

TABLE G 7.5.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater (cont'd)	Groundwater (cont'd)	Surficial Aquifer - Tap Water (cont'd)	Ingestion (cont'd)	Vinyl chloride	1.3E+01	ug/L	NA		NA		NA	3.7E-04	mg/kg/day	3.0E-03	mg/kg/day	1.2E-01
				alpha-BHC	7.7E-02	ug/L	NA		NA		NA	2.1E-06	mg/kg/day	8.0E-03	mg/kg/day	2.6E-04
				Aroclor-1260	1.2E+00	ug/L	NA		NA		NA	3.3E-05	mg/kg/day	NA	NA	NA
				beta-BHC	1.9E-01	ug/L	NA		NA		NA	5.2E-06	mg/kg/day	NA	NA	NA
				delta-BHC	1.5E+00	ug/L	NA		NA		NA	4.1E-05	mg/kg/day	NA	NA	NA
				Heptachlor epoxide	7.9E-02	ug/L	NA		NA		NA	2.2E-06	mg/kg/day	1.3E-05	mg/kg/day	1.7E-01
				Iron	1.8E+04	ug/L	NA		NA		NA	5.0E-01	mg/kg/day	7.0E-01	mg/kg/day	7.2E-01
				Manganese	8.0E+02	ug/L	NA		NA		NA	2.2E-02	mg/kg/day	2.4E-02	mg/kg/day	9.1E-01
				Vanadium	2.3E+01	ug/L	NA		NA		NA	6.2E-04	mg/kg/day	5.0E-03	mg/kg/day	1.2E-01
				Zinc	4.6E+03	ug/L	NA		NA		NA	1.3E-01	mg/kg/day	3.0E-01	mg/kg/day	4.2E-01
			Exp. Route Total								0.0E+00					4.1E+00
		Surficial Aquifer - Tap Water	Dermal Absorption[2]	1,1,2,2-Tetrachloroethane	5.6E+00	ug/L	NA		NA		NA	1.9E-05	mg/kg/day	2.0E-02	mg/kg/day	9.7E-04
				1,1,2-Trichloroethane	4.5E+00	ug/L	NA		NA		NA	1.2E-05	mg/kg/day	4.0E-03	mg/kg/day	2.9E-03
				1,2-Dichloroethane	6.9E+00	ug/L	NA		NA		NA	9.4E-06	mg/kg/day	6.0E-03	mg/kg/day	1.6E-03
				1,3-Dichlorobenzene	4.3E-01	ug/L	NA		NA		NA	1.1E-05	mg/kg/day	NA	NA	NA
				1,4-Dichlorobenzene	3.3E+00	ug/L	NA		NA		NA	6.1E-05	mg/kg/day	7.0E-02	mg/kg/day	8.7E-04
				Benzene	5.8E-01	ug/L	NA		NA		NA	2.4E-06	mg/kg/day	4.0E-03	mg/kg/day	6.0E-04
				Chloroform	1.3E+00	ug/L	NA		NA		NA	3.2E-06	mg/kg/day	1.0E-02	mg/kg/day	3.2E-04
				cis-1,2-Dichloroethene	1.1E+02	ug/L	NA		NA		NA	4.0E-04	mg/kg/day	2.0E-03	mg/kg/day	2.0E-01
				Tetrachloroethene	1.9E-01	ug/L	NA		NA		NA	3.1E-06	mg/kg/day	1.0E-02	mg/kg/day	3.1E-04
				trans-1,2-Dichloroethene	2.1E+01	ug/L	NA		NA		NA	7.3E-05	mg/kg/day	2.0E-02	mg/kg/day	3.7E-03
				Trichloroethene	2.4E+00	ug/L	NA		NA		NA	1.1E-05	mg/kg/day	NA	NA	NA
				Vinyl chloride	1.3E+01	ug/L	NA		NA		NA	1.9E-05	mg/kg/day	3.0E-03	mg/kg/day	6.5E-03
				alpha-BHC	7.7E-02	ug/L	NA		NA		NA	1.7E-06	mg/kg/day	8.0E-03	mg/kg/day	2.2E-04
				Aroclor-1260	1.2E+00	ug/L	NA		NA		NA	1.0E-03	mg/kg/day	NA	NA	NA
				beta-BHC	1.9E-01	ug/L	NA		NA		NA	4.3E-06	mg/kg/day	NA	NA	NA
				delta-BHC	1.5E+00	ug/L	NA		NA		NA	3.4E-05	mg/kg/day	NA	NA	NA
				Heptachlor epoxide	7.9E-02	ug/L	NA		NA		NA	3.4E-06	mg/kg/day	1.3E-05	mg/kg/day	2.6E-01
				Iron	1.8E+04	ug/L	NA		NA		NA	2.6E-03	mg/kg/day	7.0E-01	mg/kg/day	3.7E-03
				Manganese	8.0E+02	ug/L	NA		NA		NA	1.1E-04	mg/kg/day	9.6E-04	mg/kg/day	1.2E-01
				Vanadium	2.3E+01	ug/L	NA		NA		NA	3.2E-06	mg/kg/day	1.3E-04	mg/kg/day	2.5E-02
				Zinc	4.6E+03	ug/L	NA		NA		NA	6.6E-04	mg/kg/day	3.0E-01	mg/kg/day	2.2E-03
			Exp. Route Total								0.0E+00					6.3E-01
		Exposure Point Total									0.0E+00					4.8E+00
	Exposure Medium Total										0.0E+00					4.8E+00

TABLE G 7.5.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater (cont'd)	Air	Surficial Aquifer Water Vapors at Showerhead	Inhalation	1,1,2,2-Tetrachloroethane	6.4E-03	mg/m^3	NA		NA		NA	1.5E-04	mg/m^3	NA	NA	NA
				1,1,2-Trichloroethane	7.4E-03	mg/m^3	NA		NA		NA	1.7E-04	mg/m^3	2.0E-04	mg/m3	8.6E-01
				1,2-Dichloroethane	1.4E-02	mg/m^3	NA		NA		NA	3.2E-04	mg/m^3	7.0E-03	mg/m3	4.6E-02
				1,3-Dichlorobenzene	7.8E-04	mg/m^3	NA		NA		NA	1.8E-05	mg/m^3	NA	NA	NA
				1,4-Dichlorobenzene	6.0E-03	mg/m^3	NA		NA		NA	1.4E-04	mg/m^3	8.0E-01	mg/m3	1.7E-04
				Benzene	1.5E-03	mg/m^3	NA		NA		NA	3.5E-05	mg/m^3	3.0E-02	mg/m3	1.1E-03
				Chloroform	2.7E-03	mg/m^3	NA		NA		NA	6.2E-05	mg/m^3	9.8E-02	mg/m3	6.4E-04
				cis-1,2-Dichloroethene	2.6E-01	mg/m^3	NA		NA		NA	6.1E-03	mg/m^3	NA	NA	NA
				Tetrachloroethene	3.5E-04	mg/m^3	NA		NA		NA	8.2E-06	mg/m^3	2.7E-01	mg/m3	3.0E-05
				trans-1,2-Dichloroethene	4.9E-02	mg/m^3	NA		NA		NA	1.1E-03	mg/m^3	6.0E-02	mg/m3	1.9E-02
				Trichloroethene	4.8E-03	mg/m^3	NA		NA		NA	1.1E-04	mg/m^3	1.0E-02	mg/m3	1.1E-02
				Vinyl chloride	3.9E-02	mg/m^3	NA		NA		NA	9.1E-04	mg/m^3	1.0E-01	mg/m3	9.1E-03
			Exp. Route Total								0.0E+00					9.4E-01
	Exposure Medium Total										0.0E+00					9.4E-01
Groundwater Surficial Aquifer Total											0.0E+00					5.7E+00
Groundwater	Groundwater	Castle-Hayne Aquifer - Tap Water	Ingestion	1,2,4-Trichlorobenzene	8.5E+00	ug/L	NA		NA		NA	2.3E-04	mg/kg/day	1.0E-02	mg/kg/day	2.3E-02
				1,2-Dichloroethane	1.7E+01	ug/L	NA		NA		NA	4.7E-04	mg/kg/day	6.0E-03	mg/kg/day	7.8E-02
				1,3-Dichlorobenzene	1.2E+00	ug/L	NA		NA		NA	3.3E-05	mg/kg/day	NA	NA	NA
				1,4-Dichlorobenzene	1.0E+00	ug/L	NA		NA		NA	2.7E-05	mg/kg/day	7.0E-02	mg/kg/day	3.9E-04
				Benzene	1.2E+00	ug/L	NA		NA		NA	3.3E-05	mg/kg/day	4.0E-03	mg/kg/day	8.2E-03
				Chloroform	4.0E+00	ug/L	NA		NA		NA	1.1E-04	mg/kg/day	1.0E-02	mg/kg/day	1.1E-02
				cis-1,2-Dichloroethene	4.3E+04	ug/L	NA		NA		NA	1.2E+00	mg/kg/day	2.0E-03	mg/kg/day	5.9E+02
				trans-1,2-Dichloroethene	6.4E+02	ug/L	NA		NA		NA	1.8E-02	mg/kg/day	2.0E-02	mg/kg/day	8.8E-01
				Trichloroethene	3.0E+01	ug/L	NA		NA		NA	8.2E-04	mg/kg/day	NA	NA	NA
				Vinyl chloride	4.7E+03	ug/L	NA		NA		NA	1.3E-01	mg/kg/day	3.0E-03	mg/kg/day	4.3E+01
				Aroclor-1260	3.4E-01	ug/L	NA		NA		NA	9.3E-06	mg/kg/day	NA	NA	NA
				Dieldrin	2.6E-02	ug/L	NA		NA		NA	7.1E-07	mg/kg/day	5.0E-05	mg/kg/day	1.4E-02
				Heptachlor epoxide	5.4E-02	ug/L	NA		NA		NA	1.5E-06	mg/kg/day	1.3E-05	mg/kg/day	1.1E-01
				Chromium	1.1E+01	ug/L	NA		NA		NA	2.9E-04	mg/kg/day	3.0E-03	mg/kg/day	9.6E-02
				Iron	7.6E+03	ug/L	NA		NA		NA	2.1E-01	mg/kg/day	7.0E-01	mg/kg/day	3.0E-01
				Thallium	5.6E+00	ug/L	NA		NA		NA	1.5E-04	mg/kg/day	1.0E-05	mg/kg/day	1.5E+01
			Exp. Route Total								0.0E+00					6.5E+02

TABLE G 7.5.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater (cont'd)	Groundwater (cont'd)	Castle-Hayne Aquifer - Tap Water (cont'd)	Dermal Absorption[2]	1,2,4-Trichlorobenzene	8.5E+00	ug/L	NA		NA		NA	3.1E-04	mg/kg/day	1.0E-02	mg/kg/day	3.1E-02
				1,2-Dichloroethane	1.7E+01	ug/L	NA		NA		NA	2.3E-05	mg/kg/day	6.0E-03	mg/kg/day	3.8E-03
				1,3-Dichlorobenzene	1.2E+00	ug/L	NA		NA		NA	3.1E-05	mg/kg/day	NA	NA	NA
				1,4-Dichlorobenzene	1.0E+00	ug/L	NA		NA		NA	1.8E-05	mg/kg/day	7.0E-02	mg/kg/day	2.6E-04
				Benzene	1.2E+00	ug/L	NA		NA		NA	5.0E-06	mg/kg/day	4.0E-03	mg/kg/day	1.3E-03
				Chloroform	4.0E+00	ug/L	NA		NA		NA	9.9E-06	mg/kg/day	1.0E-02	mg/kg/day	9.9E-04
				cis-1,2-Dichloroethene	4.3E+04	ug/L	NA		NA		NA	1.5E-01	mg/kg/day	2.0E-03	mg/kg/day	7.5E+01
				trans-1,2-Dichloroethene	6.4E+02	ug/L	NA		NA		NA	2.2E-03	mg/kg/day	2.0E-02	mg/kg/day	1.1E-01
				Trichloroethene	3.0E+01	ug/L	NA		NA		NA	1.4E-04	mg/kg/day	NA	NA	NA
				Vinyl chloride	4.7E+03	ug/L	NA		NA		NA	6.8E-03	mg/kg/day	3.0E-03	mg/kg/day	2.3E+00
				Aroclor-1260	3.4E-01	ug/L	NA		NA		NA	2.9E-04	mg/kg/day	NA	NA	NA
				Dieldrin	2.6E-02	ug/L	NA		NA		NA	6.3E-07	mg/kg/day	5.0E-05	mg/kg/day	1.3E-02
				Heptachlor epoxide	5.4E-02	ug/L	NA		NA		NA	2.4E-06	mg/kg/day	1.3E-05	mg/kg/day	1.8E-01
				Chromium	1.1E+01	ug/L	NA		NA		NA	1.5E-06	mg/kg/day	7.5E-05	mg/kg/day	2.0E-02
				Iron	7.6E+03	ug/L	NA		NA		NA	1.1E-03	mg/kg/day	7.0E-01	mg/kg/day	1.5E-03
				Thallium	5.6E+00	ug/L	NA		NA		NA	8.0E-07	mg/kg/day	1.0E-05	mg/kg/day	8.0E-02
			Exp. Route Total								0.0E+00					7.8E+01
		Exposure Point Total									0.0E+00					7.3E+02
	Exposure Medium Total										0.0E+00					7.3E+02
	Air	Castle-Hayne Aquifer Water Vapors at Showerhead	Inhalation	1,2,4-Trichlorobenzene	1.3E-02	mg/m^3	NA		NA		NA	3.0E-04	mg/m^3	2.0E-03	mg/m3	1.5E-01
				1,2-Dichloroethane	3.4E-02	mg/m^3	NA		NA		NA	8.0E-04	mg/m^3	2.4E+00	mg/m3	3.3E-04
				1,3-Dichlorobenzene	2.4E-03	mg/m^3	NA		NA		NA	5.6E-05	mg/m^3	NA	NA	NA
				1,4-Dichlorobenzene	1.8E-03	mg/m^3	NA		NA		NA	4.2E-05	mg/m^3	8.0E-01	mg/m3	5.3E-05
				Benzene	3.1E-03	mg/m^3	NA		NA		NA	7.1E-05	mg/m^3	3.0E-02	mg/m3	2.4E-03
				Chloroform	8.2E-03	mg/m^3	NA		NA		NA	1.9E-04	mg/m^3	9.8E-02	mg/m3	1.9E-03
				cis-1,2-Dichloroethene	9.9E+01	mg/m^3	NA		NA		NA	2.3E+00	mg/m^3	NA	NA	NA
				trans-1,2-Dichloroethene	1.5E+00	mg/m^3	NA		NA		NA	3.4E-02	mg/m^3	6.0E-02	mg/m3	5.7E-01
				Trichloroethene	6.2E-02	mg/m^3	NA		NA		NA	1.4E-03	mg/m^3	1.0E-02	NA	1.4E-01
				Vinyl chloride	1.4E+01	mg/m^3	NA		NA		NA	3.2E-01	mg/m^3	1.0E-01	mg/m3	3.2E+00
			Exp. Route Total								0.0E+00					4.1E+00
	Exposure Medium Total										0.0E+00					4.1E+00
Groundwater Castle-Hayne Aquifer Total											0.0E+00					7.3E+02
										Total of Receptor Risks Across All Media	0.0E+00				Total of Receptor Hazards Across All Media	7.3E+02

Notes:

* Soil = combined surface and subsurface soil

1. Dermal absorption factors (DABs) used to calculated dermal absorption intake from soil are chemical specific as shown in RAGS Part E, Exhibit 3-4. DABS of 0.03 used for arsenic,0.001 for all other metals.
2. DAevent for dermal exposure to groundwater calculated on Tables 7.5.RME Supplements A and B.
3. Inhalation exposures calculated on Tables 7.5.RME Supplement C and D.
4. Total receptor risks and hazards includes higher of the Surficial Aquifer or Castle-Hayne Aquifer risks or hazards.

Generated by: Martha White/ATL
Checked by: D. Stannard/WDC

TABLE G 7.5.RME SUPPLEMENT A

Calculation of DAevent - Adult Resident, Surficial Aquifer Groundwater

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Water Concentration (CW) (µg/L)	Permeability Coefficient (Kp) (cm/hr)	B (dimensionless)	Lag Time (τ_{event}) (hr)	t* (hr)	Fraction Absorbed Water (FA) (dimensionless)	Duration of Event (t_{event}) (hr)	DA_{event} (mg/cm^2-event)	Eq
1,1,2,2-Tetrachloroethane	5.6E+00	6.9E-03	3.5E-02	9.3E-01	2.2E+00	1.0E+00	0.58	7.9E-08	2
1,1,2-Trichloroethane	4.5E+00	6.4E-03	2.9E-02	6.0E-01	1.4E+00	1.0E+00	0.58	4.8E-08	2
1,2-Dichloroethane	6.9E+00	4.2E-03	1.6E-02	3.8E-01	9.2E-01	1.0E+00	0.58	3.8E-08	2
1,3-Dichlorobenzene	4.3E-01	5.8E-02	2.7E-01	7.1E-01	1.7E+00	1.0E+00	0.58	4.4E-08	2
1,4-Dichlorobenzene	3.3E+00	4.2E-02	2.0E-01	7.1E-01	1.7E+00	1.0E+00	0.58	2.5E-07	2
Benzene	5.8E-01	1.5E-02	5.1E-02	2.9E-01	7.0E-01	1.0E+00	0.58	9.8E-09	2
Chloroform	1.3E+00	6.8E-03	2.9E-02	5.0E-01	1.2E+00	1.0E+00	0.58	1.3E-08	2
cis-1,2-Dichloroethene[1]	1.1E+02	1.10E-02	4.2E-02	3.7E-01	8.8E-01	1.0E+00	0.58	1.6E-06	2
Tetrachloroethene	1.9E-01	3.3E-02	1.7E-01	9.1E-01	2.2E+00	1.0E+00	0.58	1.3E-08	2
trans-1,2-Dichloroethene[1]	2.1E+01	1.10E-02	4.2E-02	3.7E-01	8.8E-01	1.0E+00	0.58	3.0E-07	2
Trichloroethene	2.4E+00	1.2E-02	5.1E-02	5.8E-01	1.4E+00	1.0E+00	0.58	4.4E-08	2
Vinyl chloride	1.3E+01	5.6E-03	1.7E-02	2.4E-01	5.7E-01	1.0E+00	0.58	7.9E-08	3
alpha-BHC[1]	7.7E-02	2.06E-02	1.4E-01	4.5E+00	1.1E+01	1.0E+00	0.58	7.1E-09	2
Aroclor-1260[2]	1.2E+00	7.5E-01	4.9E+00	4.6E+00	2.0E+01	1.0E+00	0.58	4.1E-06	2
beta-BHC[1]	1.9E-01	2.06E-02	1.4E-01	4.5E+00	1.1E+01	1.0E+00	0.58	1.7E-08	2
delta-BHC[1]	1.5E+00	2.06E-02	1.4E-01	4.5E+00	1.1E+01	1.0E+00	0.58	1.4E-07	2
Heptachlor epoxide[1]	7.9E-02	2.09E-02	1.6E-01	1.6E+01	3.8E+01	1.0E+00	0.58	1.4E-08	2
Iron	1.8E+04	1.0E-03	NA	NA	NA	NA	0.58	1.1E-05	1
Manganese	8.0E+02	1.0E-03	NA	NA	NA	NA	0.58	4.6E-07	1
Vanadium	2.3E+01	1.0E-03	NA	NA	NA	NA	0.58	1.3E-08	1
Zinc	4.6E+03	1.0E-03	NA	NA	NA	NA	0.58	2.7E-06	1

Inorganics: DA_{event} (mg/cm^2-event) =

Kp x CW x t_{event} x 0.001 mg/µg x 0.001 L/cm^3 (eq 1)

Organics: DAevent (mg/cm^2-event) =

If t_{event}<t*, then DA_{event} =

2 x FA x Kp x CW x (sqrt((6 x τ_{event} x t_{event})/π)) x 0.001 mg/µg x 0.001 L/cm^3

If t_{event}>t*, then DA_{event} =

FA x Kp x CW x (t_{event}/(1+B) + 2 x τ_{event} x ((1 + 3xB + 3xB^2)/(1+B)^2) x 0.001 mg/µg x 0.001 L/cm^3 (eq 3)

Notes:

B - Dimensionless ratio of the permeability coefficient of a compound through the stratum corneum relative to its permeability coefficient across the viable epidermis (dimensionless).

NA - Not applicable

t* - Time to reach steady-state

Permeability constants from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005. The default value of 0.001 was assigned to inorganics not listed in this document.

[1] - B calculated using Equation A.1 (B = Kp * MW1/2/2.6) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

t_{event} calculated using Equation A.4 (t_{event} = lsc2/6Dsc = 0.105 × 10^[0.0056 MW]) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

Since B ≤ 0.6, then t* calculated using Equation A.4 (t* = 2.4 t_{event}) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

[2] - PCB-chlorobiphenyl, 4- used as a surrogate for Aroclor-1260.

Generated by: Martha White/ATL

Checked by: D. Stannard/WDC

TABLE G 7.5.RME SUPPLEMENT B

Calculation of DAevent - Adult Resident, Castle Hayne Aquifer Groundwater

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Water Concentration (CW) (µg/L)	Permeability Coefficient (Kp) (cm/hr)	B (dimensionless)	Lag Time (τ_{event}) (hr)	t* (hr)	Fraction Absorbed Water (FA) (dimensionless)	Duration of Event (t_{event}) (hr)	DA_{event} (mg/cm^2-event)	Eq
1,2,4-Trichlorobenzene	8.5E+00	6.6E-02	3.4E-01	1.1E+00	2.7E+00	1.0E+00	0.58	1.2E-06	2
1,2-Dichloroethane	1.7E+01	4.2E-03	1.6E-02	3.8E-01	9.2E-01	1.0E+00	0.58	9.4E-08	2
1,3-Dichlorobenzene	1.2E+00	5.8E-02	2.7E-01	7.1E-01	1.7E+00	1.0E+00	0.58	1.2E-07	2
1,4-Dichlorobenzene	1.0E+00	4.2E-02	2.0E-01	7.1E-01	1.7E+00	1.0E+00	0.58	7.4E-08	2
Benzene	1.2E+00	1.5E-02	5.1E-02	2.9E-01	7.0E-01	1.0E+00	0.58	2.0E-08	2
Chloroform	4.0E+00	6.8E-03	2.9E-02	5.0E-01	1.2E+00	1.0E+00	0.58	4.0E-08	2
cis-1,2-Dichloroethene[1]	4.3E+04	1.10E-02	4.2E-02	3.7E-01	8.8E-01	1.0E+00	0.58	6.1E-04	2
trans-1,2-Dichloroethene[1]	6.4E+02	1.10E-02	4.2E-02	3.7E-01	8.8E-01	1.0E+00	0.58	9.0E-06	2
Trichloroethene	3.0E+01	1.2E-02	5.1E-02	5.8E-01	1.4E+00	1.0E+00	0.58	5.6E-07	2
Vinyl chloride	4.7E+03	5.6E-03	1.7E-02	2.4E-01	5.7E-01	1.0E+00	0.58	2.8E-05	3
Aroclor-1260[2]	3.4E-01	7.5E-01	4.9E+00	4.6E+00	2.0E+01	1.0E+00	0.58	1.2E-06	2
Dieldrin	2.6E-02	1.2E-02	9.2E-02	1.5E+01	3.5E+01	1.0E+00	0.58	2.6E-09	2
Heptachlor epoxide[1]	5.4E-02	2.09E-02	1.6E-01	1.6E+01	3.8E+01	1.0E+00	0.58	9.6E-09	2
Chromium	1.1E+01	1.0E-03	NA	NA	NA	NA	0.58	6.1E-09	1
Iron	7.6E+03	1.0E-03	NA	NA	NA	NA	0.58	4.4E-06	1
Thallum	5.6E+00	1.0E-03	NA	NA	NA	NA	0.58	3.2E-09	1

Inorganics: DA_{event} (mg/cm^2-event) =

Kp x CW x t_{event} x 0.001 mg/µg x 0.001 L/cm^3 (eq 1)

Organics: DAevent (mg/cm^2-event) =

If t_{event}<t*, then DA_{event} =

2 x FA x Kp x CW x (sqrt((6 x τ_{event} x t_{event})/π)) x 0.001 mg/µg x 0.001 L/cm^3

If t_{event}>t*, then DA_{event} =

FA x Kp x CW x (t_{event}/(1+B) + 2 x τ_{event} x ((1 + 3xB + 3xB^2)/(1+B)^2) x 0.001 mg/µg x 0.001 L/cm^3 (eq 3)

Notes:

B - Dimensionless ratio of the permeability coefficient of a compound through the stratum corneum relative to its permeability coefficient across the viable epidermis (dimensionless).

NA - Not applicable

t* - Time to reach steady-state

Permeability constants from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005. The default value of 0.001 was assigned to inorganics not listed in this document.

[1] - B calculated using Equation A.1 (B = Kp * MW1/2/2.6) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

t_{event} calculated using Equation A.4 (t_{event} = lsc2/6Dsc = 0.105 × 10^[0.0056 MW]) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

Since B ≤ 0.6, then t* calculated using Equation A.4 (t* = 2.4 t_{event}) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

[2] - PCB-chlorobiphenyl, 4- used as a surrogate for Aroclor-1260.

Generated by: Martha White/ATL

Checked by: D. Stannard/WDC

TABLE G 7.5.RME SUPPLEMENT C

Inhalation Exposure Concentrations from Foster and Chrostowski Shower Model—Surficial Groundwater Air, Adult Resident

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Exposure Point Concentration Cwo (µg/L)	Molecular weight (MW) (g/mole)	Henry's Law Constant (H) (atm-m^3/mole)	Kg (VOC) (cm/hr)	Kl (VOC) (cm/hr)	KL (cm/hr)	Kal (cm/hr)	Cwd (µg/L)	S (µg/m^3 -min)	Ca (mg/m^3)
1,1,2,2-Tetrachloroethane	5.6E+00	1.7E+02	3.7E-04	9.8E+02	1.0E+01	6.1E+00	8.2E+00	3.7E-01	3.1E-01	6.4E-03
1,1,2-Trichloroethane	4.5E+00	1.3E+02	8.2E-04	1.1E+03	1.1E+01	8.8E+00	1.2E+01	4.3E-01	3.6E-01	7.4E-03
1,2-Dichloroethane	6.9E+00	9.9E+01	1.2E-03	1.3E+03	1.3E+01	1.1E+01	1.5E+01	8.1E-01	6.7E-01	1.4E-02
1,3-Dichlorobenzene	4.3E-01	1.5E+02	2.4E-03	1.0E+03	1.1E+01	9.9E+00	1.3E+01	4.6E-02	3.8E-02	7.8E-04
1,4-Dichlorobenzene	3.3E+00	1.5E+02	2.4E-03	1.0E+03	1.1E+01	9.9E+00	1.3E+01	3.5E-01	2.9E-01	6.0E-03
Benzene	5.8E-01	7.8E+01	5.6E-03	1.4E+03	1.5E+01	1.4E+01	1.9E+01	8.7E-02	7.2E-02	1.5E-03
Chloroform	1.3E+00	1.2E+02	3.7E-03	1.2E+03	1.2E+01	1.1E+01	1.5E+01	1.6E-01	1.3E-01	2.7E-03
cis-1,2-Dichloroethene	1.1E+02	9.7E+01	4.1E-03	1.3E+03	1.3E+01	1.3E+01	1.7E+01	1.5E+01	1.3E+01	2.6E-01
Tetrachloroethene	1.9E-01	1.7E+02	1.8E-02	9.9E+02	1.0E+01	1.0E+01	1.4E+01	2.1E-02	1.7E-02	3.5E-04
trans-1,2-Dichloroethene	2.1E+01	9.7E+01	4.1E-03	1.3E+03	1.3E+01	1.3E+01	1.7E+01	2.8E+00	2.4E+00	4.9E-02
Trichloroethene	2.4E+00	1.3E+02	9.9E-03	1.1E+03	1.2E+01	1.1E+01	1.5E+01	2.8E-01	2.3E-01	4.8E-03
Vinyl chloride	1.3E+01	6.3E+01	2.8E-02	1.6E+03	1.7E+01	1.7E+01	2.2E+01	2.3E+00	1.9E+00	3.9E-02

Variables	Units	Exposure Assumptions
Kg(VOC) = gas-film mass transfer coefficient	cm/hr	Solved by Eq 1
Kl(VOC) = liquid-film mass transfer coefficient	cm/hr	Solved by Eq 2
KL = overall mass transfer coefficient	cm/hr	Solved by Eq 3
Kal = adjusted overall mass transfer coeff.	cm/hr	Solved by Eq 4
Tl = Calibration temp. of water	K (20C +273)	293
Ts = Shower water temperature	k (45C)	318
Us = water viscosity at Ts	centipoise	0.596
Ul = water viscosity at Tl	cp	1.002
Cwd = conc. leaving droplets after time sdt	µg/l	Solved by Eq 5
sdt = shower droplet drop time	sec	0.5
d = shower droplet diameter	mm	1
FR = shower water flow rate	l/min	10
SV = shower room air volume	m^3	12
S = indoor VOC generation rate	µg/m^3-min	Solved by Eq 6
VR = ventilation rate	l/min	13.8
BW = body weight	kg	70
Ds = duration of shower	min	34.8
Dt = total duration in shower room	min	60
R = air exchange rate	min^{-1}	0.0083
Ca = indoor air concentration of VOCs	µg/m^3	Solved by Eq 7

Equation 1:	Kg(VOC) =	$3000 * (18 / MW)^{0.5}$
Equation 2:	Kl(VOC) =	$20 * (44 / MW)^{0.5}$
Equation 3:	KL =	$((1 / Kl(VOC)) + (0.024 / (Kg (VOC) * H)))^{-1}$
Equation 4:	Kal =	$(KL * (((Tl * Us) / (Ts * Ul))^{-0.5}))$
Equation 5:	Cwd =	(Cwo * (1-EXP((-1 * Kal * sdt)/(60 * d))))
Equation 6:	S =	(Cwd * FR / SV)
Equation 7:	Ca =	If t>Ds [(S / R) * (Ds + (EXP(-R * Dt) / R) -(EXP(R *(Ds - Dt)) / R)] / Dt * 1/1000

Notes:

MW and log Kow from Oak Ridge National Laboratory (ORNL). June 2011. [Online]. Available: http://epa-prgs.ornl.gov/chemicals/index.shtml

1,4-dichlorobenzene used as surrogate for 1,3-dichlorobenzene.

Generated by: Martha White/ATL

Checked by: D. Stannard/WDC

TABLE G 7.5.RME SUPPLEMENT D

Inhalation Exposure Concentrations from Foster and Chrostowski Shower Model—Castle-Hayne Groundwater Air, Adult Resident

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	**Exposure Point Concentration Cwo** (µg/L)	**Molecular weight (MW)** (g/mole)	**Henry's Law Constant (H)** (atm-m^3/mole)	**Kg (VOC)** (cm/hr)	**Kl (VOC)** (cm/hr)	**KL** (cm/hr)	**Kal** (cm/hr)	**Cwd** (µg/L)	**S** (µg/m^3 -min)	**Ca** (mg/m^3)
1,2,4-Trichlorobenzene	8.5E+00	1.8E+02	1.4E-03	9.4E+02	9.8E+00	8.4E+00	1.1E+01	7.6E-01	6.4E-01	1.3E-02
1,2-Dichloroethane	1.7E+01	9.9E+01	1.2E-03	1.3E+03	1.3E+01	1.1E+01	1.5E+01	2.0E+00	1.7E+00	3.4E-02
1,3-Dichlorobenzene	1.2E+00	1.5E+02	1.9E-01	1.0E+03	1.1E+01	1.1E+01	1.5E+01	1.4E-01	1.2E-01	2.4E-03
1,4-Dichlorobenzene	1.0E+00	1.5E+02	2.4E-03	1.0E+03	1.1E+01	9.9E+00	1.3E+01	1.1E-01	8.8E-02	1.8E-03
Benzene	1.2E+00	7.8E+01	5.6E-03	1.4E+03	1.5E+01	1.4E+01	1.9E+01	1.8E-01	1.5E-01	3.1E-03
Chloroform	4.0E+00	1.2E+02	3.7E-03	1.2E+03	1.2E+01	1.1E+01	1.5E+01	4.8E-01	4.0E-01	8.2E-03
cis-1,2-Dichloroethene	4.3E+04	9.7E+01	4.1E-03	1.3E+03	1.3E+01	1.3E+01	1.7E+01	5.8E+03	4.8E+03	9.9E+01
trans-1,2-Dichloroethene	6.4E+02	9.7E+01	4.1E-03	1.3E+03	1.3E+01	1.3E+01	1.7E+01	8.5E+01	7.1E+01	1.5E+00
Trichloroethene	3.0E+01	1.3E+02	9.9E-03	1.1E+03	1.2E+01	1.1E+01	1.5E+01	3.6E+00	3.0E+00	6.2E-02
Vinyl chloride	4.7E+03	6.3E+01	2.8E-02	1.6E+03	1.7E+01	1.7E+01	2.2E+01	8.0E+02	6.7E+02	1.4E+01

Variables	Units	Exposure Assumptions
Kg(VOC) = gas-film mass transfer coefficient	cm/hr	Solved by Eq 1
Kl(VOC) = liquid-film mass transfer coefficient	cm/hr	Solved by Eq 2
KL = overall mass transfer coefficient	cm/hr	Solved by Eq 3
Kal = adjusted overall mass transfer coeff.	cm/hr	Solved by Eq 4
Tl = Calibration temp. of water	K (20C +273)	293
Ts = Shower water temperature	k (45C)	318
Us = water viscosity at Ts	centipoise	0.596
Ul = water viscosity at Tl	cp	1.002
Cwd = conc. leaving droplets after time sdt	µg/l	Solved by Eq 5
sdt = shower droplet drop time	sec	0.5
d = shower droplet diameter	mm	1
FR = shower water flow rate	l/min	10
SV = shower room air volume	m^3	12
S = indoor VOC generation rate	µg/m^3-min	Solved by Eq 6
VR = ventilation rate	l/min	13.8
BW = body weight	kg	70
Ds = duration of shower	min	34.8
Dt = total duration in shower room	min	60
R = air exchange rate	min^{-1}	0.0083
Ca = indoor air concentration of VOCs	µg/m^3	Solved by Eq 7

Equation 1:	Kg(VOC) =	3000 * (18 / MW)$^{0.5}$
Equation 2:	Kl(VOC) =	20 * (44 / MW)$^{0.5}$
Equation 3:	KL =	((1 / Kl(VOC)) + (0.024 / (Kg (VOC) * H)))$^{-1}$
Equation 4:	Kal =	(KL * (((Tl * Us) / (Ts * Ul))$^{0.5}$))
Equation 5:	Cwd =	(Cwo * (1-EXP((-1 * Kal * sdt)/(60 * d))))
Equation 6:	S =	(Cwd * FR / SV)
Equation 7:	Ca =	If t>Ds [(S / R) * (Ds + (EXP(-R * Dt) / R) -(EXP(R *(Ds - Dt)) / R)] / Dt * 1/1000

Notes:

MW and log Kow from Oak Ridge National Laboratory (ORNL). June 2011. [Online]. Available: http://epa-prgs.ornl.gov/chemicals/index.shtml

1,4-dichlorobenzene used as surrogate for 1,3-dichlorobenzene.

Generated by: Martha White/ATL

Checked by: D. Stannard/WDC

TABLE G 7.6.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil*	Soil*	Soil*	Ingestion	Aluminum	9.1E+03	mg/kg	NA		NA		NA	1.2E-01	mg/kg/day	1.0E+00	mg/kg/day	1.2E-01
				Arsenic	3.9E+00	mg/kg	NA		NA		NA	5.0E-05	mg/kg/day	3.0E-04	mg/kg/day	1.7E-01
				Chromium	1.7E+01	mg/kg	NA		NA		NA	2.2E-04	mg/kg/day	3.0E-03	mg/kg/day	7.3E-02
				Iron	8.8E+03	mg/kg	NA		NA		NA	1.1E-01	mg/kg/day	7.0E-01	mg/kg/day	1.6E-01
				Manganese	8.2E+01	mg/kg	NA		NA		NA	1.1E-03	mg/kg/day	2.4E-02	mg/kg/day	4.4E-02
				Vanadium	2.1E+01	mg/kg	NA		NA		NA	2.7E-04	mg/kg/day	5.0E-03	mg/kg/day	5.5E-02
			Exp. Route Total								0.0E+00					6.1E-01
			Dermal Absorption[1]	Aluminum	9.1E+03	mg/kg	NA		NA		NA	3.3E-04	mg/kg/day	1.0E+00	mg/kg/day	3.3E-04
				Arsenic	3.9E+00	mg/kg	NA		NA		NA	4.2E-06	mg/kg/day	3.0E-04	mg/kg/day	1.4E-02
				Chromium	1.7E+01	mg/kg	NA		NA		NA	6.2E-07	mg/kg/day	7.5E-05	mg/kg/day	8.2E-03
				Iron	8.8E+03	mg/kg	NA		NA		NA	3.1E-04	mg/kg/day	7.0E-01	mg/kg/day	4.5E-04
				Manganese	8.2E+01	mg/kg	NA		NA		NA	3.0E-06	mg/kg/day	9.6E-04	mg/kg/day	3.1E-03
				Vanadium	2.1E+01	mg/kg	NA		NA		NA	7.7E-07	mg/kg/day	1.3E-04	mg/kg/day	5.9E-03
			Exp. Route Total								0.0E+00					3.2E-02
	Exposure Medium Total										0.0E+00					6.5E-01
	Air	Emissions from Soil*	Inhalation	Chromium	1.3E-08	mg/m^3	NA		NA		NA	1.2E-08	mg/kg/day	1.0E-04	mg/m3	1.2E-04
			Exp. Route Total								0.0E+00					1.2E-04
	Exposure Medium Total										0.0E+00					1.2E-04
Soil* Total											0.0E+00					6.5E-01
Groundwater	Groundwater	Surficial Aquifer - Tap Water	Ingestion	1,1,2,2-Tetrachloroethane	5.6E+00	ug/L	NA		NA		NA	3.6E-04	mg/kg/day	2.0E-02	mg/kg/day	1.8E-02
				1,1,2-Trichloroethane	4.5E+00	ug/L	NA		NA		NA	2.9E-04	mg/kg/day	4.0E-03	mg/kg/day	7.3E-02
				1,2-Dichloroethane	6.9E+00	ug/L	NA		NA		NA	4.4E-04	mg/kg/day	6.0E-03	mg/kg/day	7.4E-02
				1,3-Dichlorobenzene	4.3E-01	ug/L	NA		NA		NA	2.8E-05	mg/kg/day	NA	NA	NA
				1,4-Dichlorobenzene	3.3E+00	ug/L	NA		NA		NA	2.1E-04	mg/kg/day	7.0E-02	mg/kg/day	3.0E-03
				Benzene	5.8E-01	ug/L	NA		NA		NA	3.7E-05	mg/kg/day	4.0E-03	mg/kg/day	9.3E-03
				Chloroform	1.3E+00	ug/L	NA		NA		NA	8.3E-05	mg/kg/day	1.0E-02	mg/kg/day	8.3E-03
				cis-1,2-Dichloroethene	1.1E+02	ug/L	NA		NA		NA	7.3E-03	mg/kg/day	2.0E-03	mg/kg/day	3.7E+00
				Tetrachloroethene	1.9E-01	ug/L	NA		NA		NA	1.2E-05	mg/kg/day	1.0E-02	mg/kg/day	1.2E-03
				trans-1,2-Dichloroethene	2.1E+01	ug/L	NA		NA		NA	1.4E-03	mg/kg/day	2.0E-02	mg/kg/day	6.8E-02
				Trichloroethene	2.4E+00	ug/L	NA		NA		NA	1.5E-04	mg/kg/day	NA	NA	NA
				Vinyl chloride	1.3E+01	ug/L	NA		NA		NA	8.6E-04	mg/kg/day	3.0E-03	mg/kg/day	2.9E-01
				alpha-BHC	7.7E-02	ug/L	NA		NA		NA	4.9E-06	mg/kg/day	8.0E-03	mg/kg/day	6.2E-04
				Aroclor-1260	1.2E+00	ug/L	NA		NA		NA	7.7E-05	mg/kg/day	NA	NA	NA
				beta-BHC	1.9E-01	ug/L	NA		NA		NA	1.2E-05	mg/kg/day	NA	NA	NA
				delta-BHC	1.5E+00	ug/L	NA		NA		NA	9.6E-05	mg/kg/day	NA	NA	NA
				Heptachlor epoxide	7.9E-02	ug/L	NA		NA		NA	5.1E-06	mg/kg/day	1.3E-05	mg/kg/day	3.9E-01
				Iron	1.8E+04	ug/L	NA		NA		NA	1.2E+00	mg/kg/day	7.0E-01	mg/kg/day	1.7E+00
				Manganese	8.0E+02	ug/L	NA		NA		NA	5.1E-02	mg/kg/day	2.4E-02	mg/kg/day	2.1E+00

TABLE G 7.6.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater (cont'd)	Groundwater (cont'd)	Surficial Aquifer - Tap Water (cont'd)	Ingestion (cont'd)	Vanadium	2.3E+01	ug/L	NA		NA		NA	1.4E-03	mg/kg/day	5.0E-03	mg/kg/day	2.9E-01
				Zinc	4.6E+03	ug/L	NA		NA		NA	2.9E-01	mg/kg/day	3.0E-01	mg/kg/day	9.8E-01
			Exp. Route Total								0.0E+00					9.7E+00
			Dermal Absorption[2]	1,1,2,2-Tetrachloroethane	5.6E+00	ug/L	NA		NA		NA	4.4E-05	mg/kg/day	2.0E-02	mg/kg/day	2.2E-03
				1,1,2-Trichloroethane	4.5E+00	ug/L	NA		NA		NA	2.6E-05	mg/kg/day	4.0E-03	mg/kg/day	6.6E-03
				1,2-Dichloroethane	6.9E+00	ug/L	NA		NA		NA	2.2E-05	mg/kg/day	6.0E-03	mg/kg/day	3.6E-03
				1,3-Dichlorobenzene	4.3E-01	ug/L	NA		NA		NA	2.5E-05	mg/kg/day	NA	NA	NA
				1,4-Dichlorobenzene	3.3E+00	ug/L	NA		NA		NA	1.4E-04	mg/kg/day	7.0E-02	mg/kg/day	1.9E-03
				Benzene	5.8E-01	ug/L	NA		NA		NA	5.7E-06	mg/kg/day	4.0E-03	mg/kg/day	1.4E-03
				Chloroform	1.3E+00	ug/L	NA		NA		NA	7.3E-06	mg/kg/day	1.0E-02	mg/kg/day	7.3E-04
				cis-1,2-Dichloroethene	1.1E+02	ug/L	NA		NA		NA	9.2E-04	mg/kg/day	2.0E-03	mg/kg/day	4.6E-01
				Tetrachloroethene	1.9E-01	ug/L	NA		NA		NA	7.1E-06	mg/kg/day	1.0E-02	mg/kg/day	7.1E-04
				trans-1,2-Dichloroethene	2.1E+01	ug/L	NA		NA		NA	1.7E-04	mg/kg/day	2.0E-02	mg/kg/day	8.5E-03
				Trichloroethene	2.4E+00	ug/L	NA		NA		NA	2.4E-05	mg/kg/day	NA	NA	NA
				Vinyl chloride	1.3E+01	ug/L	NA		NA		NA	4.6E-05	mg/kg/day	3.0E-03	mg/kg/day	1.5E-02
				alpha-BHC	7.7E-02	ug/L	NA		NA		NA	3.9E-06	mg/kg/day	8.0E-03	mg/kg/day	4.9E-04
				Aroclor-1260	1.2E+00	ug/L	NA		NA		NA	2.3E-03	mg/kg/day	NA	NA	NA
				beta-BHC	1.9E-01	ug/L	NA		NA		NA	9.7E-06	mg/kg/day	NA	NA	NA
				delta-BHC	1.5E+00	ug/L	NA		NA		NA	7.6E-05	mg/kg/day	NA	NA	NA
				Heptachlor epoxide	7.9E-02	ug/L	NA		NA		NA	7.7E-06	mg/kg/day	1.3E-05	mg/kg/day	5.9E-01
				Iron	1.8E+04	ug/L	NA		NA		NA	7.7E-03	mg/kg/day	7.0E-01	mg/kg/day	1.1E-02
				Manganese	8.0E+02	ug/L	NA		NA		NA	3.4E-04	mg/kg/day	9.6E-04	mg/kg/day	3.5E-01
				Vanadium	2.3E+01	ug/L	NA		NA		NA	9.5E-06	mg/kg/day	1.3E-04	mg/kg/day	7.3E-02
				Zinc	4.6E+03	ug/L	NA		NA		NA	1.9E-03	mg/kg/day	3.0E-01	mg/kg/day	6.5E-03
			Exp. Route Total								0.0E+00					1.5E+00
		Exposure Point Total									0.0E+00					1.1E+01
	Exposure Medium Total										0.0E+00					1.1E+01
	Air	Surficial Aquifer Water Vapors at Showerhead	Inhalation	1,1,2,2-Tetrachloroethane	9.3E-03	mg/m^3	NA		NA		NA	3.7E-04	mg/m^3	NA	NA	NA
				1,1,2-Trichloroethane	1.1E-02	mg/m^3	NA		NA		NA	4.3E-04	mg/m^3	2.0E-04	mg/m3	2.1E+00
				1,2-Dichloroethane	2.0E-02	mg/m^3	NA		NA		NA	8.1E-04	mg/m^3	7.0E-03	mg/m3	1.2E-01
				1,3-Dichlorobenzene	1.1E-03	mg/m^3	NA		NA		NA	4.6E-05	mg/m^3	NA	NA	NA
				1,4-Dichlorobenzene	8.7E-03	mg/m^3	NA		NA		NA	3.5E-04	mg/m^3	8.0E-01	mg/m3	4.4E-04
				Benzene	2.2E-03	mg/m^3	NA		NA		NA	8.7E-05	mg/m^3	3.0E-02	mg/m3	2.9E-03
				Chloroform	3.9E-03	mg/m^3	NA		NA		NA	1.6E-04	mg/m^3	9.8E-02	mg/m3	1.6E-03
				cis-1,2-Dichloroethene	3.8E-01	mg/m^3	NA		NA		NA	1.5E-02	mg/m^3	NA	NA	NA
				Tetrachloroethene	5.1E-04	mg/m^3	NA		NA		NA	2.1E-05	mg/m^3	2.7E-01	mg/m3	7.6E-05
				trans-1,2-Dichloroethene	7.1E-02	mg/m^3	NA		NA		NA	2.8E-03	mg/m^3	6.0E-02	mg/m3	4.7E-02
				Trichloroethene	7.0E-03	mg/m^3	NA		NA		NA	2.8E-04	mg/m^3	1.0E-02	mg/m3	2.8E-02
				Vinyl chloride	5.7E-02	mg/m^3	NA		NA		NA	2.3E-03	mg/m^3	1.0E-01	mg/m3	2.3E-02

TABLE G 7.6.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
			Exp. Route Total								0.0E+00					2.4E+00
	Exposure Medium Total										0.0E+00					2.4E+00
Groundwater Surficial Aquifer Total											0.0E+00					1.4E+01
Groundwater	Groundwater	Castle-Hayne Aquifer - Tap Water	Ingestion	1,2,4-Trichlorobenzene	8.5E+00	ug/L	NA		NA		NA	5.4E-04	mg/kg/day	1.0E-02	mg/kg/day	5.4E-02
				1,2-Dichloroethane	1.7E+01	ug/L	NA		NA		NA	1.1E-03	mg/kg/day	6.0E-03	mg/kg/day	1.8E-01
				1,3-Dichlorobenzene	1.2E+00	ug/L	NA		NA		NA	7.7E-05	mg/kg/day	NA	NA	NA
				1,4-Dichlorobenzene	1.0E+00	ug/L	NA		NA		NA	6.4E-05	mg/kg/day	7.0E-02	mg/kg/day	9.1E-04
				Benzene	1.2E+00	ug/L	NA		NA		NA	7.7E-05	mg/kg/day	4.0E-03	mg/kg/day	1.9E-02
				Chloroform	4.0E+00	ug/L	NA		NA		NA	2.5E-04	mg/kg/day	1.0E-02	mg/kg/day	2.5E-02
				cis-1,2-Dichloroethene	4.3E+04	ug/L	NA		NA		NA	2.8E+00	mg/kg/day	2.0E-03	mg/kg/day	1.4E+03
				trans-1,2-Dichloroethene	6.4E+02	ug/L	NA		NA		NA	4.1E-02	mg/kg/day	2.0E-02	mg/kg/day	2.0E+00
				Trichloroethene	3.0E+01	ug/L	NA		NA		NA	1.9E-03	mg/kg/day	NA	NA	NA
				Vinyl chloride	4.7E+03	ug/L	NA		NA		NA	3.0E-01	mg/kg/day	3.0E-03	mg/kg/day	1.0E+02
				Aroclor-1260	3.4E-01	ug/L	NA		NA		NA	2.2E-05	mg/kg/day	NA	NA	NA
				Dieldrin	2.6E-02	ug/L	NA		NA		NA	1.7E-06	mg/kg/day	5.0E-05	mg/kg/day	3.3E-02
				Heptachlor epoxide	5.4E-02	ug/L	NA		NA		NA	3.5E-06	mg/kg/day	1.3E-05	mg/kg/day	2.7E-01
				Chromium	1.1E+01	ug/L	NA		NA		NA	6.7E-04	mg/kg/day	3.0E-03	mg/kg/day	2.2E-01
				Iron	7.6E+03	ug/L	NA		NA		NA	4.8E-01	mg/kg/day	7.0E-01	mg/kg/day	6.9E-01
				Thallium	5.6E+00	ug/L	NA		NA		NA	3.6E-04	mg/kg/day	1.0E-05	mg/kg/day	3.6E+01
			Exp. Route Total								0.0E+00					1.5E+03
			Dermal Absorption[2]	1,2,4-Trichlorobenzene	8.5E+00	ug/L	NA		NA		NA	6.9E-04	mg/kg/day	1.0E-02	mg/kg/day	6.9E-02
				1,2-Dichloroethane	1.7E+01	ug/L	NA		NA		NA	5.3E-05	mg/kg/day	6.0E-03	mg/kg/day	8.9E-03
				1,3-Dichlorobenzene	1.2E+00	ug/L	NA		NA		NA	6.9E-05	mg/kg/day	NA	NA	NA
				1,4-Dichlorobenzene	1.0E+00	ug/L	NA		NA		NA	4.1E-05	mg/kg/day	7.0E-02	mg/kg/day	5.9E-04
				Benzene	1.2E+00	ug/L	NA		NA		NA	1.2E-05	mg/kg/day	4.0E-03	mg/kg/day	2.9E-03
				Chloroform	4.0E+00	ug/L	NA		NA		NA	2.2E-05	mg/kg/day	1.0E-02	mg/kg/day	2.2E-03
				cis-1,2-Dichloroethene	4.3E+04	ug/L	NA		NA		NA	3.5E-01	mg/kg/day	2.0E-03	mg/kg/day	1.7E+02
				trans-1,2-Dichloroethene	6.4E+02	ug/L	NA		NA		NA	5.1E-03	mg/kg/day	2.0E-02	mg/kg/day	2.6E-01
				Trichloroethene	3.0E+01	ug/L	NA		NA		NA	3.1E-04	mg/kg/day	NA	NA	NA
				Vinyl chloride	4.7E+03	ug/L	NA		NA		NA	1.6E-02	mg/kg/day	3.0E-03	mg/kg/day	5.4E+00
				Aroclor-1260	3.4E-01	ug/L	NA		NA		NA	6.4E-04	mg/kg/day	NA	NA	NA
				Dieldrin	2.6E-02	ug/L	NA		NA		NA	1.4E-06	mg/kg/day	5.0E-05	mg/kg/day	2.8E-02
				Heptachlor epoxide	5.4E-02	ug/L	NA		NA		NA	5.3E-06	mg/kg/day	1.3E-05	mg/kg/day	4.1E-01
				Chromium	1.1E+01	ug/L	NA		NA		NA	4.4E-06	mg/kg/day	7.5E-05	mg/kg/day	5.9E-02
				Iron	7.6E+03	ug/L	NA		NA		NA	3.2E-03	mg/kg/day	7.0E-01	mg/kg/day	4.6E-03
				Thallium	5.6E+00	ug/L	NA		NA		NA	2.4E-06	mg/kg/day	1.0E-05	mg/kg/day	2.4E-01
			Exp. Route Total								0.0E+00					1.8E+02
		Exposure Point Total									0.0E+00					1.7E+03
	Exposure Medium Total										0.0E+00					1.7E+03

TABLE G 7.6.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater (cont'd)	Air	Castle-Hayne Aquifer Water Vapors at Showerhead	Inhalation	1,2,4-Trichlorobenzene	1.9E-02	mg/m^3	NA		NA		NA	7.7E-04	mg/m^3	2.0E-03	mg/m3	3.8E-01
				1,2-Dichloroethane	5.0E-02	mg/m^3	NA		NA		NA	2.0E-03	mg/m^3	2.4E+00	mg/m3	8.3E-04
				1,3-Dichlorobenzene	3.5E-03	mg/m^3	NA		NA		NA	1.4E-04	mg/m^3	NA	NA	NA
				1,4-Dichlorobenzene	2.6E-03	mg/m^3	NA		NA		NA	1.1E-04	mg/m^3	8.0E-01	mg/m3	1.3E-04
				Benzene	4.5E-03	mg/m^3	NA		NA		NA	1.8E-04	mg/m^3	3.0E-02	mg/m3	6.0E-03
				Chloroform	1.2E-02	mg/m^3	NA		NA		NA	4.8E-04	mg/m^3	9.8E-02	mg/m3	4.9E-03
				cis-1,2-Dichloroethene	1.4E+02	mg/m^3	NA		NA		NA	5.8E+00	mg/m^3	NA	NA	NA
				trans-1,2-Dichloroethene	2.1E+00	mg/m^3	NA		NA		NA	8.5E-02	mg/m^3	6.0E-02	mg/m3	1.4E+00
				Trichloroethene	9.0E-02	mg/m^3	NA		NA		NA	3.6E-03	mg/m^3	1.0E-02	mg/m3	3.6E-01
				Vinyl chloride	2.0E+01	mg/m^3	NA		NA		NA	8.0E-01	mg/m^3	1.0E-01	mg/m3	8.0E+00
			Exp. Route Total								0.0E+00					1.0E+01
	Exposure Medium Total										0.0E+00					1.0E+01
Groundwater Castle-Hayne Aquifer Total											0.0E+00					1.7E+03
										Total of Receptor Risks Across All Media	0.0E+00				Total of Receptor Hazards Across All Media	1.7E+03

Notes:

* Soil = combined surface and subsurface soil

1. Dermal absorption factors (DABs) used to calculated dermal absorption intake from soil are chemical specific as shown in RAGS Part E, Exhibit 3-4. DABS of 0.03 used for arsenic,0.001 for all other metals.

2. DAevent for dermal exposure to groundwater calculated on Tables 7.6.RME Supplements A and B.

3. Inhalation exposures calculated on Tables 7.6.RME Supplement C and D.

4. Total receptor risks and hazards includes higher of the Surficial Aquifer or Castle-Hayne Aquifer risks or hazards.

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Checked by: D. Stannard/WDC

TABLE G 7.6.RME SUPPLEMENT A

Calculation of DAevent - Child Resident, Surficial Aquifer Groundwater

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Water Concentration (CW) (µg/L)	Permeability Coefficient (Kp) (cm/hr)	B (dimensionless)	Lag Time (τ_{event}) (hr)	t* (hr)	Fraction Absorbed Water (FA) (dimensionless)	Duration of Event (t_{event}) (hr)	DA_{event} (mg/cm^2-event)	Eq
1,1,2,2-Tetrachloroethane	5.6E+00	6.9E-03	3.5E-02	9.3E-01	2.2E+00	1.0E+00	1	1.0E-07	2
1,1,2-Trichloroethane	4.5E+00	6.4E-03	2.9E-02	6.0E-01	1.4E+00	1.0E+00	1	6.2E-08	2
1,2-Dichloroethane	6.9E+00	4.2E-03	1.6E-02	3.8E-01	9.2E-01	1.0E+00	1	5.1E-08	3
1,3-Dichlorobenzene	4.3E-01	5.8E-02	2.7E-01	7.1E-01	1.7E+00	1.0E+00	1	5.8E-08	2
1,4-Dichlorobenzene	3.3E+00	4.2E-02	2.0E-01	7.1E-01	1.7E+00	1.0E+00	1	3.2E-07	2
Benzene	5.8E-01	1.5E-02	5.1E-02	2.9E-01	7.0E-01	1.0E+00	1	1.3E-08	3
Chloroform	1.3E+00	6.8E-03	2.9E-02	5.0E-01	1.2E+00	1.0E+00	1	1.7E-08	2
cis-1,2-Dichloroethene[1]	1.1E+02	1.10E-02	4.2E-02	3.7E-01	8.8E-01	1.0E+00	1	2.2E-06	3
Tetrachloroethene	1.9E-01	3.3E-02	1.7E-01	9.1E-01	2.2E+00	1.0E+00	1	1.7E-08	2
trans-1,2-Dichloroethene[1]	2.1E+01	1.10E-02	4.2E-02	3.7E-01	8.8E-01	1.0E+00	1	4.0E-07	3
Trichloroethene	2.4E+00	1.2E-02	5.1E-02	5.8E-01	1.4E+00	1.0E+00	1	5.8E-08	2
Vinyl chloride	1.3E+01	5.6E-03	1.7E-02	2.4E-01	5.7E-01	1.0E+00	1	1.1E-07	3
alpha-BHC[1]	7.7E-02	2.06E-02	1.4E-01	4.5E+00	1.1E+01	1.0E+00	1	9.3E-09	2
Aroclor-1260[2]	1.2E+00	7.5E-01	4.9E+00	4.6E+00	2.0E+01	1.0E+00	1	5.4E-06	2
beta-BHC[1]	1.9E-01	2.06E-02	1.4E-01	4.5E+00	1.1E+01	1.0E+00	1	2.3E-08	2
delta-BHC[1]	1.5E+00	2.06E-02	1.4E-01	4.5E+00	1.1E+01	1.0E+00	1	1.8E-07	2
Heptachlor epoxide[1]	7.9E-02	2.09E-02	1.6E-01	1.6E+01	3.8E+01	1.0E+00	1	1.8E-08	2
Iron	1.8E+04	1.0E-03	NA	NA	NA	NA	1	1.8E-05	1
Manganese	8.0E+02	1.0E-03	NA	NA	NA	NA	1	8.0E-07	1
Vanadium	2.3E+01	1.0E-03	NA	NA	NA	NA	1	2.3E-08	1
Zinc	4.6E+03	1.0E-03	NA	NA	NA	NA	1	4.6E-06	1

Inorganics: DA_{event} (mg/cm^2-event) =

Kp x CW x t_{event} x 0.001 mg/µg x 0.001 L/cm^3 (eq 1)

Organics: DAevent (mg/cm^2-event) =

If t_{event}<t*, then DA_{event} =

2 x FA x Kp x CW x (sqrt((6 x τ_{event} x t_{event})/π)) x 0.001 mg/µg x 0.001

If t_{event}>t*, then DA_{event} =

FA x Kp x CW x (t_{event}/(1+B) + 2 x τ_{event} x ((1 + 3xB + 3xB^2)/(1+B)^2) x 0.001 mg/µg x 0.001 L/cm^3 (eq 3)

Notes:

B - Dimensionless ratio of the permeability coefficient of a compound through the stratum corneum relative to its permeability coefficient across the viable epidermis (dimensionless).

NA - Not applicable

t* - Time to reach steady-state

Permeability constants from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005. The default value of 0.001 was assigned to inorganics not listed in this document.

[1] - B calculated using Equation A.1 (B = Kp * MW1/2/2.6) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

t_{event} calculated using Equation A.4 (t_{event} = lsc2/6Dsc = 0.105 × 10^[0.0056 MW]) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

Since B ≤ 0.6, then t* calculated using Equation A.4 (t* = 2.4 t_{event}) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

[2] - PCB-chlorobiphenyl, 4- used as a surrogate for Aroclor-1260.

Generated by: Martha White/ATL

Checked by: D. Stannard/WDC

TABLE G 7.6.RME SUPPLEMENT B

Calculation of DAevent - Child Resident, Castle Hayne Aquifer Groundwater

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Water Concentration (CW) (µg/L)	Permeability Coefficient (Kp) (cm/hr)	B (dimensionless)	Lag Time (τ_{event}) (hr)	t* (hr)	Fraction Absorbed Water (FA) (dimensionless)	Duration of Event (t_{event}) (hr)	DA_{event} (mg/cm^2-event)	Eq
1,2,4-Trichlorobenzene	8.5E+00	6.6E-02	3.4E-01	1.1E+00	2.7E+00	1.0E+00	1	1.6E-06	2
1,2-Dichloroethane	1.7E+01	4.2E-03	1.6E-02	3.8E-01	9.2E-01	1.0E+00	1	1.3E-07	3
1,3-Dichlorobenzene	1.2E+00	5.8E-02	2.7E-01	7.1E-01	1.7E+00	1.0E+00	1	1.6E-07	2
1,4-Dichlorobenzene	1.0E+00	4.2E-02	2.0E-01	7.1E-01	1.7E+00	1.0E+00	1	9.8E-08	2
Benzene	1.2E+00	1.5E-02	5.1E-02	2.9E-01	7.0E-01	1.0E+00	1	2.8E-08	3
Chloroform	4.0E+00	6.8E-03	2.9E-02	5.0E-01	1.2E+00	1.0E+00	1	5.3E-08	2
cis-1,2-Dichloroethene[1]	4.3E+04	1.10E-02	4.2E-02	3.7E-01	8.8E-01	1.0E+00	1	8.2E-04	3
trans-1,2-Dichloroethene[1]	6.4E+02	1.10E-02	4.2E-02	3.7E-01	8.8E-01	1.0E+00	1	1.2E-05	3
Trichloroethene	3.0E+01	1.2E-02	5.1E-02	5.8E-01	1.4E+00	1.0E+00	1	7.4E-07	2
Vinyl chloride	4.7E+03	5.6E-03	1.7E-02	2.4E-01	5.7E-01	1.0E+00	1	3.9E-05	3
Aroclor-1260[2]	3.4E-01	7.5E-01	4.9E+00	4.6E+00	2.0E+01	1.0E+00	1	1.5E-06	2
Dieldrin	2.6E-02	1.2E-02	9.2E-02	1.5E+01	3.5E+01	1.0E+00	1	3.4E-09	2
Heptachlor epoxide[1]	5.4E-02	2.09E-02	1.6E-01	1.6E+01	3.8E+01	1.0E+00	1	1.3E-08	2
Chromium	1.1E+01	1.0E-03	NA	NA	NA	1.0E+00	1	1.1E-08	1
Iron	7.6E+03	1.0E-03	NA	NA	NA	1.0E+00	1	7.6E-06	1
Thallium	5.6E+00	1.0E-03	NA	NA	NA	1.0E+00	1	5.6E-09	1

Inorganics: DA_{event} (mg/cm^2-event) =

Kp x CW x t_{event} x 0.001 mg/µg x 0.001 L/cm^3 (eq 1)

Organics: DAevent (mg/cm^2-event) =

If t_{event}<t*, then DA_{event} =

2 x FA x Kp x CW x (sqrt((6 x τ_{event} x t_{event})/π)) x 0.001 mg/µg x 0.001

If t_{event}>t*, then DA_{event} =

FA x Kp x CW x (t_{event}/(1+B) + 2 x τ_{event} x ((1 + 3xB + 3xB^2)/(1+B)^2) x 0.001 mg/µg x 0.001 L/cm^3 (eq 3)

Notes:

B - Dimensionless ratio of the permeability coefficient of a compound through the stratum corneum relative to its permeability coefficient across the viable epidermis (dimensionless).

NA - Not applicable

t* - Time to reach steady-state

Permeability constants from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005. The default value of 0.001 was assigned to inorganics not listed in this document.

[1] - B calculated using Equation A.1 (B = Kp * MW1/2/2.6) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

t_{event} calculated using Equation A.4 (t_{event} = lsc2/6Dsc = 0.105 × 10^[0.0056 MW]) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

Since B ≤ 0.6, then t* calculated using Equation A.4 (t* = 2.4 t_{event}) from EPA 2004, Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Final). EPA/540/R/99/005.

[2] - PCB-chlorobiphenyl, 4- used as a surrogate for Aroclor-1260.

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Checked by: D. Stannard/WDC

TABLE G 7.6.RME SUPPLEMENT C

Inhalation Exposure Concentrations from Foster and Chrostowski Shower Model—Surficial Groundwater Air, Child Resident

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Exposure Point Concentration Cwo (µg/L)	Molecular weight (MW) (g/mole)	Henry's Law Constant (H) (atm-m^3/mole)	Kg (VOC) (cm/hr)	Kl (VOC) (cm/hr)	KL (cm/hr)	Kal (cm/hr)	Cwd (µg/L)	S (µg/m^3 -min)	Ca (mg/m^3)
1,1,2,2-Tetrachloroethane	5.6E+00	1.7E+02	3.7E-04	9.8E+02	1.0E+01	6.1E+00	8.2E+00	3.7E-01	3.1E-01	9.3E-03
1,1,2-Trichloroethane	4.5E+00	1.3E+02	8.2E-04	1.1E+03	1.1E+01	8.8E+00	1.2E+01	4.3E-01	3.6E-01	1.1E-02
1,2-Dichloroethane	6.9E+00	9.9E+01	1.2E-03	1.3E+03	1.3E+01	1.1E+01	1.5E+01	8.1E-01	6.7E-01	2.0E-02
1,3-Dichlorobenzene	4.3E-01	1.5E+02	2.4E-03	1.0E+03	1.1E+01	9.9E+00	1.3E+01	4.6E-02	3.8E-02	1.1E-03
1,4-Dichlorobenzene	3.3E+00	1.5E+02	2.4E-03	1.0E+03	1.1E+01	9.9E+00	1.3E+01	3.5E-01	2.9E-01	8.7E-03
Benzene	5.8E-01	7.8E+01	5.6E-03	1.4E+03	1.5E+01	1.4E+01	1.9E+01	8.7E-02	7.2E-02	2.2E-03
Chloroform	1.3E+00	1.2E+02	3.7E-03	1.2E+03	1.2E+01	1.1E+01	1.5E+01	1.6E-01	1.3E-01	3.9E-03
cis-1,2-Dichloroethene	1.1E+02	9.7E+01	4.1E-03	1.3E+03	1.3E+01	1.3E+01	1.7E+01	1.5E+01	1.3E+01	3.8E-01
Tetrachloroethene	1.9E-01	1.7E+02	1.8E-02	9.9E+02	1.0E+01	1.0E+01	1.4E+01	2.1E-02	1.7E-02	5.1E-04
trans-1,2-Dichloroethene	2.1E+01	9.7E+01	4.1E-03	1.3E+03	1.3E+01	1.3E+01	1.7E+01	2.8E+00	2.4E+00	7.1E-02
Trichloroethene	2.4E+00	1.3E+02	9.9E-03	1.1E+03	1.2E+01	1.1E+01	1.5E+01	2.8E-01	2.3E-01	7.0E-03
Vinyl chloride	1.3E+01	6.3E+01	2.8E-02	1.6E+03	1.7E+01	1.7E+01	2.2E+01	2.3E+00	1.9E+00	5.7E-02

Variables	Units	Exposure Assumptions
Kg(VOC) = gas-film mass transfer coefficient	cm/hr	Solved by Eq 1
Kl(VOC) = liquid-film mass transfer coefficient	cm/hr	Solved by Eq 2
KL = overall mass transfer coefficient	cm/hr	Solved by Eq 3
Kal = adjusted overall mass transfer coeff.	cm/hr	Solved by Eq 4
Tl = Calibration temp. of water	K (20C +273)	293
Ts = Shower water temperature	k (45C)	318
Us = water viscosity at Ts	centipoise	0.596
Ul = water viscosity at Tl	cp	1.002
Cwd = conc. leaving droplets after time sdt	µg/l	Solved by Eq 5
sdt = shower droplet drop time	sec	0.5
d = shower droplet diameter	mm	1
FR = shower water flow rate	l/min	10
SV = shower room air volume	m^3	12
S = indoor VOC generation rate	µg/m^3-min	Solved by Eq 6
Ds = duration of shower	min	60
Dt = total duration in shower room	min	80
R = air exchange rate	min^{-1}	0.0083
Ca = indoor air concentration of VOCs	µg/m^3	Solved by Eq 7

Equation 1:	Kg(VOC) =	$3000 * (18 / MW)^{0.5}$
Equation 2:	Kl(VOC) =	$20 * (44 / MW)^{0.5}$
Equation 3:	KL =	$((1 / Kl(VOC)) + (0.024 / (Kg (VOC) * H)))^{-1}$
Equation 4:	Kal =	$(KL * (((Tl * Us) / (Ts * Ul))^{-0.5}))$
Equation 5:	Cwd =	(Cwo * (1-EXP((-1 * Kal * sdt)/(60 * d))))
Equation 6:	S =	(Cwd * FR / SV)
Equation 7:	Ca =	If t>Ds [(S / R) * (Ds + (EXP(-R * Dt) / R) -(EXP(R *(Ds - Dt)) / R)] / Dt * 1/1000

Notes:

MW and log Kow from Oak Ridge National Laboratory (ORNL). June 2011. [Online]. Available: http://epa-prgs.ornl.gov/chemicals/index.shtml

1,4-dichlorobenzene used as surrogate for 1,3-dichlorobenzene.

Generated by: Martha White/ATL

Checked by: D. Stannard/WDC

TABLE G 7.6.RME SUPPLEMENT D

Inhalation Exposure Concentrations from Foster and Chrostowski Shower Model—Castle Hayne Aquifer Groundwater Air, Child Resident

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Chemical of Potential Concern	Exposure Point Concentration Cwo (µg/L)	Molecular weight (MW) (g/mole)	Henry's Law Constant (H) (atm-m^3/mole)	Kg (VOC) (cm/hr)	Kl (VOC) (cm/hr)	KL (cm/hr)	Kal (cm/hr)	Cwd (µg/L)	S (µg/m^3 -min)	Ca (mg/m^3)
1,2,4-Trichlorobenzene	8.5E+00	1.8E+02	1.4E-03	9.4E+02	9.8E+00	8.4E+00	1.1E+01	7.6E-01	6.4E-01	1.9E-02
1,2-Dichloroethane	1.7E+01	9.9E+01	1.2E-03	1.3E+03	1.3E+01	1.1E+01	1.5E+01	2.0E+00	1.7E+00	5.0E-02
1,3-Dichlorobenzene	1.2E+00	1.5E+02	1.9E-01	1.0E+03	1.1E+01	1.1E+01	1.5E+01	1.4E-01	1.2E-01	3.5E-03
1,4-Dichlorobenzene	1.0E+00	1.5E+02	2.4E-03	1.0E+03	1.1E+01	9.9E+00	1.3E+01	1.1E-01	8.8E-02	2.6E-03
Benzene	1.2E+00	7.8E+01	5.6E-03	1.4E+03	1.5E+01	1.4E+01	1.9E+01	1.8E-01	1.5E-01	4.5E-03
Chloroform	4.0E+00	1.2E+02	3.7E-03	1.2E+03	1.2E+01	1.1E+01	1.5E+01	4.8E-01	4.0E-01	1.2E-02
cis-1,2-Dichloroethene	4.3E+04	9.7E+01	4.1E-03	1.3E+03	1.3E+01	1.3E+01	1.7E+01	5.8E+03	4.8E+03	1.4E+02
trans-1,2-Dichloroethene	6.4E+02	9.7E+01	4.1E-03	1.3E+03	1.3E+01	1.3E+01	1.7E+01	8.5E+01	7.1E+01	2.1E+00
Trichloroethene	3.0E+01	1.3E+02	9.9E-03	1.1E+03	1.2E+01	1.1E+01	1.5E+01	3.6E+00	3.0E+00	9.0E-02
Vinyl chloride	4.7E+03	6.3E+01	2.8E-02	1.6E+03	1.7E+01	1.7E+01	2.2E+01	8.0E+02	6.7E+02	2.0E+01

Variables	Units	Exposure Assumptions
Kg(VOC) = gas-film mass transfer coefficient	cm/hr	Solved by Eq 1
Kl(VOC) = liquid-film mass transfer coefficient	cm/hr	Solved by Eq 2
KL = overall mass transfer coefficient	cm/hr	Solved by Eq 3
Kal = adjusted overall mass transfer coeff.	cm/hr	Solved by Eq 4
Tl = Calibration temp. of water	K (20C +273)	293
Ts = Shower water temperature	k (45C)	318
Us = water viscosity at Ts	centipoise	0.596
Ul = water viscosity at Tl	cp	1.002
Cwd = conc. leaving droplets after time sdt	µg/l	Solved by Eq 5
sdt = shower droplet drop time	sec	0.5
d = shower droplet diameter	mm	1
FR = shower water flow rate	l/min	10
SV = shower room air volume	m^3	12
S = indoor VOC generation rate	µg/m^3-min	Solved by Eq 6
Ds = duration of shower	min	60
Dt = total duration in shower room	min	80
R = air exchange rate	min^{-1}	0.0083
Ca = indoor air concentration of VOCs	µg/m^3	Solved by Eq 7

Equation 1:	Kg(VOC) =	3000 * (18 / MW)$^{0.5}$
Equation 2:	Kl(VOC) =	20 * (44 / MW)$^{0.5}$
Equation 3:	KL =	((1 / Kl(VOC)) + (0.024 / (Kg (VOC) * H)))$^{-1}$
Equation 4:	Kal =	(KL * (((Tl * Us) / (Ts * Ul))$^{-0.5}$))
Equation 5:	Cwd =	(Cwo * (1-EXP((-1 * Kal * sdt)/(60 * d))))
Equation 6:	S =	(Cwd * FR / SV)
Equation 7:	Ca =	If t>Ds [(S / R) * (Ds + (EXP(-R * Dt) / R) -(EXP(R *(Ds - Dt)) / R)] / Dt * 1/1000

Notes:

MW and log Kow from Oak Ridge National Laboratory (ORNL). June 2011. [Online]. Available: http://epa-prgs.ornl.gov/chemicals/index.shtml

1,4-dichlorobenzene used as surrogate for 1,3-dichlorobenzene.

Generated by: Martha White/ATL

Checked by: D. Stannard/WDC

TABLE G 7.7.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil*	Soil*	Soil*	Ingestion	Aluminum	9.1E+03	mg/kg	1.4E-02	mg/kg/day	NA	NA	NA	NA		NA		NA
				Arsenic	3.9E+00	mg/kg	6.1E-06	mg/kg/day	1.5E+00	mg/kg/day	9.1E-06	NA		NA		NA
				Chromium[4]	1.7E+01	mg/kg			5.0E-01	mg/kg/day	5.8E-05	NA		NA		NA
				Iron	8.8E+03	mg/kg	1.4E-02	mg/kg/day	NA	NA	NA	NA		NA		NA
				Manganese	8.2E+01	mg/kg	1.3E-04	mg/kg/day	NA	NA	NA	NA		NA		NA
				Vanadium	2.1E+01	mg/kg	3.4E-05	mg/kg/day	NA	NA	NA	NA		NA		NA
			Exp. Route Total								6.7E-05					0.0E+00
			Dermal Absorption[1]	Aluminum	9.1E+03	mg/kg	4.5E-05	mg/kg/day	NA	NA	NA	NA		NA		NA
				Arsenic	3.9E+00	mg/kg	5.8E-07	mg/kg/day	1.5E+00	mg/kg/day	8.6E-07	NA		NA		NA
				Chromium[4]	1.7E+01	mg/kg			1.3E-02	mg/kg/day	2.8E-08	NA		NA		NA
				Iron	8.8E+03	mg/kg	4.3E-05	mg/kg/day	NA	NA	NA	NA		NA		NA
				Manganese	8.2E+01	mg/kg	4.1E-07	mg/kg/day	NA	NA	NA	NA		NA		NA
				Vanadium	2.1E+01	mg/kg	1.1E-07	mg/kg/day	NA	NA	NA	NA		NA		NA
			Exp. Route Total								8.9E-07					0.0E+00
	Exposure Medium Total										6.8E-05					0.0E+00
	Air	Emissions from Soil*	Inhalation	Chromium[4]	1.3E-08	mg/m^3			8.4E-02	(µg/m^3)$^{-1}$	1.9E-11	NA		NA		NA
			Exp. Route Total								1.9E-11					0.0E+00
	Exposure Medium Total										1.9E-11					0.0E+00
Soil* Total											6.8E-05					0.0E+00
Groundwater	Groundwater	Surficial Aquifer - Tap Water	Ingestion	1,1,2,2-Tetrachloroethane	5.6E+00	ug/L	8.3E-05	mg/kg/day	2.0E-01	mg/kg/day	1.7E-05	NA		NA		NA
				1,1,2-Trichloroethane	4.5E+00	ug/L	6.8E-05	mg/kg/day	5.7E-02	mg/kg/day	3.9E-06	NA		NA		NA
				1,2-Dichloroethane	6.9E+00	ug/L	1.0E-04	mg/kg/day	9.1E-02	mg/kg/day	9.4E-06	NA		NA		NA
				1,3-Dichlorobenzene	4.3E-01	ug/L	6.4E-06	mg/kg/day	NA	NA	NA	NA		NA		NA
				1,4-Dichlorobenzene	3.3E+00	ug/L	4.9E-05	mg/kg/day	5.4E-03	mg/kg/day	2.7E-07	NA		NA		NA
				Benzene	5.8E-01	ug/L	8.7E-06	mg/kg/day	5.5E-02	mg/kg/day	4.8E-07	NA		NA		NA
				Chloroform	1.3E+00	ug/L	1.9E-05	mg/kg/day	3.1E-02	mg/kg/day	6.0E-07	NA		NA		NA
				cis-1,2-Dichloroethene	1.1E+02	ug/L	1.7E-03	mg/kg/day	NA	NA	NA	NA		NA		NA
				Tetrachloroethene	1.9E-01	ug/L	2.8E-06	mg/kg/day	5.4E-01	mg/kg/day	1.5E-06	NA		NA		NA
				trans-1,2-Dichloroethene	2.1E+01	ug/L	3.2E-04	mg/kg/day	NA	NA	NA	NA		NA		NA
				Trichloroethene	2.4E+00	ug/L	3.5E-05	mg/kg/day	5.9E-03	mg/kg/day	2.1E-07	NA		NA		NA
				Vinyl chloride[4]	1.3E+01	ug/L			7.2E-01	mg/kg/day	2.0E-04	NA		NA		NA
				alpha-BHC	7.7E-02	ug/L	1.1E-06	mg/kg/day	6.3E+00	mg/kg/day	7.2E-06	NA		NA		NA
				Aroclor-1260	1.2E+00	ug/L	1.8E-05	mg/kg/day	2.0E+00	mg/kg/day	3.6E-05	NA		NA		NA
				beta-BHC	1.9E-01	ug/L	2.8E-06	mg/kg/day	1.8E+00	mg/kg/day	5.1E-06	NA		NA		NA
				delta-BHC	1.5E+00	ug/L	2.2E-05	mg/kg/day	NA	NA	NA	NA		NA		NA
				Heptachlor epoxide	7.9E-02	ug/L	1.2E-06	mg/kg/day	9.1E+00	mg/kg/day	1.1E-05	NA		NA		NA
				Iron	1.8E+04	ug/L	2.7E-01	mg/kg/day	NA	NA	NA	NA		NA		NA

TABLE G 7.7.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater (cont'd)	Groundwater (cont'd)	Surficial Aquifer - Tap Water (cont'd)	Ingestion (cont'd)	Manganese	8.0E+02	ug/L	1.2E-02	mg/kg/day	NA	NA	NA	NA		NA		NA
				Vanadium	2.3E+01	ug/L	3.4E-04	mg/kg/day	NA	NA	NA	NA		NA		NA
				Zinc	4.6E+03	ug/L	6.9E-02	mg/kg/day	NA	NA	NA	NA		NA		NA
			Exp. Route Total								2.9E-04					0.0E+00
			Dermal Absorption[2]	1,1,2,2-Tetrachloroethane	5.6E+00	ug/L	1.0E-05	mg/kg/day	2.0E-01	mg/kg/day	2.1E-06	NA		NA		NA
				1,1,2-Trichloroethane	4.5E+00	ug/L	6.3E-06	mg/kg/day	5.7E-02	mg/kg/day	3.6E-07	NA		NA		NA
				1,2-Dichloroethane	6.9E+00	ug/L	5.1E-06	mg/kg/day	9.1E-02	mg/kg/day	4.6E-07	NA		NA		NA
				1,3-Dichlorobenzene	4.3E-01	ug/L	5.8E-06	mg/kg/day	NA	NA	NA	NA		NA		NA
				1,4-Dichlorobenzene	3.3E+00	ug/L	3.2E-05	mg/kg/day	5.4E-03	mg/kg/day	1.8E-07	NA		NA		NA
				Benzene	5.8E-01	ug/L	1.3E-06	mg/kg/day	5.5E-02	mg/kg/day	7.2E-08	NA		NA		NA
				Chloroform	1.3E+00	ug/L	1.7E-06	mg/kg/day	3.1E-02	mg/kg/day	5.4E-08	NA		NA		NA
				cis-1,2-Dichloroethene	1.1E+02	ug/L	2.1E-04	mg/kg/day	NA	NA	NA	NA		NA		NA
				Tetrachloroethene	1.9E-01	ug/L	1.7E-06	mg/kg/day	5.4E-01	mg/kg/day	9.1E-07	NA		NA		NA
				trans-1,2-Dichloroethene	2.1E+01	ug/L	4.0E-05	mg/kg/day	NA	NA	NA	NA		NA		NA
				Trichloroethene	2.4E+00	ug/L	5.8E-06	mg/kg/day	5.9E-03	mg/kg/day	3.4E-08	NA		NA		NA
				Vinyl chloride[4]	1.3E+01	ug/L			7.2E-01	mg/kg/day	1.1E-05	NA		NA		NA
				alpha-BHC	7.7E-02	ug/L	9.3E-07	mg/kg/day	6.3E+00	mg/kg/day	5.9E-06	NA		NA		NA
				Aroclor-1260	1.2E+00	ug/L	5.4E-04	mg/kg/day	NA	NA	NA	NA		NA		NA
				beta-BHC	1.9E-01	ug/L	2.3E-06	mg/kg/day	1.8E+00	mg/kg/day	4.1E-06	NA		NA		NA
				delta-BHC	1.5E+00	ug/L	1.8E-05	mg/kg/day	NA	NA	NA	NA		NA		NA
				Heptachlor epoxide	7.9E-02	ug/L	1.8E-06	mg/kg/day	9.1E+00	mg/kg/day	1.7E-05	NA		NA		NA
				Iron	1.8E+04	ug/L	1.6E-03	mg/kg/day	NA	NA	NA	NA		NA		NA
				Manganese	8.0E+02	ug/L	6.8E-05	mg/kg/day	NA	NA	NA	NA		NA		NA
				Vanadium	2.3E+01	ug/L	1.9E-06	mg/kg/day	NA	NA	NA	NA		NA		NA
				Zinc	4.6E+03	ug/L	3.9E-04	mg/kg/day	NA	NA	NA	NA		NA		NA
			Exp. Route Total								4.2E-05					0.0E+00
		Exposure Point Total									3.3E-04					0.0E+00
	Exposure Medium Total										3.3E-04					0.0E+00

TABLE G 7.7.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater (cont'd)	Air	Surficial Aquifer Water Vapors at Showerhead	Inhalation	1,1,2,2-Tetrachloroethane	1.4E+02	µg/m^3	8.2E-02	µg/m^3	5.8E-05	(µg/m^3)$^{-1}$	4.8E-06	NA		NA		NA
				1,1,2-Trichloroethane	1.7E+02	µg/m^3	9.6E-02	µg/m^3	1.6E-05	(µg/m^3)$^{-1}$	1.5E-06	NA		NA		NA
				1,2-Dichloroethane	3.2E+02	µg/m^3	1.8E-01	µg/m^3	2.6E-05	(µg/m^3)$^{-1}$	4.7E-06	NA		NA		NA
				1,3-Dichlorobenzene	1.8E+01	µg/m^3	1.0E-02	µg/m^3	NA	(µg/m^3)$^{-1}$	NA	NA		NA		NA
				1,4-Dichlorobenzene	1.4E+02	µg/m^3	7.8E-02	µg/m^3	1.1E-05	(µg/m^3)$^{-1}$	8.5E-07	NA		NA		NA
				Benzene	3.4E+01	µg/m^3	1.9E-02	µg/m^3	7.8E-06	(µg/m^3)$^{-1}$	1.5E-07	NA		NA		NA
				Chloroform	6.1E+01	µg/m^3	3.5E-02	µg/m^3	2.3E-05	(µg/m^3)$^{-1}$	8.0E-07	NA		NA		NA
				cis-1,2-Dichloroethene	6.0E+03	µg/m^3	3.4E+00	µg/m^3	NA	(µg/m^3)$^{-1}$	NA	NA		NA		NA
				Tetrachloroethene	8.0E+00	µg/m^3	4.6E-03	µg/m^3	5.9E-06	(µg/m^3)$^{-1}$	2.7E-08	NA		NA		NA
				trans-1,2-Dichloroethene	1.1E+03	µg/m^3	6.3E-01	µg/m^3	NA	(µg/m^3)$^{-1}$	NA	NA		NA		NA
				Trichloroethene	1.1E+02	µg/m^3	6.2E-02	µg/m^3	2.0E-06	(µg/m^3)$^{-1}$	1.2E-07	NA		NA		NA
				Vinyl chloride	8.9E+02	µg/m^3	5.1E-01	µg/m^3	4.4E-06	(µg/m^3)$^{-1}$	2.2E-06	NA		NA		NA
			Exp. Route Total								1.5E-05					0.0E+00
	Exposure Medium Total										1.5E-05					0.0E+00
Groundwater Surficial Aquifer Total											3.5E-04					0.0E+00
Groundwater	Groundwater	Castle-Hayne Aquifer - Tap Water	Ingestion	1,2,4-Trichlorobenzene	8.5E+00	ug/L	1.3E-04	mg/kg/day	2.9E-02	mg/kg/day	3.7E-06	NA		NA		NA
				1,2-Dichloroethane	1.7E+01	ug/L	2.6E-04	mg/kg/day	9.1E-02	mg/kg/day	2.3E-05	NA		NA		NA
				1,3-Dichlorobenzene	1.2E+00	ug/L	1.8E-05	mg/kg/day	NA	NA	NA	NA		NA		NA
				1,4-Dichlorobenzene	1.0E+00	ug/L	1.5E-05	mg/kg/day	5.4E-03	mg/kg/day	8.1E-08	NA		NA		NA
				Benzene	1.2E+00	ug/L	1.8E-05	mg/kg/day	5.5E-02	mg/kg/day	9.9E-07	NA		NA		NA
				Chloroform	4.0E+00	ug/L	5.9E-05	mg/kg/day	3.1E-02	mg/kg/day	1.8E-06	NA		NA		NA
				cis-1,2-Dichloroethene	4.3E+04	ug/L	6.5E-01	mg/kg/day	NA	NA	NA	NA		NA		NA
				trans-1,2-Dichloroethene	6.4E+02	ug/L	9.6E-03	mg/kg/day	NA	NA	NA	NA		NA		NA
				Trichloroethene	3.0E+01	ug/L	4.5E-04	mg/kg/day	5.9E-03	mg/kg/day	2.6E-06	NA		NA		NA
				Vinyl chloride[4]	4.7E+03	ug/L			7.2E-01	mg/kg/day	6.9E-02	NA		NA		NA
				Aroclor-1260	3.4E-01	ug/L	5.1E-06	mg/kg/day	2.0E+00	mg/kg/day	1.0E-05	NA		NA		NA
				Dieldrin	2.6E-02	ug/L	3.9E-07	mg/kg/day	1.6E+01	mg/kg/day	6.2E-06	NA		NA		NA
				Heptachlor epoxide	5.4E-02	ug/L	8.1E-07	mg/kg/day	9.1E+00	mg/kg/day	7.4E-06	NA		NA		NA
				Chromium[4]	1.1E+01	ug/L			5.0E-01	mg/kg/day	2.4E-04	NA		NA		NA
				Iron	7.6E+03	ug/L	1.1E-01	mg/kg/day	NA	NA	NA	NA		NA		NA
				Thallium	5.6E+00	ug/L	8.4E-05	mg/kg/day	NA	NA	NA	NA		NA		NA
			Exp. Route Total								6.9E-02					0.0E+00

TABLE G 7.7.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater (cont'd)	Groundwater (cont'd)	Castle-Hayne Aquifer - Tap Water (cont'd)	Dermal Absorption[2]	1,2,4-Trichlorobenzene	8.5E+00	ug/L	1.7E-04	mg/kg/day	2.9E-02	mg/kg/day	4.8E-06	NA		NA		NA
				1,2-Dichloroethane	1.7E+01	ug/L	1.2E-05	mg/kg/day	9.1E-02	mg/kg/day	1.1E-06	NA		NA		NA
				1,3-Dichlorobenzene	1.2E+00	ug/L	1.6E-05	mg/kg/day	NA	NA	NA	NA		NA		NA
				1,4-Dichlorobenzene	1.0E+00	ug/L	9.8E-06	mg/kg/day	5.4E-03	mg/kg/day	5.3E-08	NA		NA		NA
				Benzene	1.2E+00	ug/L	2.7E-06	mg/kg/day	5.5E-02	mg/kg/day	1.5E-07	NA		NA		NA
				Chloroform	4.0E+00	ug/L	5.3E-06	mg/kg/day	3.1E-02	mg/kg/day	1.6E-07	NA		NA		NA
				cis-1,2-Dichloroethene	4.3E+04	ug/L	8.1E-02	mg/kg/day	NA	NA	NA	NA		NA		NA
				trans-1,2-Dichloroethene	6.4E+02	ug/L	1.2E-03	mg/kg/day	NA	NA	NA	NA		NA		NA
				Trichloroethene	3.0E+01	ug/L	7.4E-05	mg/kg/day	5.9E-03	mg/kg/day	4.4E-07	NA		NA		NA
				Vinyl chloride[4]	4.7E+03	ug/L			7.2E-01	mg/kg/day	7.2E-05	NA		NA		NA
				Aroclor-1260	3.4E-01	ug/L	1.5E-04	mg/kg/day	NA	NA	NA	NA		NA		NA
				Dieldrin	2.6E-02	ug/L	3.4E-07	mg/kg/day	1.6E+01	mg/kg/day	5.4E-06	NA		NA		NA
				Heptachlor epoxide	5.4E-02	ug/L	1.3E-06	mg/kg/day	9.1E+00	mg/kg/day	1.1E-05	NA		NA		NA
				Chromium[4]	1.1E+01	ug/L			1.3E-02	mg/kg/day	5.9E-06	NA		NA		NA
				Iron	7.6E+03	ug/L	6.4E-04	mg/kg/day	NA	NA	NA	NA		NA		NA
				Thallium	5.6E+00	ug/L	4.8E-07	mg/kg/day	NA	NA	NA	NA		NA		NA
			Exp. Route Total								1.0E-04					0.0E+00
		Exposure Point Total									6.9E-02					0.0E+00
	Exposure Medium Total										6.9E-02					0.0E+00
	Air	Castle-Hayne Aquifer Water Vapors at Showerhead	Inhalation	1,2,4-Trichlorobenzene	3.0E+02	$\mu g/m^3$	1.7E-01	$\mu g/m^3$	NA	NA	NA	NA		NA		NA
				1,2-Dichloroethane	7.8E+02	$\mu g/m^3$	4.4E-01	$\mu g/m^3$	2.6E-05	$(\mu g/m^3)^{-1}$	1.2E-05	NA		NA		NA
				1,3-Dichlorobenzene	5.5E+01	$\mu g/m^3$	3.1E-02	$\mu g/m^3$	NA	NA	NA	NA		NA		NA
				1,4-Dichlorobenzene	4.1E+01	$\mu g/m^3$	2.3E-02	$\mu g/m^3$	1.1E-05	$(\mu g/m^3)^{-1}$	2.6E-07	NA		NA		NA
				Benzene	7.0E+01	$\mu g/m^3$	4.0E-02	$\mu g/m^3$	7.8E-06	$(\mu g/m^3)^{-1}$	3.1E-07	NA		NA		NA
				Chloroform	1.9E+02	$\mu g/m^3$	1.1E-01	$\mu g/m^3$	2.3E-05	$(\mu g/m^3)^{-1}$	2.4E-06	NA		NA		NA
				cis-1,2-Dichloroethene	2.2E+06	$\mu g/m^3$	1.3E+03	$\mu g/m^3$	NA	NA	NA	NA		NA		NA
				trans-1,2-Dichloroethene	3.3E+04	$\mu g/m^3$	1.9E+01	$\mu g/m^3$	NA	NA	NA	NA		NA		NA
				Trichloroethene	1.4E+03	$\mu g/m^3$	8.0E-01	$\mu g/m^3$	2.0E-06	$(\mu g/m^3)^{-1}$	1.6E-06	NA		NA		NA
				Vinyl chloride	3.1E+05	$\mu g/m^3$	1.8E+02	$\mu g/m^3$	4.4E-06	$(\mu g/m^3)^{-1}$	7.8E-04	NA		NA		NA
			Exp. Route Total								8.0E-04					0.0E+00
	Exposure Medium Total										8.0E-04					0.0E+00
Groundwater Castle-Hayne Aquifer Total											7.0E-02					0.0E+00
										Total of Receptor Risks Across All Media	7.0E-02				Total of Receptor Hazards Across All Media	0.0E+00

TABLE G 7.7.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	

Notes:

* Soil = combined surface and subsurface soil

1. Dermal absorption factors (DABs) used to calculated dermal absorption intake from soil are chemical specific as shown in RAGS Part E, Exhibit 3-4. DABS of 0.03 used for arsenic,0.001 for all other metals.
2. DAevent for dermal exposure to groundwater calculated on Tables 7.5.RME and 7.6.RME Supplements A and B.
3. Inhalation exposures calculated on Tables 7.5.RME and 7.6.RME Supplements C and D.
4. See Table 7.7.RME Supplement A for calculation of intake and cancer risk following MMOA method.
5. Total receptor risks and hazards includes higher of the Surficial Aquifer or Castle-Hayne Aquifer risks or hazards.

Generated by: Martha White/ATL
Checked by: D. Stannard/WDC

TABLE G 7.7.RME SUPPLEMENT A

Calculation of Chemical Cancer Risks for COPC With Mutagenic Mode of Action—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations										
							Intake					CSF/Unit Risk					Cancer Risk
							Value				Units	Value				Units	
					Value	Units	0-2 years	2-6 years	6-16 years	16-30 years		0-2 years (ADAF=10)	2-6 years (ADAF=3)	6-16 years (ADAF=3)	16-30 years (ADAF=1)		
Soil	Soil	Soil*	Ingestion	Chromium	1.7E+01	mg/kg	6.3E-06	1.3E-05	3.4E-06	4.7E-06	mg/kg/day	5.0E+00	1.5E+00	1.5E+00	5.0E-01	1/(mg/kg-day)	5.8E-05
			Dermal	Chromium	1.7E+01	mg/kg	8.8E-08	1.8E-07	1.9E-07	2.7E-07	mg/kg/day	1.3E-01	3.8E-02	3.8E-02	1.3E-02	1/(mg/kg-day)	2.8E-08
	Air	Emissions from Soil*	Inhalation	Chromium	1.3E-08	mg/m3	1.4E-11	2.9E-11	7.2E-11	5.9E-11	mg/kg/day	8.4E-01	2.5E-01	2.5E-01	8.4E-02	1/(mg/kg-day)	1.9E-11
Groundwater	Groundwater	Surficial Aquifer - Tap Water	Ingestion	Vinyl Chloride	1.3E+01	ug/L	7.3E-05		1.3E-04		mg/kg/day	1.5E+00		7.2E-01		1/(mg/kg-day)	2.0E-04
			Dermal	Vinyl Chloride	1.3E+01	ug/L	4.0E-06		6.7E-06		mg/kg/day	1.5E+00		7.2E-01		1/(mg/kg-day)	1.1E-05
		Castle-Hayne Aquifer - Tap Water	Ingestion	Vinyl Chloride	4.7E+03	ug/L	2.6E-02		4.4E-02		mg/kg/day	1.5E+00		7.2E-01		1/(mg/kg-day)	6.9E-02
				Chromium	1.1E+01	ug/L	1.9E-05	3.8E-05	4.1E-05	5.8E-05	mg/kg/day	5.0E+00	1.5E+00	1.5E+00	5.0E-01	1/(mg/kg-day)	2.4E-04
			Dermal	Vinyl Chloride	4.7E+03	ug/L	2.9E-05		3.9E-05		mg/kg/day	1.5E+00		7.2E-01		1/(mg/kg-day)	7.2E-05
				Chromium	1.1E+01	ug/L	1.8E-05	3.7E-05	4.1E-05	5.7E-05	mg/kg/day	1.3E-01	3.8E-02	3.8E-02	1.3E-02	1/(mg/kg-day)	5.9E-06

Generated by: Martha White/ATL
Checked by: Debbie Stannard/WDC

TABLE G 7.8.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil*	Soil*	Soil*	Ingestion	Aluminum	9.1E+03	mg/kg	3.2E-03	mg/kg/day	NA	NA	NA	8.9E-03	mg/kg/day	1.0E+00	mg/kg/day	8.9E-03
				Arsenic	3.9E+00	mg/kg	1.4E-06	mg/kg/day	1.5E+00	mg/kg/day	2.0E-06	3.8E-06	mg/kg/day	3.0E-04	mg/kg/day	1.3E-02
				Chromium	1.7E+01	mg/kg	6.0E-06	mg/kg/day	5.0E-01	mg/kg/day	3.0E-06	1.7E-05	mg/kg/day	3.0E-03	mg/kg/day	5.6E-03
				Iron	8.8E+03	mg/kg	3.1E-03	mg/kg/day	NA	NA	NA	8.6E-03	mg/kg/day	7.0E-01	mg/kg/day	1.2E-02
				Manganese	8.2E+01	mg/kg	2.9E-05	mg/kg/day	NA	NA	NA	8.1E-05	mg/kg/day	2.4E-02	mg/kg/day	3.4E-03
				Vanadium	2.1E+01	mg/kg	7.5E-06	mg/kg/day	NA	NA	NA	2.1E-05	mg/kg/day	5.0E-03	mg/kg/day	4.2E-03
			Exp. Route Total								5.0E-06					4.7E-02
			Dermal Absorption[1]	Aluminum	9.1E+03	mg/kg	2.1E-05	mg/kg/day	NA	NA	NA	5.9E-05	mg/kg/day	1.0E+00	mg/kg/day	5.9E-05
				Arsenic	3.9E+00	mg/kg	2.7E-07	mg/kg/day	1.5E+00	mg/kg/day	4.0E-07	7.5E-07	mg/kg/day	3.0E-04	mg/kg/day	2.5E-03
				Chromium	1.7E+01	mg/kg	4.0E-08	mg/kg/day	1.3E-02	mg/kg/day	5.0E-10	1.1E-07	mg/kg/day	7.5E-05	mg/kg/day	1.5E-03
				Iron	8.8E+03	mg/kg	2.0E-05	mg/kg/day	NA	NA	NA	5.7E-05	mg/kg/day	7.0E-01	mg/kg/day	8.1E-05
				Manganese	8.2E+01	mg/kg	1.9E-07	mg/kg/day	NA	NA	NA	5.3E-07	mg/kg/day	9.6E-04	mg/kg/day	5.5E-04
				Vanadium	2.1E+01	mg/kg	4.9E-08	mg/kg/day	NA	NA	NA	1.4E-07	mg/kg/day	1.3E-04	mg/kg/day	1.1E-03
			Exp. Route Total								4.0E-07					5.7E-03
	Exposure Medium Total										5.4E-06					5.3E-02
	Air	Emissions from Soil*	Inhalation	Chromium	1.3E-08	mg/m^3	1.0E-09	mg/kg/day	8.4E-02	(ug/m3)-1	8.7E-08	2.9E-09	mg/kg/day	1.0E-04	mg/m3	2.9E-05
			Exp. Route Total								8.7E-08					2.9E-05
	Exposure Medium Total										8.7E-08					2.9E-05
Soil* Total											5.5E-06					5.3E-02
Groundwater	Groundwater	Surficial Aquifer - Tap Water	Ingestion	1,1,2,2-Tetrachloroethan	5.6E+00	ug/L	2.0E-05	mg/kg/day	2.0E-01	mg/kg/day	3.9E-06	5.5E-05	mg/kg/day	2.0E-02	mg/kg/day	2.7E-03
				1,1,2-Trichloroethane	4.5E+00	ug/L	1.6E-05	mg/kg/day	5.7E-02	mg/kg/day	9.1E-07	4.4E-05	mg/kg/day	4.0E-03	mg/kg/day	1.1E-02
				1,2-Dichloroethane	6.9E+00	ug/L	2.4E-05	mg/kg/day	9.1E-02	mg/kg/day	2.2E-06	6.8E-05	mg/kg/day	6.0E-03	mg/kg/day	1.1E-02
				1,3-Dichlorobenzene	4.3E-01	ug/L	1.5E-06	mg/kg/day	NA	NA	NA	4.2E-06	mg/kg/day	NA	NA	NA
				1,4-Dichlorobenzene	3.3E+00	ug/L	1.2E-05	mg/kg/day	5.4E-03	mg/kg/day	6.2E-08	3.2E-05	mg/kg/day	7.0E-02	mg/kg/day	4.6E-04
				Benzene	5.8E-01	ug/L	2.0E-06	mg/kg/day	5.5E-02	mg/kg/day	1.1E-07	5.7E-06	mg/kg/day	4.0E-03	mg/kg/day	1.4E-03
				Chloroform	1.3E+00	ug/L	4.5E-06	mg/kg/day	3.1E-02	mg/kg/day	1.4E-07	1.3E-05	mg/kg/day	1.0E-02	mg/kg/day	1.3E-03
				cis-1,2-Dichloroethene	1.1E+02	ug/L	4.0E-04	mg/kg/day	NA	NA	NA	1.1E-03	mg/kg/day	2.0E-03	mg/kg/day	5.6E-01
				Tetrachloroethene	1.9E-01	ug/L	6.6E-07	mg/kg/day	5.4E-01	mg/kg/day	3.6E-07	1.9E-06	mg/kg/day	1.0E-02	mg/kg/day	1.9E-04
				trans-1,2-Dichloroethene	2.1E+01	ug/L	7.4E-05	mg/kg/day	NA	NA	NA	2.1E-04	mg/kg/day	2.0E-02	mg/kg/day	1.0E-02
				Trichloroethene	2.4E+00	ug/L	8.2E-06	mg/kg/day	5.9E-03	mg/kg/day	4.8E-08	2.3E-05	mg/kg/day	NA	NA	NA
				Vinyl chloride	1.3E+01	ug/L	4.7E-05	mg/kg/day	7.2E-01	mg/kg/day	3.4E-05	1.3E-04	mg/kg/day	3.0E-03	mg/kg/day	4.4E-02
				alpha-BHC	7.7E-02	ug/L	2.7E-07	mg/kg/day	6.3E+00	mg/kg/day	1.7E-06	7.5E-07	mg/kg/day	8.0E-03	mg/kg/day	9.4E-05
				Aroclor-1260	1.2E+00	ug/L	4.2E-06	mg/kg/day	2.0E+00	mg/kg/day	8.4E-06	1.2E-05	mg/kg/day	NA	NA	NA
				beta-BHC	1.9E-01	ug/L	6.6E-07	mg/kg/day	1.8E+00	mg/kg/day	1.2E-06	1.9E-06	mg/kg/day	NA	NA	NA
				delta-BHC	1.5E+00	ug/L	5.2E-06	mg/kg/day	NA	NA	NA	1.5E-05	mg/kg/day	NA	NA	NA
				Heptachlor epoxide	7.9E-02	ug/L	2.8E-07	mg/kg/day	9.1E+00	mg/kg/day	2.5E-06	7.7E-07	mg/kg/day	1.3E-05	mg/kg/day	5.9E-02

TABLE G 7.8.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater (cont'd)	Groundwater (cont'd)	Surficial Aquifer - Tap Water (cont'd)	Ingestion	Iron	1.8E+04	ug/L	6.4E-02	mg/kg/day	NA	NA	NA	1.8E-01	mg/kg/day	7.0E-01	mg/kg/day	2.6E-01
				Manganese	8.0E+02	ug/L	2.8E-03	mg/kg/day	NA	NA	NA	7.8E-03	mg/kg/day	2.4E-02	mg/kg/day	3.3E-01
				Vanadium	2.3E+01	ug/L	7.9E-05	mg/kg/day	NA	NA	NA	2.2E-04	mg/kg/day	5.0E-03	mg/kg/day	4.4E-02
				Zinc	4.6E+03	ug/L	1.6E-02	mg/kg/day	NA	NA	NA	4.5E-02	mg/kg/day	3.0E-01	mg/kg/day	1.5E-01
			Exp. Route Total								5.5E-05					1.5E+00
Groundwater Surficial Aquifer Total											5.5E-05					1.5E+00
Groundwater	Groundwater	Castle-Hayne Aquifer - Tap Water	Ingestion	1,2,4-Trichlorobenzene	8.5E+00	ug/L	3.0E-05	mg/kg/day	2.9E-02	mg/kg/day	8.6E-07	8.3E-05	mg/kg/day	1.0E-02	mg/kg/day	8.3E-03
				1,2-Dichloroethane	1.7E+01	ug/L	6.0E-05	mg/kg/day	9.1E-02	mg/kg/day	5.4E-06	1.7E-04	mg/kg/day	6.0E-03	mg/kg/day	2.8E-02
				1,3-Dichlorobenzene	1.2E+00	ug/L	4.2E-06	mg/kg/day	NA	NA	NA	1.2E-05	mg/kg/day	NA	NA	NA
				1,4-Dichlorobenzene	1.0E+00	ug/L	3.5E-06	mg/kg/day	5.4E-03	mg/kg/day	1.9E-08	9.8E-06	mg/kg/day	7.0E-02	mg/kg/day	1.4E-04
				Benzene	1.2E+00	ug/L	4.2E-06	mg/kg/day	5.5E-02	mg/kg/day	2.3E-07	1.2E-05	mg/kg/day	4.0E-03	mg/kg/day	2.9E-03
				Chloroform	4.0E+00	ug/L	1.4E-05	mg/kg/day	3.1E-02	mg/kg/day	4.3E-07	3.9E-05	mg/kg/day	1.0E-02	mg/kg/day	3.9E-03
				cis-1,2-Dichloroethene	4.3E+04	ug/L	1.5E-01	mg/kg/day	NA	NA	NA	4.2E-01	mg/kg/day	2.0E-03	mg/kg/day	2.1E+02
				trans-1,2-Dichloroethene	6.4E+02	ug/L	2.2E-03	mg/kg/day	NA	NA	NA	6.3E-03	mg/kg/day	2.0E-02	mg/kg/day	3.1E-01
				Trichloroethene	3.0E+01	ug/L	1.1E-04	mg/kg/day	5.9E-03	mg/kg/day	6.2E-07	2.9E-04	mg/kg/day	NA	NA	NA
				Vinyl chloride	4.7E+03	ug/L	1.6E-02	mg/kg/day	7.2E-01	mg/kg/day	1.2E-02	4.6E-02	mg/kg/day	3.0E-03	mg/kg/day	1.5E+01
				Aroclor-1260	3.4E-01	ug/L	1.2E-06	mg/kg/day	2.0E+00	mg/kg/day	2.4E-06	3.3E-06	mg/kg/day	NA	NA	NA
				Dieldrin	2.6E-02	ug/L	9.1E-08	mg/kg/day	1.6E+01	mg/kg/day	1.5E-06	2.5E-07	mg/kg/day	5.0E-05	mg/kg/day	5.1E-03
				Heptachlor epoxide	5.4E-02	ug/L	1.9E-07	mg/kg/day	9.1E+00	mg/kg/day	1.7E-06	5.3E-07	mg/kg/day	1.3E-05	mg/kg/day	4.1E-02
				Chromium	1.1E+01	ug/L	3.7E-05	mg/kg/day	5.0E-01	mg/kg/day	1.8E-05	1.0E-04	mg/kg/day	3.0E-03	mg/kg/day	3.4E-02
				Iron	7.6E+03	ug/L	2.6E-02	mg/kg/day	NA	NA	NA	7.4E-02	mg/kg/day	7.0E-01	mg/kg/day	1.1E-01
				Thallium	5.6E+00	ug/L	2.0E-05	mg/kg/day	NA	NA	NA	5.5E-05	mg/kg/day	1.0E-05	mg/kg/day	5.5E+00
			Exp. Route Total								1.2E-02					2.3E+02
Groundwater Castle Hayne Aquifer Total											1.2E-02					2.3E+02
										Total of Receptor Risks Across All Media	1.2E-02				Total of Receptor Hazards Across All Media	2.3E+02

Notes:

1. Dermal absorption factors (DABs) used to calculated dermal absorption intake from soil are chemical specific as shown in RAGS Part E, Exhibit 3-4. DABS of 0.03 used for arsenic,0.001 for all other metals.
2. Total receptor risks and hazards includes higher of the Surficial Aquifer or Castle-Hayne Aquifer risks or hazards.

Generated by: Martha White/ATL
Checked by: D. Stannard/WDC

TABLE G 7.9.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil*	Soil*	Soil*	Ingestion	Aluminum	9.1E+03	mg/kg	6.4E-04	mg/kg/day	NA	NA	NA	1.9E-03	mg/kg/day	1.0E+00	mg/kg/day	1.9E-03
				Arsenic	3.9E+00	mg/kg	2.7E-07	mg/kg/day	1.5E+00	mg/kg/day	4.1E-07	7.9E-07	mg/kg/day	3.0E-04	mg/kg/day	2.6E-03
				Chromium	1.7E+01	mg/kg	1.2E-06	mg/kg/day	5.0E-01	mg/kg/day	6.0E-07	3.5E-06	mg/kg/day	3.0E-03	mg/kg/day	1.2E-03
				Iron	8.8E+03	mg/kg	6.1E-04	mg/kg/day	NA	NA	NA	1.8E-03	mg/kg/day	7.0E-01	mg/kg/day	2.5E-03
				Manganese	8.2E+01	mg/kg	5.8E-06	mg/kg/day	NA	NA	NA	1.7E-05	mg/kg/day	2.4E-02	mg/kg/day	7.0E-04
				Vanadium	2.1E+01	mg/kg	1.5E-06	mg/kg/day	NA	NA	NA	4.4E-06	mg/kg/day	5.0E-03	mg/kg/day	8.7E-04
			Exp. Route Total								1.0E-06					9.8E-03
			Dermal Absorption[2]	Aluminum	9.1E+03	mg/kg	2.5E-06	mg/kg/day	NA	NA	NA	7.4E-06	mg/kg/day	1.0E+00	mg/kg/day	7.4E-06
				Arsenic	3.9E+00	mg/kg	3.2E-08	mg/kg/day	1.5E+00	mg/kg/day	4.9E-08	9.5E-08	mg/kg/day	3.0E-04	mg/kg/day	3.2E-04
				Chromium	1.7E+01	mg/kg	4.8E-09	mg/kg/day	1.3E-02	mg/kg/day	6.0E-11	1.4E-08	mg/kg/day	7.5E-05	mg/kg/day	1.9E-04
				Iron	8.8E+03	mg/kg	2.4E-06	mg/kg/day	NA	NA	NA	7.1E-06	mg/kg/day	7.0E-01	mg/kg/day	1.0E-05
				Manganese	8.2E+01	mg/kg	2.3E-08	mg/kg/day	NA	NA	NA	6.7E-08	mg/kg/day	9.6E-04	mg/kg/day	7.0E-05
				Vanadium	2.1E+01	mg/kg	6.0E-09	mg/kg/day	NA	NA	NA	1.7E-08	mg/kg/day	1.3E-04	mg/kg/day	1.3E-04
			Exp. Route Total								4.9E-08					7.2E-04
	Exposure Medium Total										1.1E-06					1.0E-02
	Air	Emissions from Soil*	Inhalation	Chromium	1.3E-08	mg/m^3	5.1E-11	mg/kg/day	8.4E-02	(ug/m3)-1	4.3E-09	1.5E-10	mg/kg/day	1.0E-04	mg/m3	1.5E-06
			Exp. Route Total								4.3E-09					1.5E-06
	Exposure Medium Total										4.3E-09					1.5E-06
Soil* Total											1.1E-06					1.0E-02
Surface Water	Surface Water	Drainage Ditches/Marshy Area	Ingestion	Iron	7.5E+02	ug/L	1.0E-05	mg/kg/day	NA	NA	NA	3.1E-05	mg/kg/day	7.0E-01	mg/kg/day	4.4E-05
				Thallium	6.9E+00	ug/L	9.6E-08	mg/kg/day	NA	NA	NA	2.8E-07	mg/kg/day	1.0E-05	mg/kg/day	2.8E-02
			Exp. Route Total								0.0E+00					2.8E-02
			Dermal Absorption[1]	Iron	7.5E+02	ug/L	1.0E-09	mg/kg/day	NA	NA	NA	4.0E-06	mg/kg/day	7.0E-01	mg/kg/day	5.8E-06
				Thallium	6.9E+00	ug/L	9.6E-12	mg/kg/day	NA	NA	NA	3.7E-08	mg/kg/day	1.0E-05	mg/kg/day	3.7E-03
			Exp. Route Total								0.0E+00					3.7E-03
		Exposure Point Total									0.0E+00					3.2E-02
	Exposure Medium Total										0.0E+00					3.2E-02
Surface Water in Drainage Ditches/Marshy Area Total											0.0E+00					3.2E-02

TABLE G 7.9.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Sediment	Sediment	Drainage Ditches/Marshy Area	Ingestion	Benzo(a)anthracene	1.7E-02	mg/kg	1.2E-09	mg/kg/day	7.3E-01	mg/kg/day	8.7E-10	3.5E-09	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	3.7E-02	mg/kg	2.6E-09	mg/kg/day	7.3E+00	mg/kg/day	1.9E-08	7.5E-09	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	2.4E-02	mg/kg	1.7E-09	mg/kg/day	7.3E-01	mg/kg/day	1.2E-09	4.9E-09	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.7E-02	mg/kg	1.2E-09	mg/kg/day	7.3E-02	mg/kg/day	8.7E-11	3.5E-09	mg/kg/day	NA	NA	NA
				Chrysene	1.8E-02	mg/kg	1.3E-09	mg/kg/day	7.3E-03	mg/kg/day	9.2E-12	3.7E-09	mg/kg/day	NA	NA	NA
				Indeno(1,2,3-cd)pyrene	3.1E-03	mg/kg	2.2E-10	mg/kg/day	7.3E-01	mg/kg/day	1.6E-10	6.3E-10	mg/kg/day	NA	NA	NA
				Aluminum	8.7E+03	mg/kg	6.0E-04	mg/kg/day	NA	NA	NA	1.8E-03	mg/kg/day	1.0E+00	mg/kg/day	1.8E-03
				Antimony	5.3E+00	mg/kg	3.7E-07	mg/kg/day	NA	NA	NA	1.1E-06	mg/kg/day	4.0E-04	mg/kg/day	2.7E-03
				Chromium	9.0E+00	mg/kg	6.3E-07	mg/kg/day	5.0E-01	mg/kg/day	3.1E-07	1.8E-06	mg/kg/day	3.0E-03	mg/kg/day	6.1E-04
			Exp. Route Total								3.4E-07					5.1E-03
			Dermal Absorption[2]	Benzo(a)anthracene	1.7E-02	mg/kg	5.3E-09	mg/kg/day	7.3E-01	mg/kg/day	3.9E-09	1.5E-08	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	3.7E-02	mg/kg	1.1E-08	mg/kg/day	7.3E+00	mg/kg/day	8.4E-08	3.3E-08	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	2.4E-02	mg/kg	7.4E-09	mg/kg/day	7.3E-01	mg/kg/day	5.4E-09	2.2E-08	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.7E-02	mg/kg	5.3E-09	mg/kg/day	7.3E-02	mg/kg/day	3.9E-10	1.5E-08	mg/kg/day	NA	NA	NA
				Chrysene	1.8E-02	mg/kg	5.6E-09	mg/kg/day	7.3E-03	mg/kg/day	4.1E-11	1.6E-08	mg/kg/day	NA	NA	NA
				Indeno(1,2,3-cd)pyrene	3.1E-03	mg/kg	9.6E-10	mg/kg/day	7.3E-01	mg/kg/day	7.0E-10	2.8E-09	mg/kg/day	NA	NA	NA
				Aluminum	8.7E+03	mg/kg	2.1E-05	mg/kg/day	NA	NA	NA	6.0E-05	mg/kg/day	1.0E+00	mg/kg/day	6.0E-05
				Antimony	5.3E+00	mg/kg	1.3E-08	mg/kg/day	NA	NA	NA	3.7E-08	mg/kg/day	6.0E-05	mg/kg/day	6.1E-04
				Chromium	9.0E+00	mg/kg	2.1E-08	mg/kg/day	1.3E-02	mg/kg/day	2.7E-10	6.3E-08	mg/kg/day	7.5E-05	mg/kg/day	8.4E-04
			Exp. Route Total								9.4E-08					1.5E-03
		Exposure Point Total									4.3E-07					6.6E-03
	Exposure Medium Total										4.3E-07					6.6E-03
Sediment in Drainage Ditches/Marshy Area Total											4.3E-07					6.6E-03
										Total of Receptor Risks Across All Media	1.5E-06				Total of Receptor Hazards Across All Media	4.9E-02

Notes:

1. Dermal absorption from surface water calculated on Table 7.1.RME Supplement A.
2. Dermal absorption factors (DABs) used to calculated dermal absorption intake from soil are chemical specific as shown in RAGS Part E, Exhibit 3-4. DABS of 0.13 used for PAHs, 0.03 used for arsenic,0.001 for all other metals.

Generated by: Martha White/ATL
Checked by: D. Stannard/WDC

TABLE G 7.10.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Trespasser/Visitor
Receptor Age: Youth

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil*	Soil*	Soil*	Ingestion	Aluminum	9.1E+03	mg/kg	4.1E-04	mg/kg/day	NA	NA	NA	2.9E-03	mg/kg/day	1.0E+00	mg/kg/day	2.9E-03
				Arsenic	3.9E+00	mg/kg	1.8E-07	mg/kg/day	1.5E+00	mg/kg/day	2.6E-07	1.2E-06	mg/kg/day	3.0E-04	mg/kg/day	4.1E-03
				Chromium	1.7E+01	mg/kg	7.8E-07	mg/kg/day	5.0E-01	mg/kg/day	3.9E-07	5.4E-06	mg/kg/day	3.0E-03	mg/kg/day	1.8E-03
				Iron	8.8E+03	mg/kg	4.0E-04	mg/kg/day	NA	NA	NA	2.8E-03	mg/kg/day	7.0E-01	mg/kg/day	4.0E-03
				Manganese	8.2E+01	mg/kg	3.7E-06	mg/kg/day	NA	NA	NA	2.6E-05	mg/kg/day	2.4E-02	mg/kg/day	1.1E-03
				Vanadium	2.1E+01	mg/kg	9.7E-07	mg/kg/day	NA	NA	NA	6.8E-06	mg/kg/day	5.0E-03	mg/kg/day	1.4E-03
			Exp. Route Total								6.5E-07					1.5E-02
			Dermal Absorption[2]	Aluminum	9.1E+03	mg/kg	6.9E-07	mg/kg/day	NA	NA	NA	4.8E-06	mg/kg/day	1.0E+00	mg/kg/day	4.8E-06
				Arsenic	3.9E+00	mg/kg	8.8E-09	mg/kg/day	1.5E+00	mg/kg/day	1.3E-08	6.2E-08	mg/kg/day	3.0E-04	mg/kg/day	2.1E-04
				Chromium	1.7E+01	mg/kg	1.3E-09	mg/kg/day	1.3E-02	mg/kg/day	1.6E-11	9.1E-09	mg/kg/day	7.5E-05	mg/kg/day	1.2E-04
				Iron	8.8E+03	mg/kg	6.7E-07	mg/kg/day	NA	NA	NA	4.7E-06	mg/kg/day	7.0E-01	mg/kg/day	6.7E-06
				Manganese	8.2E+01	mg/kg	6.3E-09	mg/kg/day	NA	NA	NA	4.4E-08	mg/kg/day	9.6E-04	mg/kg/day	4.6E-05
				Vanadium	2.1E+01	mg/kg	1.6E-09	mg/kg/day	NA	NA	NA	1.1E-08	mg/kg/day	1.3E-04	mg/kg/day	8.8E-05
			Exp. Route Total								1.3E-08					4.7E-04
	Exposure Medium Total										6.7E-07					1.6E-02
	Air	Emissions from Soil*	Inhalation	Chromium	1.3E-08	mg/m^3	2.1E-11	mg/kg/day	8.4E-02	(ug/m3)-1	1.8E-09	1.5E-10	mg/kg/day	1.0E-04	mg/m3	1.5E-06
			Exp. Route Total								1.8E-09					1.5E-06
	Exposure Medium Total										1.8E-09					1.5E-06
Soil* Total											6.7E-07					1.6E-02
Surface Water	Surface Water	Drainage Ditches/Marshy Area	Ingestion	Iron	7.5E+02	ug/L	6.8E-06	mg/kg/day	NA	NA	NA	4.8E-05	mg/kg/day	7.0E-01	mg/kg/day	6.8E-05
				Thallium	6.9E+00	ug/L	6.2E-08	mg/kg/day	NA	NA	NA	4.4E-07	mg/kg/day	1.0E-05	mg/kg/day	4.4E-02
			Exp. Route Total								0.0E+00					4.4E-02
			Dermal Absorption[1]	Iron	7.5E+02	ug/L	1.0E-09	mg/kg/day	NA	NA	NA	4.0E-06	mg/kg/day	7.0E-01	mg/kg/day	5.8E-06
				Thallium	6.9E+00	ug/L	9.6E-12	mg/kg/day	NA	NA	NA	3.7E-08	mg/kg/day	1.0E-05	mg/kg/day	3.7E-03
			Exp. Route Total								0.0E+00					3.7E-03
		Exposure Point Total									0.0E+00					4.7E-02
	Exposure Medium Total										0.0E+00					4.7E-02
Surface Water in Drainage Ditches/Marshy Area Total											0.0E+00					4.7E-02

TABLE G 7.10.RME

Calculation of Chemical Cancer Risks and Non-Cancer Hazards—Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Trespasser/Visitor
Receptor Age: Youth

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Sediment	Sediment	Drainage Ditches/Marshy Area	Ingestion	Benzo(a)anthracene	1.7E-02	mg/kg	7.7E-10	mg/kg/day	7.3E-01	mg/kg/day	5.6E-10	5.4E-09	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	3.7E-02	mg/kg	1.7E-09	mg/kg/day	7.3E+00	mg/kg/day	1.2E-08	1.2E-08	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	2.4E-02	mg/kg	1.1E-09	mg/kg/day	7.3E-01	mg/kg/day	7.9E-10	7.6E-09	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.7E-02	mg/kg	7.7E-10	mg/kg/day	7.3E-02	mg/kg/day	5.6E-11	5.4E-09	mg/kg/day	NA	NA	NA
				Chrysene	1.8E-02	mg/kg	8.1E-10	mg/kg/day	7.3E-03	mg/kg/day	5.9E-12	5.7E-09	mg/kg/day	NA	NA	NA
				Indeno(1,2,3-cd)pyrene	3.1E-03	mg/kg	1.4E-10	mg/kg/day	7.3E-01	mg/kg/day	1.0E-10	9.8E-10	mg/kg/day	NA	NA	NA
				Aluminum	8.7E+03	mg/kg	3.9E-04	mg/kg/day	NA	NA	NA	2.7E-03	mg/kg/day	1.0E+00	mg/kg/day	2.7E-03
				Antimony	5.3E+00	mg/kg	2.4E-07	mg/kg/day	NA	NA	NA	1.7E-06	mg/kg/day	4.0E-04	mg/kg/day	4.2E-03
				Chromium	9.0E+00	mg/kg	4.1E-07	mg/kg/day	5.0E-01	mg/kg/day	2.0E-07	2.8E-06	mg/kg/day	3.0E-03	mg/kg/day	9.5E-04
			Exp. Route Total								2.2E-07					7.9E-03
			Dermal Absorption[2]	Benzo(a)anthracene	1.7E-02	mg/kg	5.3E-09	mg/kg/day	7.3E-01	mg/kg/day	3.9E-09	6.0E-09	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	3.7E-02	mg/kg	1.1E-08	mg/kg/day	7.3E+00	mg/kg/day	8.4E-08	1.3E-08	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	2.4E-02	mg/kg	7.4E-09	mg/kg/day	7.3E-01	mg/kg/day	5.4E-09	8.5E-09	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.7E-02	mg/kg	5.3E-09	mg/kg/day	7.3E-02	mg/kg/day	3.9E-10	6.0E-09	mg/kg/day	NA	NA	NA
				Chrysene	1.8E-02	mg/kg	5.6E-09	mg/kg/day	7.3E-03	mg/kg/day	4.1E-11	6.4E-09	mg/kg/day	NA	NA	NA
				Indeno(1,2,3-cd)pyrene	3.1E-03	mg/kg	9.6E-10	mg/kg/day	7.3E-01	mg/kg/day	7.0E-10	1.1E-09	mg/kg/day	NA	NA	NA
				Aluminum	8.7E+03	mg/kg	2.1E-05	mg/kg/day	NA	NA	NA	2.4E-05	mg/kg/day	1.0E+00	mg/kg/day	2.4E-05
				Antimony	5.3E+00	mg/kg	1.3E-08	mg/kg/day	NA	NA	NA	1.4E-08	mg/kg/day	6.0E-05	mg/kg/day	2.4E-04
				Chromium	9.0E+00	mg/kg	2.1E-08	mg/kg/day	1.3E-02	mg/kg/day	2.7E-10	2.5E-08	mg/kg/day	7.5E-05	mg/kg/day	3.3E-04
			Exp. Route Total								9.4E-08					5.9E-04
		Exposure Point Total									3.1E-07					8.5E-03
	Exposure Medium Total										3.1E-07					8.5E-03
Sediment in Drainage Ditches/Marshy Area Total											3.1E-07					8.5E-03
										Total of Receptor Risks Across All Media	9.8E-07				Total of Receptor Hazards Across All Media	7.2E-02

Notes:

1. Dermal absorption from surface water calculated on Table 7.1.RME Supplement A.
2. Dermal absorption factors (DABs) used to calculated dermal absorption intake from soil are chemical specific as shown in RAGS Part E, Exhibit 3-4. DABS of 0.13 used for PAHs, 0.03 used for arsenic,0.001 for all other metals.

Generated by: Martha White/ATL
Checked by: D. Stannard/WDC

TABLE G 9.1.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Receptor Population: Military Personnel
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Surface Soil	Surface Soil	Surface Soil	Arsenic	5.8E-08	NA	1.1E-08	6.9E-08	Skin, Vascular	2.2E-03	NA	4.4E-04	2.7E-03
			Chromium	9.8E-08	NA	1.6E-11	9.8E-08	Not identified	1.1E-03	NA	3.0E-04	1.4E-03
			Manganese	NA	NA	NA	0.0E+00	CNS	4.9E-03	NA	8.0E-04	5.7E-03
			Chemical Total	1.6E-07	0.0E+00	1.1E-08	1.7E-07		8.3E-03	0.0E+00	1.6E-03	9.8E-03
		Exposure Point Total					1.7E-07					9.8E-03
	Exposure Medium Total						1.7E-07					9.8E-03
Surface Soil In Industrial Area Total							1.7E-07					9.8E-03
Surface Water	Surface Water	Drainage Ditches/ Marshy Area	Iron	NA	NA	NA	0.0E+00	Gastrointestinal	1.0E-05	NA	5.8E-06	1.6E-05
			Thallium	NA	NA	NA	0.0E+00	Skin, Hair follicle atrophy	6.5E-03	NA	3.7E-03	1.0E-02
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		6.5E-03	0.0E+00	3.7E-03	1.0E-02
		Exposure Point Total					0.0E+00					1.0E-02
	Exposure Medium Total						0.0E+00					1.0E-02
Surface Water in Drainage Ditches/Marshy Area Total							0.0E+00					1.0E-02

TABLE G 9.1.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Receptor Population: Military Personnel
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Sediment	Sediment	Drainage Ditches/ Marshy Area	Benzo(a)anthracene	3.3E-11	NA	1.5E-10	1.8E-10	NA	NA	NA	NA	0.0E+00
			Benzo(a)pyrene	7.2E-10	NA	3.2E-09	3.9E-09	NA	NA	NA	NA	0.0E+00
			Benzo(b)fluoranthene	4.7E-11	NA	2.1E-10	2.6E-10	NA	NA	NA	NA	0.0E+00
			Benzo(k)fluoranthene	3.3E-12	NA	1.5E-11	1.8E-11	NA	NA	NA	NA	0.0E+00
			Chrysene	3.5E-13	NA	1.6E-12	1.9E-12	NA	NA	NA	NA	0.0E+00
			Indeno(1,2,3-cd)pyrene	6.1E-12	NA	2.7E-11	3.3E-11	NA	NA	NA	NA	0.0E+00
			Aluminum	NA	NA	NA	0.0E+00	Neurological, Developmental	4.1E-04	NA	1.4E-05	4.2E-04
			Antimony	NA	NA	NA	0.0E+00	Longevity, Blood	6.2E-04	NA	1.4E-04	7.6E-04
			Chromium	1.2E-08	NA	1.0E-11	1.2E-08	Not identified	1.4E-04	NA	1.9E-04	3.3E-04
			Chemical Total	1.3E-08	NA	3.6E-09	1.7E-08		1.2E-03	NA	3.5E-04	1.5E-03
		Exposure Point Total					1.7E-08					1.5E-03
	Exposure Medium Total						1.7E-08					1.5E-03
Sediment in Drainage Ditches/Marshy Area Total							1.7E-08					1.5E-03
Receptor Total							1.8E-07	Receptor HI Total				2.2E-02

Notes:

CNS - Central Nervous System

Total Skin HI Across All Media =	1.3E-02
Total Vascular HI Across All Media =	2.7E-03
Total CNS/Neurological HI Across All Media =	6.1E-03
Total Gastrointestinal HI Across All Media =	1.6E-05
Total Developmental HI Across All Media =	4.2E-04
Total Longevity HI Across All Media =	7.6E-04
Total Blood HI Across All Media =	7.6E-04
Total Hair HI Across All Media =	1.0E-02

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 9.2.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Surface Soil	Surface Soil	Surface Soil	Arsenic	7.2E-08	NA	8.6E-09	8.1E-08	Skin, Vascular	4.7E-04	NA	5.6E-05	5.2E-04
			Chromium	1.2E-07	NA	1.2E-11	1.2E-07	Not identified	2.4E-04	NA	3.8E-05	2.8E-04
			Manganese	NA	NA	NA	0.0E+00	CNS	1.0E-03	NA	1.0E-04	1.1E-03
			Chemical Total	1.9E-07	0.0E+00	8.6E-09	2.0E-07		1.7E-03	0.0E+00	2.0E-04	1.9E-03
		Exposure Point Total					2.0E-07					1.9E-03
	Exposure Medium Total						2.0E-07					1.9E-03
Surface Soil Total							2.0E-07					1.9E-03
Surface Water	Surface Water	Drainage Ditches/ Marshy Area	Iron	NA	NA	NA	0.0E+00	Gastrointestinal	4.4E-05	NA	2.5E-05	6.9E-05
			Thallium	NA	NA	NA	0.0E+00	Skin, Hair follicle atrophy	2.8E-02	NA	1.6E-02	4.4E-02
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		2.8E-02	0.0E+00	1.6E-02	4.4E-02
		Exposure Point Total					0.0E+00					4.4E-02
	Exposure Medium Total						0.0E+00					4.4E-02
Surface Water in Drainage Ditches/Marshy Area Total							0.0E+00					4.4E-02

TABLE G 9.2.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Sediment	Sediment	Drainage Ditches/ Marshy Area	Benzo(a)anthracene	8.7E-10	NA	3.9E-09	4.7E-09	NA	NA	NA	NA	0.0E+00
			Benzo(a)pyrene	1.9E-08	NA	8.4E-08	1.0E-07	NA	NA	NA	NA	0.0E+00
			Benzo(b)fluoranthene	1.2E-09	NA	5.4E-09	6.7E-09	NA	NA	NA	NA	0.0E+00
			Benzo(k)fluoranthene	8.7E-11	NA	3.9E-10	4.7E-10	NA	NA	NA	NA	0.0E+00
			Chrysene	9.2E-12	NA	4.1E-11	5.0E-11	NA	NA	NA	NA	0.0E+00
			Indeno(1,2,3-cd)pyrene	1.6E-10	NA	5.4E-12	1.6E-10	NA	NA	NA	NA	0.0E+00
			Aluminum	NA	NA	NA	0.0E+00	Neurological, Developmental	1.8E-03	NA	6.0E-05	1.8E-03
			Antimony	NA	NA	NA	0.0E+00	Longevity, Blood	2.7E-03	NA	6.1E-04	3.3E-03
			Chromium	3.1E-07	NA	2.7E-10	3.1E-07	Not identified	6.1E-04	NA	8.4E-04	1.4E-03
			Chemical Total	3.4E-07	NA	9.4E-08	4.3E-07		5.1E-03	NA	1.5E-03	6.6E-03
		Exposure Point Total					4.3E-07					6.6E-03
	Exposure Medium Total						4.3E-07					6.6E-03
Sediment in Drainage Ditches/Marshy Area Total							4.3E-07					6.6E-03
Receptor Total							6.3E-07				Receptor HI Total	5.3E-02

Notes:

CNS - Central Nervous System

Total Skin HI Across All Media =	4.5E-02
Total Vascular HI Across All Media =	5.2E-04
Total CNS/Neurological HI Across All Media =	2.9E-03
Total Gastrointestinal HI Across All Media =	6.9E-05
Total Developmental HI Across All Media =	1.8E-03
Total Longevity HI Across All Media =	3.3E-03
Total Blood HI Across All Media =	3.3E-03
Total Hair HI Across All Media =	4.4E-02

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 9.3.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Receptor Population: Trespasser/Visitor
Receptor Age: Youth

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Surface Soil	Surface Soil	Surface Soil	Arsenic	4.7E-08	NA	2.4E-09	4.9E-08	Skin, Vascular	7.3E-04	NA	3.7E-05	7.6E-04
			Chromium	7.9E-08	NA	3.3E-12	7.9E-08	Not identified	3.7E-04	NA	2.5E-05	4.0E-04
			Manganese	NA	NA	NA	0.0E+00	CNS	1.6E-03	NA	6.6E-05	1.6E-03
			Chemical Total	1.3E-07	0.0E+00	2.4E-09	1.3E-07		2.7E-03	0.0E+00	1.3E-04	2.8E-03
		Exposure Point Total					1.3E-07					2.8E-03
	Exposure Medium Total						1.3E-07					2.8E-03
Surface Soil Total							1.3E-07					2.8E-03
Surface Water	Surface Water	Drainage Ditches/ Marshy Area	Iron	NA	NA	NA	0.0E+00	Gastrointestinal	6.8E-05	NA	2.7E-05	9.5E-05
			Thallium	NA	NA	NA	0.0E+00	Skin, Hair follicle atrophy	4.4E-02	NA	1.7E-02	6.1E-02
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		4.4E-02	0.0E+00	1.8E-02	6.1E-02
		Exposure Point Total					0.0E+00					6.1E-02
	Exposure Medium Total						0.0E+00					6.1E-02
Surface Water in Drainage Ditches/Marshy Area Total							0.0E+00					6.1E-02

TABLE G 9.3.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Current/Future
Receptor Population: Trespasser/Visitor
Receptor Age: Youth

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Sediment	Sediment	Drainage Ditches/ Marshy Area	Benzo(a)anthracene	5.6E-10	NA	5.8E-10	1.1E-09	NA	NA	NA	NA	0.0E+00
			Benzo(a)pyrene	1.2E-08	NA	1.3E-08	2.5E-08	NA	NA	NA	NA	0.0E+00
			Benzo(b)fluoranthene	7.9E-10	NA	8.2E-10	1.6E-09	NA	NA	NA	NA	0.0E+00
			Benzo(k)fluoranthene	5.6E-11	NA	5.8E-11	1.1E-10	NA	NA	NA	NA	0.0E+00
			Chrysene	5.9E-12	NA	6.2E-12	1.2E-11	NA	NA	NA	NA	0.0E+00
			Indeno(1,2,3-cd)pyrene	1.0E-10	NA	8.2E-13	1.0E-10	NA	NA	NA	NA	0.0E+00
			Aluminum	NA	NA	NA	0.0E+00	Neurological, Developmental	2.7E-03	NA	2.2E-05	2.8E-03
			Antimony	NA	NA	NA	0.0E+00	Longevity, Blood	4.2E-03	NA	2.2E-04	4.4E-03
			Chromium	2.0E-07	NA	4.1E-11	2.0E-07	Not identified	9.5E-04	NA	3.0E-04	1.3E-03
			Chemical Total	2.2E-07	NA	1.4E-08	2.3E-07		7.9E-03	NA	5.5E-04	8.4E-03
		Exposure Point Total					2.3E-07					8.4E-03
	Exposure Medium Total						2.3E-07					8.4E-03
Sediment in Drainage Ditches/Marshy Area Total							2.3E-07					8.4E-03
Receptor Total							3.6E-07				Receptor HI Total	7.2E-02

Notes:

CNS - Central Nervous System

Total Skin HI Across All Media =	6.2E-02
Total Vascular HI Across All Media =	7.6E-04
Total CNS/Neurological HI Across All Media =	4.4E-03
Total Gastrointestinal HI Across All Media =	9.5E-05
Total Developmental HI Across All Media =	2.8E-03
Total Longevity HI Across All Media =	4.4E-03
Total Blood HI Across All Media =	4.4E-03
Total Hair HI Across All Media =	6.1E-02

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 9.4.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Surface Water	Surface Water	Drainage Ditches/ Marshy Area	Iron	NA	NA	NA	0.0E+00	Gastrointestinal	3.4E-05	NA	1.9E-05	5.3E-05
			Thallium	NA	NA	NA	0.0E+00	Skin, Hair follicle atrophy	5.4E-03	NA	3.1E-03	8.5E-03
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		5.4E-03	0.0E+00	3.1E-03	8.5E-03
		Exposure Point Total					0.0E+00					8.5E-03
	Exposure Medium Total						0.0E+00					8.5E-03
Surface Water in Drainage Ditches/Marshy Area Total							0.0E+00					8.5E-03
Sediment	Sediment	Drainage Ditches/ Marshy Area	Benzo(a)anthracene	1.4E-11	NA	3.6E-11	5.0E-11	NA	NA	NA	NA	0.0E+00
			Benzo(a)pyrene	3.0E-10	NA	7.8E-10	1.1E-09	NA	NA	NA	NA	0.0E+00
			Benzo(b)fluoranthene	2.0E-11	NA	5.0E-11	7.0E-11	NA	NA	NA	NA	0.0E+00
			Benzo(k)fluoranthene	1.4E-12	NA	3.6E-12	5.0E-12	NA	NA	NA	NA	0.0E+00
			Chrysene	1.5E-13	NA	3.8E-13	5.3E-13	NA	NA	NA	NA	0.0E+00
			Indeno(1,2,3-cd)pyrene	2.5E-12	NA	5.0E-14	2.6E-12	NA	NA	NA	NA	0.0E+00
			Aluminum	NA	NA	NA	0.0E+00	Neurological, Developmental	6.8E-04	NA	1.3E-05	6.9E-04
			Antimony	NA	NA	NA	0.0E+00	Longevity, Blood	1.0E-03	NA	1.4E-04	1.2E-03
			Chromium	5.0E-09	NA	2.5E-12	5.0E-09	Not identified	3.5E-05	NA	2.8E-05	6.3E-05
			Chemical Total	5.4E-09	NA	8.7E-10	6.2E-09		1.7E-03	NA	1.8E-04	1.9E-03
		Exposure Point Total					6.2E-09					1.9E-03
	Exposure Medium Total						6.2E-09					1.9E-03
Sediment in Drainage Ditches/Marshy Area Total							6.2E-09					1.9E-03
Soil*	Soil*	Soil*	Aluminum	NA	NA	NA	0.0E+00	Neurological, Developmental	4.3E-02	NA	5.9E-05	4.3E-02
			Arsenic	3.9E-07	NA	1.6E-08	4.1E-07	Skin, Vascular	6.1E-02	NA	2.5E-03	6.3E-02
			Chromium	5.8E-07	NA	2.0E-11	5.8E-07	Not identified	4.0E-03	NA	2.2E-04	4.3E-03
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	5.9E-02	NA	8.1E-05	5.9E-02
			Manganese	NA	NA	NA	0.0E+00	CNS	1.6E-02	NA	5.5E-04	1.7E-02
			Vanadium	NA	NA	NA	0.0E+00	Hair, Blood	1.4E-02	NA	7.6E-04	1.5E-02
			Chemical Total	9.7E-07	0.0E+00	1.6E-08	9.8E-07		2.0E-01	0.0E+00	4.2E-03	2.0E-01
		Exposure Point Total					9.8E-07					2.0E-01
	Exposure Medium Total						9.8E-07					2.0E-01
	Air	Emissions from Soil*	Chromium	NA	3.5E-09	NA	3.5E-09	Respiratory System	NA	2.9E-05	NA	2.9E-05
			Chemical Total	0.0E+00	3.5E-09	0.0E+00	3.5E-09		0.0E+00	2.9E-05	0.0E+00	2.9E-05
		Exposure Point Total					3.5E-09					2.9E-05
	Exposure Medium Total						3.5E-09					2.9E-05
Soil* Total							9.9E-07					2.0E-01

TABLE G 9.4.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Groundwater	Groundwater	Surficial Aquifer	1,1,2,2-Tetrachloroethane	NA	NA	4.3E-09	4.3E-09	Liver	NA	NA	7.5E-05	7.5E-05
		Water in Excavation	1,1,2-Trichloroethane	NA	NA	8.2E-10	8.2E-10	Blood	NA	NA	2.5E-05	2.5E-05
		Pit	1,2-Dichloroethane	NA	NA	1.2E-09	1.2E-09	Kidney	NA	NA	4.6E-05	4.6E-05
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	NA	NA	3.6E-10	3.6E-10	Liver	NA	NA	6.7E-05	6.7E-05
			Benzene	NA	NA	2.0E-10	2.0E-10	Blood, Immune	NA	NA	6.4E-05	6.4E-05
			Chloroform	NA	NA	1.3E-10	1.3E-10	Liver	NA	NA	2.9E-05	2.9E-05
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Kidney	NA	NA	1.9E-03	1.9E-03
			Tetrachloroethene	NA	NA	1.8E-09	1.8E-09	Liver, Body Weight	NA	NA	2.4E-06	2.4E-06
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Blood	NA	NA	3.6E-04	3.6E-04
			Trichloroethene	NA	NA	7.8E-11	7.8E-11	NA	NA	NA	NA	0.0E+00
			Vinyl chloride	NA	NA	2.3E-08	2.3E-08	Liver	NA	NA	7.4E-04	7.4E-04
			alpha-BHC	NA	NA	1.3E-08	1.3E-08	CNS	NA	NA	1.8E-05	1.8E-05
			Aroclor-1260	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			beta-BHC	NA	NA	9.2E-09	9.2E-09	NA	NA	NA	NA	0.0E+00
			delta-BHC	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Heptachlor epoxide	NA	NA	5.8E-08	5.8E-08	Liver	NA	NA	3.4E-02	3.4E-02
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	NA	NA	7.0E-04	7.0E-04
			Manganese	NA	NA	NA	0.0E+00	CNS	NA	NA	2.2E-02	2.2E-02
			Vanadium	NA	NA	NA	0.0E+00	Hair, Blood	NA	NA	4.7E-03	4.7E-03
			Zinc	NA	NA	NA	0.0E+00	Blood	NA	NA	4.1E-04	4.1E-04
			Chemical Total	0.0E+00	0.0E+00	1.1E-07	1.1E-07		0.0E+00	0.0E+00	6.6E-02	6.6E-02
		Exposure Point Total					1.1E-07					6.6E-02
	Exposure Medium Total						1.1E-07					6.6E-02
	Air	Surficial Aquifer	1,1,2,2-Tetrachloroethane	NA	8.2E-10	NA	8.2E-10	NA	NA	NA	NA	0.0E+00
		Water Vapors in Excavation	1,1,2-Trichloroethane	NA	3.6E-10	NA	3.6E-10	Nasal	NA	7.8E-04	NA	7.8E-04
		Pit	1,2-Dichloroethane	NA	1.2E-09	NA	1.2E-09	Liver	NA	4.6E-05	NA	4.6E-05
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	NA	3.1E-10	NA	3.1E-10	Liver	NA	7.9E-07	NA	7.9E-07
			Benzene	NA	5.8E-11	NA	5.8E-11	Blood, Immune	NA	1.7E-05	NA	1.7E-05
			Chloroform	NA	3.1E-10	NA	3.1E-10	Liver	NA	9.7E-06	NA	9.7E-06
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Tetrachloroethene	NA	1.4E-11	NA	1.4E-11	Kidney, Liver	NA	6.3E-07	NA	6.3E-07
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Respiratory System	NA	2.8E-04	NA	2.8E-04
			Trichloroethene	NA	5.9E-11	NA	5.9E-11	NA	NA	2.1E-04	NA	2.1E-04
			Vinyl chloride	NA	9.9E-10	NA	9.9E-10	Liver	NA	1.6E-04	NA	1.6E-04
			Chemical Total	0.0E+00	4.1E-09	0.0E+00	4.1E-09		0.0E+00	1.5E-03	0.0E+00	1.5E-03
		Exposure Point Total					4.1E-09					1.5E-03
	Exposure Medium Total						4.1E-09					1.5E-03
Groundwater Surficial Aquifer Total							1.2E-07					6.7E-02
Receptor Total							1.1E-06				Receptor HI Total	2.8E-01

TABLE G 9.4.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure

Notes:

CNS - Central Nervous System

Total Gastrointestinal HI Across All Media =	6.0E-02
Total CNS/Neurological HI Across All Media =	8.3E-02
Total Developmental HI Across All Media =	4.3E-02
Total Longevity HI Across All Media =	1.2E-03
Total Blood HI Across All Media =	2.2E-02
Total Skin HI Across All Media =	7.2E-02
Total Vascular HI Across All Media =	6.3E-02
Total Respiratory System HI Across All Media =	3.1E-04
Total Hair HI Across All Media =	2.8E-02
Total Liver HI Across All Media =	3.5E-02
Total Kidney HI Across All Media =	2.0E-03
Total Immune System HI Across All Media =	8.1E-05
Total Body Weight HI Across All Media =	2.4E-06

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 9.5.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Soil*	Soil*	Soil*	Aluminum	NA	NA	NA	0.0E+00	Neurological, Developmental	1.2E-02	NA	5.0E-05	1.3E-02
			Arsenic	NA	NA	NA	0.0E+00	Skin, Vascular	1.8E-02	NA	2.1E-03	2.0E-02
			Chromium	NA	NA	NA	0.0E+00	Not identified	7.8E-03	NA	1.3E-03	9.1E-03
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	1.7E-02	NA	6.8E-05	1.7E-02
			Manganese	NA	NA	NA	0.0E+00	CNS	4.7E-03	NA	4.7E-04	5.2E-03
			Vanadium	NA	NA	NA	0.0E+00	Hair, Blood	5.9E-03	NA	9.0E-04	6.8E-03
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		6.6E-02	0.0E+00	4.9E-03	7.1E-02
		Exposure Point Total					0.0E+00					7.1E-02
	Exposure Medium Total						0.0E+00					7.1E-02
	Air	Emissions from Soil*	Chromium	NA	NA	NA	0.0E+00	Respiratory System	NA	1.2E-04	NA	1.2E-04
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		0.0E+00	1.2E-04	0.0E+00	1.2E-04
		Exposure Point Total					0.0E+00					1.2E-04
	Exposure Medium Total						0.0E+00					1.2E-04
Soil* Total							0.0E+00					7.1E-02
Groundwater	Groundwater	Surficial Aquifer	1,1,2,2-Tetrachloroethane	NA	NA	NA	0.0E+00	Liver	7.6E-03	NA	9.7E-04	8.6E-03
		Tap Water	1,1,2-Trichloroethane	NA	NA	NA	0.0E+00	Blood	3.1E-02	NA	2.9E-03	3.4E-02
			1,2-Dichloroethane	NA	NA	NA	0.0E+00	Kidney	3.2E-02	NA	1.6E-03	3.3E-02
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	NA	NA	NA	0.0E+00	Liver	1.3E-03	NA	8.7E-04	2.2E-03
			Benzene	NA	NA	NA	0.0E+00	Blood, Immune	4.0E-03	NA	6.0E-04	4.6E-03
			Chloroform	NA	NA	NA	0.0E+00	Liver	3.6E-03	NA	3.2E-04	3.9E-03
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Kidney	1.6E+00	NA	2.0E-01	1.8E+00
			Tetrachloroethene	NA	NA	NA	0.0E+00	Liver, Body Weight	5.2E-04	NA	3.1E-04	8.3E-04
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Blood	2.9E-02	NA	3.7E-03	3.3E-02
			Trichloroethene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Vinyl chloride	NA	NA	NA	0.0E+00	Liver	1.2E-01	NA	6.5E-03	1.3E-01
			alpha-BHC	NA	NA	NA	0.0E+00	CNS	2.6E-04	NA	2.2E-04	4.8E-04
			Aroclor-1260	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			beta-BHC	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			delta-BHC	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Heptachlor epoxide	NA	NA	NA	0.0E+00	Liver	1.7E-01	NA	2.6E-01	4.3E-01
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	7.2E-01	NA	3.7E-03	7.2E-01
			Manganese	NA	NA	NA	0.0E+00	CNS	9.1E-01	NA	1.2E-01	1.0E+00
			Vanadium	NA	NA	NA	0.0E+00	Hair, Blood	1.2E-01	NA	2.5E-02	1.5E-01
			Zinc	NA	NA	NA	0.0E+00	Blood	4.2E-01	NA	2.2E-03	4.2E-01
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		4.1E+00	0.0E+00	6.3E-01	4.8E+00
		Exposure Point Total					0.0E+00					4.8E+00
	Exposure Medium Total						0.0E+00					4.8E+00

TABLE G 9.5.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Groundwater	Air	Surficial Aquifer	1,1,2,2-Tetrachloroethane	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
(cont'd)		Water Vapors at	1,1,2-Trichloroethane	NA	NA	NA	0.0E+00	Nasal	NA	8.6E-01	NA	8.6E-01
		Showerhead	1,2-Dichloroethane	NA	NA	NA	0.0E+00	Liver	NA	4.6E-02	NA	4.6E-02
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	NA	NA	NA	0.0E+00	Liver	NA	1.7E-04	NA	1.7E-04
			Benzene	NA	NA	NA	0.0E+00	Blood, Immune	NA	1.1E-03	NA	1.1E-03
			Chloroform	NA	NA	NA	0.0E+00	Liver	NA	6.4E-04	NA	6.4E-04
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Tetrachloroethene	NA	NA	NA	0.0E+00	Kidney, Liver	NA	3.0E-05	NA	3.0E-05
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Respiratory System	NA	1.9E-02	NA	1.9E-02
			Trichloroethene	NA	NA	NA	0.0E+00	NA	NA	1.1E-02	NA	1.1E-02
			Vinyl chloride	NA	NA	NA	0.0E+00	Liver	NA	9.1E-03	NA	9.1E-03
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		0.0E+00	9.4E-01	0.0E+00	9.4E-01
		Exposure Point Total					0.0E+00					9.4E-01
	Exposure Medium Total						0.0E+00					9.4E-01
Groundwater Surficial Aquifer Total							0.0E+00					5.7E+00
Groundwater	Groundwater	Castle-Hayne	1,2,4-Trichlorobenzene	NA	NA	NA	0.0E+00	Adrenal	2.3E-02	NA	3.1E-02	5.4E-02
		Aquifer - Tap Water	1,2-Dichloroethane	NA	NA	NA	0.0E+00	Kidney	7.8E-02	NA	3.8E-03	8.2E-02
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	NA	NA	NA	0.0E+00	Liver	3.9E-04	NA	2.6E-04	6.5E-04
			Benzene	NA	NA	NA	0.0E+00	Blood, Immune	8.2E-03	NA	1.3E-03	9.5E-03
			Chloroform	NA	NA	NA	0.0E+00	Liver	1.1E-02	NA	9.9E-04	1.2E-02
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Kidney	5.9E+02	NA	7.5E+01	6.7E+02
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Blood	8.8E-01	NA	1.1E-01	9.9E-01
			Trichloroethene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Vinyl chloride	NA	NA	NA	0.0E+00	Liver	4.3E+01	NA	2.3E+00	4.5E+01
			Aroclor-1260	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Dieldrin	NA	NA	NA	0.0E+00	Liver	1.4E-02	NA	1.3E-02	2.7E-02
			Heptachlor epoxide	NA	NA	NA	0.0E+00	Liver	1.1E-01	NA	1.8E-01	3.0E-01
			Chromium	NA	NA	NA	0.0E+00	Not identified	9.6E-02	NA	2.0E-02	1.2E-01
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	3.0E-01	NA	1.5E-03	3.0E-01
			Thallium	NA	NA	NA	0.0E+00	Skin, Hair follicle atrophy	1.5E+01	NA	8.0E-02	1.5E+01
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		6.5E+02	0.0E+00	7.8E+01	7.3E+02
		Exposure Point Total					0.0E+00					7.3E+02
	Exposure Medium Total						0.0E+00					7.3E+02

TABLE G 9.5.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Groundwater (cont'd)	Air	Castle-Hayne Aquifer Water Vapors at Showerhead	1,2,4-Trichlorobenzene	NA	NA	NA	0.0E+00	Liver	NA	1.5E-01	NA	1.5E-01
			1,2-Dichloroethane	NA	NA	NA	0.0E+00	Liver	NA	3.3E-04	NA	3.3E-04
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	NA	NA	NA	0.0E+00	Liver	NA	5.3E-05	NA	5.3E-05
			Benzene	NA	NA	NA	0.0E+00	Blood, Immune	NA	2.4E-03	NA	2.4E-03
			Chloroform	NA	NA	NA	0.0E+00	Liver	NA	1.9E-03	NA	1.9E-03
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Respiratory System	NA	5.7E-01	NA	5.7E-01
			Trichloroethene	NA	NA	NA	0.0E+00	NA	NA	1.4E-01	NA	1.4E-01
			Vinyl chloride	NA	NA	NA	0.0E+00	Liver	NA	3.2E+00	NA	3.2E+00
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		0.0E+00	4.1E+00	0.0E+00	4.1E+00
		Exposure Point Total					0.0E+00					4.1E+00
	Exposure Medium Total						0.0E+00					4.1E+00
Groundwater Castle-Hayne Aquifer Total							0.0E+00					7.3E+02
Receptor Total							0.0E+00				Receptor HI Total	7.3E+02

Receptor total and target organ totals includes higher of the Surficial Aquifer or Castle-Hayne Aquifer risks and hazards

CNS = Central Nervous System

Total CNS/Neurological HI Across All Media =	1.8E-02
Total Developmental HI Across All Media =	1.3E-02
Total Skin HI Across All Media =	**1.5E+01**
Total Vascular HI Across All Media =	2.0E-02
Total Gastrointestinal HI Across All Media =	3.2E-01
Total Hair HI Across All Media =	**1.5E+01**
Total Blood HI Across All Media =	1.0E+00
Total Respiratory System HI Across All Media =	5.7E-01
Total Adrenal HI Across All Media =	5.4E-02
Total Kidney HI Across All Media =	**6.7E+02**
Total Liver HI Across All Media =	**4.9E+01**
Total Immune HI Across All Media =	1.2E-02

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 9.6.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Soil*	Soil*	Soil*	Aluminum	NA	NA	NA	0.0E+00	Neurological, Developmental	1.2E-01	NA	3.3E-04	1.2E-01
			Arsenic	NA	NA	NA	0.0E+00	Skin, Vascular	1.7E-01	NA	1.4E-02	1.8E-01
			Chromium	NA	NA	NA	0.0E+00	Not identified	7.3E-02	NA	8.2E-03	8.1E-02
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	1.6E-01	NA	4.5E-04	1.6E-01
			Manganese	NA	NA	NA	0.0E+00	CNS	4.4E-02	NA	3.1E-03	4.7E-02
			Vanadium	NA	NA	NA	0.0E+00	Hair, Blood	5.5E-02	NA	5.9E-03	6.1E-02
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		6.1E-01	0.0E+00	3.2E-02	6.5E-01
		Exposure Point Total					0.0E+00					6.5E-01
	Exposure Medium Total						0.0E+00					6.5E-01
	Air	Emissions from Soil*	Chromium	NA	NA	NA	0.0E+00	Respiratory System	NA	1.2E-04	NA	1.2E-04
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		0.0E+00	1.2E-04	0.0E+00	1.2E-04
		Exposure Point Total					0.0E+00					1.2E-04
	Exposure Medium Total						0.0E+00					1.2E-04
Soil* Total							0.0E+00					6.5E-01
Groundwater	Groundwater	Surficial Aquifer	1,1,2,2-Tetrachloroethane	NA	NA	NA	0.0E+00	Liver	1.8E-02	NA	2.2E-03	2.0E-02
		Tap Water	1,1,2-Trichloroethane	NA	NA	NA	0.0E+00	Blood	7.3E-02	NA	6.6E-03	7.9E-02
			1,2-Dichloroethane	NA	NA	NA	0.0E+00	Kidney	7.4E-02	NA	3.6E-03	7.8E-02
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	NA	NA	NA	0.0E+00	Liver	3.0E-03	NA	1.9E-03	5.0E-03
			Benzene	NA	NA	NA	0.0E+00	Blood, Immune	9.3E-03	NA	1.4E-03	1.1E-02
			Chloroform	NA	NA	NA	0.0E+00	Liver	8.3E-03	NA	7.3E-04	9.0E-03
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Kidney	3.7E+00	NA	4.6E-01	4.1E+00
			Tetrachloroethene	NA	NA	NA	0.0E+00	Liver, Body Weight	1.2E-03	NA	7.1E-04	1.9E-03
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Blood	6.8E-02	NA	8.5E-03	7.6E-02
			Trichloroethene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Vinyl chloride	NA	NA	NA	0.0E+00	Liver	2.9E-01	NA	1.5E-02	3.0E-01
			alpha-BHC	NA	NA	NA	0.0E+00	CNS	6.2E-04	NA	4.9E-04	1.1E-03
			Aroclor-1260	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			beta-BHC	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			delta-BHC	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Heptachlor epoxide	NA	NA	NA	0.0E+00	Liver	3.9E-01	NA	5.9E-01	9.8E-01
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	1.7E+00	NA	1.1E-02	1.7E+00
			Manganese	NA	NA	NA	0.0E+00	CNS	2.1E+00	NA	3.5E-01	2.5E+00
			Vanadium	NA	NA	NA	0.0E+00	Hair, Blood	2.9E-01	NA	7.3E-02	3.6E-01
			Zinc	NA	NA	NA	0.0E+00	Blood	9.8E-01	NA	6.5E-03	9.9E-01
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		9.7E+00	0.0E+00	1.5E+00	1.1E+01
		Exposure Point Total					0.0E+00					1.1E+01
	Exposure Medium Total						0.0E+00					1.1E+01

TABLE G 9.6.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Groundwater	Air	Surficial Aquifer	1,1,2,2-Tetrachloroethane	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
(cont'd)		Water Vapors at	1,1,2-Trichloroethane	NA	NA	NA	0.0E+00	Nasal	NA	2.1E+00	NA	2.1E+00
		Showerhead	1,2-Dichloroethane	NA	NA	NA	0.0E+00	Liver	NA	1.2E-01	NA	1.2E-01
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	NA	NA	NA	0.0E+00	Liver	NA	4.4E-04	NA	4.4E-04
			Benzene	NA	NA	NA	0.0E+00	Blood, Immune	NA	2.9E-03	NA	2.9E-03
			Chloroform	NA	NA	NA	0.0E+00	Liver	NA	1.6E-03	NA	1.6E-03
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Tetrachloroethene	NA	NA	NA	0.0E+00	Kidney, Liver	NA	7.6E-05	NA	7.6E-05
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Respiratory System	NA	4.7E-02	NA	4.7E-02
			Trichloroethene	NA	NA	NA	0.0E+00	NA	NA	2.8E-02	NA	2.8E-02
			Vinyl chloride	NA	NA	NA	0.0E+00	Liver	NA	2.3E-02	NA	2.3E-02
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		0.0E+00	2.4E+00	0.0E+00	2.4E+00
		Exposure Point Total					0.0E+00					2.4E+00
	Exposure Medium Total						0.0E+00					2.4E+00
Groundwater Surficial Aquifer Total							0.0E+00					1.4E+01
Groundwater	Groundwater	Castle-Hayne	1,2,4-Trichlorobenzene	NA	NA	NA	0.0E+00	Adrenal	5.4E-02	NA	6.9E-02	1.2E-01
		Aquifer - Tap Water	1,2-Dichloroethane	NA	NA	NA	0.0E+00	Kidney	1.8E-01	NA	8.9E-03	1.9E-01
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	NA	NA	NA	0.0E+00	Liver	9.1E-04	NA	5.9E-04	1.5E-03
			Benzene	NA	NA	NA	0.0E+00	Blood, Immune	1.9E-02	NA	2.9E-03	2.2E-02
			Chloroform	NA	NA	NA	0.0E+00	Liver	2.5E-02	NA	2.2E-03	2.8E-02
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Kidney	1.4E+03	NA	1.7E+02	1.6E+03
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Blood	2.0E+00	NA	2.6E-01	2.3E+00
			Trichloroethene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Vinyl chloride	NA	NA	NA	0.0E+00	Liver	1.0E+02	NA	5.4E+00	1.1E+02
			Aroclor-1260	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Dieldrin	NA	NA	NA	0.0E+00	Liver	3.3E-02	NA	2.8E-02	6.2E-02
			Heptachlor epoxide	NA	NA	NA	0.0E+00	Liver	2.7E-01	NA	4.1E-01	6.7E-01
			Chromium	NA	NA	NA	0.0E+00	Not identified	2.2E-01	NA	5.9E-02	2.8E-01
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	6.9E-01	NA	4.6E-03	7.0E-01
			Thallium	NA	NA	NA	0.0E+00	Skin, Hair follicle atrophy	3.6E+01	NA	2.4E-01	3.6E+01
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		1.5E+03	0.0E+00	1.8E+02	1.7E+03
		Exposure Point Total					0.0E+00					1.7E+03
	Exposure Medium Total						0.0E+00					1.7E+03

TABLE G 9.6.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Groundwater (cont'd)	Air	Castle-Hayne Aquifer Water Vapors at Showerhead	1,2,4-Trichlorobenzene	NA	NA	NA	0.0E+00	Liver	NA	3.8E-01	NA	3.8E-01
			1,2-Dichloroethane	NA	NA	NA	0.0E+00	Liver	NA	8.3E-04	NA	8.3E-04
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	NA	NA	NA	0.0E+00	Liver	NA	1.3E-04	NA	1.3E-04
			Benzene	NA	NA	NA	0.0E+00	Blood, Immune	NA	6.0E-03	NA	6.0E-03
			Chloroform	NA	NA	NA	0.0E+00	Liver	NA	4.9E-03	NA	4.9E-03
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Respiratory System	NA	1.4E+00	NA	1.4E+00
			Trichloroethene	NA	NA	NA	0.0E+00	NA	NA	3.6E-01	NA	3.6E-01
			Vinyl chloride	NA	NA	NA	0.0E+00	Liver	NA	8.0E+00	NA	8.0E+00
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		0.0E+00	1.0E+01	0.0E+00	1.0E+01
		Exposure Point Total					0.0E+00					1.0E+01
	Exposure Medium Total						0.0E+00					1.0E+01
Groundwater Castle-Hayne Aquifer Total							0.0E+00					1.7E+03
Receptor Total							0.0E+00				Receptor HI Total	1.7E+03

Receptor total and target organ totals includes higher of the Surficial Aquifer or Castle-Hayne Aquifer risks and hazards

CNS = Central Nervous System

Total CNS/Neurological HI Across All Media =	1.6E-01
Total Developmental HI Across All Media =	1.2E-01
Total Skin HI Across All Media =	**3.6E+01**
Total Vascular HI Across All Media =	1.8E-01
Total Gastrointestinal HI Across All Media =	8.6E-01
Total Hair HI Across All Media =	**3.6E+01**
Total Blood HI Across All Media =	**2.4E+00**
Total Respiratory System HI Across All Media =	**1.4E+00**
Total Adrenal HI Across All Media =	1.2E-01
Total Kidney HI Across All Media =	**1.6E+03**
Total Liver HI Across All Media =	**1.1E+02**
Total Immune HI Across All Media =	2.8E-02

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 9.7.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Soil*	Soil*	Soil*	Aluminum	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Arsenic	9.1E-06	NA	8.6E-07	1.0E-05		NA	NA	NA	0.0E+00
			Chromium	5.8E-05	NA	2.8E-08	5.8E-05		NA	NA	NA	0.0E+00
			Iron	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Manganese	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Vanadium	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Chemical Total	6.7E-05	0.0E+00	8.9E-07	6.8E-05		0.0E+00	0.0E+00	0.0E+00	0.0E+00
		Exposure Point Total					6.8E-05					0.0E+00
	Exposure Medium Total						6.8E-05					0.0E+00
	Air	Emissions from Soil*	Chromium	NA	1.9E-11	NA	1.9E-11		NA	NA	NA	0.0E+00
			Chemical Total	0.0E+00	1.9E-11	0.0E+00	1.9E-11		0.0E+00	0.0E+00	0.0E+00	0.0E+00
		Exposure Point Total					1.9E-11					0.0E+00
	Exposure Medium Total						1.9E-11					0.0E+00
Soil* Total							6.8E-05					0.0E+00
Groundwater	Groundwater	Surficial Aquifer	1,1,2,2-Tetrachloroethane	1.7E-05	NA	2.1E-06	1.9E-05		NA	NA	NA	0.0E+00
		Tap Water	1,1,2-Trichloroethane	3.9E-06	NA	3.6E-07	4.2E-06		NA	NA	NA	0.0E+00
			1,2-Dichloroethane	9.4E-06	NA	4.6E-07	9.9E-06		NA	NA	NA	0.0E+00
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	2.7E-07	NA	1.8E-07	4.4E-07		NA	NA	NA	0.0E+00
			Benzene	4.8E-07	NA	7.2E-08	5.5E-07		NA	NA	NA	0.0E+00
			Chloroform	6.0E-07	NA	5.4E-08	6.6E-07		NA	NA	NA	0.0E+00
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Tetrachloroethene	1.5E-06	NA	9.1E-07	2.4E-06		NA	NA	NA	0.0E+00
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Trichloroethene	2.1E-07	NA	3.4E-08	2.4E-07		NA	NA	NA	0.0E+00
			Vinyl chloride	2.0E-04	NA	1.1E-05	2.1E-04		NA	NA	NA	0.0E+00
			alpha-BHC	7.2E-06	NA	5.9E-06	1.3E-05		NA	NA	NA	0.0E+00
			Aroclor-1260	3.6E-05	NA	NA	3.6E-05		NA	NA	NA	0.0E+00
			beta-BHC	5.1E-06	NA	4.1E-06	9.2E-06		NA	NA	NA	0.0E+00
			delta-BHC	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Heptachlor epoxide	1.1E-05	NA	1.7E-05	2.7E-05		NA	NA	NA	0.0E+00
			Iron	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Manganese	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Vanadium	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Zinc	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Chemical Total	2.9E-04	0.0E+00	4.2E-05	3.3E-04		0.0E+00	0.0E+00	0.0E+00	0.0E+00
		Exposure Point Total					3.3E-04					0.0E+00
	Exposure Medium Total						3.3E-04					0.0E+00

TABLE G 9.7.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Groundwater (cont'd)	Air	Surficial Aquifer Water Vapors at Showerhead	1,1,2,2-Tetrachloroethane	NA	4.8E-06	NA	4.8E-06		NA	NA	NA	0.0E+00
			1,1,2-Trichloroethane	NA	1.5E-06	NA	1.5E-06		NA	NA	NA	0.0E+00
			1,2-Dichloroethane	NA	4.7E-06	NA	4.7E-06		NA	NA	NA	0.0E+00
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	NA	8.5E-07	NA	8.5E-07		NA	NA	NA	0.0E+00
			Benzene	NA	1.5E-07	NA	1.5E-07		NA	NA	NA	0.0E+00
			Chloroform	NA	8.0E-07	NA	8.0E-07		NA	NA	NA	0.0E+00
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Tetrachloroethene	NA	2.7E-08	NA	2.7E-08		NA	NA	NA	0.0E+00
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Trichloroethene	NA	1.2E-07	NA	1.2E-07		NA	NA	NA	0.0E+00
			Vinyl chloride	NA	2.2E-06	NA	2.2E-06		NA	NA	NA	0.0E+00
			Chemical Total	0.0E+00	1.5E-05	0.0E+00	1.5E-05		0.0E+00	0.0E+00	0.0E+00	0.0E+00
		Exposure Point Total					1.5E-05					0.0E+00
	Exposure Medium Total						1.5E-05					0.0E+00
Groundwater Surficial Aquifer Total							3.5E-04					0.0E+00
Groundwater	Groundwater	Castle-Hayne Aquifer Aquifer - Tap Water	1,2,4-Trichlorobenzene	3.7E-06	NA	4.8E-06	8.5E-06		NA	NA	NA	0.0E+00
			1,2-Dichloroethane	2.3E-05	NA	1.1E-06	2.4E-05		NA	NA	NA	0.0E+00
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	8.1E-08	NA	5.3E-08	1.3E-07		NA	NA	NA	0.0E+00
			Benzene	9.9E-07	NA	1.5E-07	1.1E-06		NA	NA	NA	0.0E+00
			Chloroform	1.8E-06	NA	1.6E-07	2.0E-06		NA	NA	NA	0.0E+00
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Trichloroethene	2.6E-06	NA	4.4E-07	3.1E-06		NA	NA	NA	0.0E+00
			Vinyl chloride	6.9E-02	NA	7.2E-05	6.9E-02		NA	NA	NA	0.0E+00
			Aroclor-1260	1.0E-05	NA	NA	1.0E-05		NA	NA	NA	0.0E+00
			Dieldrin	6.2E-06	NA	5.4E-06	1.2E-05		NA	NA	NA	0.0E+00
			Heptachlor epoxide	7.4E-06	NA	1.1E-05	1.9E-05		NA	NA	NA	0.0E+00
			Chromium	2.4E-04	NA	5.9E-06	2.5E-04		NA	NA	NA	0.0E+00
			Iron	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Thallium	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Chemical Total	6.9E-02	0.0E+00	1.0E-04	6.9E-02		0.0E+00	0.0E+00	0.0E+00	0.0E+00
		Exposure Point Total					6.9E-02					0.0E+00
	Exposure Medium Total						6.9E-02					0.0E+00

TABLE G 9.7.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Groundwater (cont'd)	Air	Castle-Hayne Aquifer Water Vapors at Showerhead	1,2,4-Trichlorobenzene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			1,2-Dichloroethane	NA	1.2E-05	NA	1.2E-05		NA	NA	NA	0.0E+00
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	NA	2.6E-07	NA	2.6E-07		NA	NA	NA	0.0E+00
			Benzene	NA	3.1E-07	NA	3.1E-07		NA	NA	NA	0.0E+00
			Chloroform	NA	2.4E-06	NA	2.4E-06		NA	NA	NA	0.0E+00
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Trichloroethene	NA	1.6E-06	NA	1.6E-06		NA	NA	NA	0.0E+00
			Vinyl chloride	NA	7.8E-04	NA	7.8E-04		NA	NA	NA	0.0E+00
			Chemical Total	0.0E+00	8.0E-04	0.0E+00	8.0E-04		0.0E+00	0.0E+00	0.0E+00	0.0E+00
		Exposure Point Total					8.0E-04					0.0E+00
	Exposure Medium Total						8.0E-04					0.0E+00
Groundwater Castle-Hayne Aquifer Total							7.0E-02					0.0E+00
Receptor Total							7.0E-02				Receptor HI Total	0.0E+00

Receptor total and target organ totals includes higher of the Surficial Aquifer or Castle-Hayne Aquifer risks and hazards

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 9.8.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Soil*	Soil*	Soil*	Aluminum	NA	NA	NA	0.0E+00	Neurological, Developmental	8.9E-03	NA	5.9E-05	9.0E-03
			Arsenic	2.0E-06	NA	4.0E-07	2.4E-06	Skin, Vascular	1.3E-02	NA	2.5E-03	1.5E-02
			Chromium	3.0E-06	NA	5.0E-10	3.0E-06	Not identified	5.6E-03	NA	1.5E-03	7.1E-03
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	1.2E-02	NA	8.1E-05	1.2E-02
			Manganese	NA	NA	NA	0.0E+00	CNS	3.4E-03	NA	5.5E-04	3.9E-03
			Vanadium	NA	NA	NA	0.0E+00	Hair, Blood	4.2E-03	NA	1.1E-03	5.3E-03
			Chemical Total	5.0E-06	0.0E+00	4.0E-07	5.4E-06		4.7E-02	0.0E+00	5.7E-03	5.3E-02
		Exposure Point Total					5.4E-06					5.3E-02
	Exposure Medium Total						5.4E-06					5.3E-02
	Air	Emissions from Soil*	Chromium	NA	8.7E-08	NA	8.7E-08	Respiratory System	NA	2.9E-05	NA	2.9E-05
			Chemical Total	0.0E+00	8.7E-08	0.0E+00	8.7E-08		0.0E+00	2.9E-05	0.0E+00	2.9E-05
		Exposure Point Total					8.7E-08					2.9E-05
	Exposure Medium Total						8.7E-08					2.9E-05
Soil* Total							5.5E-06					5.3E-02
Groundwater	Groundwater	Surficial Aquifer	1,1,2,2-Tetrachloroethane	3.9E-06	NA	NA	3.9E-06	Liver	2.7E-03	NA	NA	2.7E-03
		Tap Water	1,1,2-Trichloroethane	9.1E-07	NA	NA	9.1E-07	Blood	1.1E-02	NA	NA	1.1E-02
			1,2-Dichloroethane	2.2E-06	NA	NA	2.2E-06	Kidney	1.1E-02	NA	NA	1.1E-02
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	6.2E-08	NA	NA	6.2E-08	Liver	4.6E-04	NA	NA	4.6E-04
			Benzene	1.1E-07	NA	NA	1.1E-07	Blood, Immune	1.4E-03	NA	NA	1.4E-03
			Chloroform	1.4E-07	NA	NA	1.4E-07	Liver	1.3E-03	NA	NA	1.3E-03
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Kidney	5.6E-01	NA	NA	5.6E-01
			Tetrachloroethene	3.6E-07	NA	NA	3.6E-07	Liver, Body Weight	1.9E-04	NA	NA	1.9E-04
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Blood	1.0E-02	NA	NA	1.0E-02
			Trichloroethene	4.8E-08	NA	NA	4.8E-08	NA	NA	NA	NA	0.0E+00
			Vinyl chloride	3.4E-05	NA	NA	3.4E-05	Liver	4.4E-02	NA	NA	4.4E-02
			alpha-BHC	1.7E-06	NA	NA	1.7E-06	CNS	9.4E-05	NA	NA	9.4E-05
			Aroclor-1260	8.4E-06	NA	NA	8.4E-06	NA	NA	NA	NA	0.0E+00
			beta-BHC	1.2E-06	NA	NA	1.2E-06	NA	NA	NA	NA	0.0E+00
			delta-BHC	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Heptachlor epoxide	2.5E-06	NA	NA	2.5E-06	Liver	5.9E-02	NA	NA	5.9E-02
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	2.6E-01	NA	NA	2.6E-01
			Manganese	NA	NA	NA	0.0E+00	CNS	3.3E-01	NA	NA	3.3E-01
			Vanadium	NA	NA	NA	0.0E+00	Hair, Blood	4.4E-02	NA	NA	4.4E-02
			Zinc	NA	NA	NA	0.0E+00	Blood	1.5E-01	NA	NA	1.5E-01
			Chemical Total	5.5E-05	0.0E+00	0.0E+00	5.5E-05		1.5E+00	0.0E+00	0.0E+00	1.5E+00
		Exposure Point Total					5.5E-05					1.5E+00
	Exposure Medium Total						5.5E-05					1.5E+00
Groundwater Surficial Aquifer Total							5.5E-05					1.5E+00

TABLE G 9.8.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Groundwater	Groundwater	Castle-Hayne Aquifer	1,2,4-Trichlorobenzene	8.6E-07	NA	NA	8.6E-07	Adrenal	8.3E-03	NA	NA	8.3E-03
		Aquifer - Tap Water	1,2-Dichloroethane	5.4E-06	NA	NA	5.4E-06	Kidney	2.8E-02	NA	NA	2.8E-02
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	1.9E-08	NA	NA	1.9E-08	Liver	1.4E-04	NA	NA	1.4E-04
			Benzene	2.3E-07	NA	NA	2.3E-07	Blood, Immune	2.9E-03	NA	NA	2.9E-03
			Chloroform	4.3E-07	NA	NA	4.3E-07	Liver	3.9E-03	NA	NA	3.9E-03
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Kidney	2.1E+02	NA	NA	2.1E+02
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Blood	3.1E-01	NA	NA	3.1E-01
			Trichloroethene	6.2E-07	NA	NA	6.2E-07	NA	NA	NA	NA	0.0E+00
			Vinyl chloride	1.2E-02	NA	NA	1.2E-02	Liver	1.5E+01	NA	NA	1.5E+01
			Aroclor-1260	2.4E-06	NA	NA	2.4E-06	NA	NA	NA	NA	0.0E+00
			Dieldrin	1.5E-06	NA	NA	1.5E-06	Liver	5.1E-03	NA	NA	5.1E-03
			Heptachlor epoxide	1.7E-06	NA	NA	1.7E-06	Liver	4.1E-02	NA	NA	4.1E-02
			Chromium	1.8E-05	NA	NA	1.8E-05	Not identified	3.4E-02	NA	NA	3.4E-02
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	1.1E-01	NA	NA	1.1E-01
			Thallium	NA	NA	NA	0.0E+00	Skin, Hair follicle atrophy	5.5E+00	NA	NA	5.5E+00
			Chemical Total	1.2E-02	0.0E+00	0.0E+00	1.2E-02		2.3E+02	0.0E+00	0.0E+00	2.3E+02
		Exposure Point Total					1.2E-02					2.3E+02
	Exposure Medium Total						1.2E-02					2.3E+02
Groundwater Castle-Hayne Aquifer Total							1.2E-02					2.3E+02
Receptor Total							1.2E-02				Receptor HI Total	2.3E+02

Receptor total and target organ totals includes higher of the Surficial Aquifer or Castle-Hayne Aquifer risks and hazards

CNS = Central Nervous System

Total CNS/Neurological HI Across All Media =	1.3E-02
Total Developmental HI Across All Media =	9.0E-03
Total Skin HI Across All Media =	**5.5E+00**
Total Vascular HI Across All Media =	1.5E-02
Total Gastrointestinal HI Across All Media =	1.2E-01
Total Hair HI Across All Media =	**5.5E+00**
Total Blood HI Across All Media =	3.2E-01
Total Respiratory System HI Across All Media =	2.9E-05
Total Adrenal HI Across All Media =	8.3E-03
Total Kidney HI Across All Media =	2.1E+02
Total Liver HI Across All Media =	**1.5E+01**
Total Immune HI Across All Media =	6.2E-02

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 9.9.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Soil*	Soil*	Soil*	Aluminum	NA	NA	NA	0.0E+00	Neurological, Developmental	1.9E-03	NA	7.4E-06	1.9E-03
			Arsenic	4.1E-07	NA	4.9E-08	4.5E-07	Skin, Vascular	2.6E-03	NA	3.2E-04	2.9E-03
			Chromium	6.0E-07	NA	6.0E-11	6.0E-07	Not identified	1.2E-03	NA	1.9E-04	1.4E-03
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	2.5E-03	NA	1.0E-05	2.6E-03
			Manganese	NA	NA	NA	0.0E+00	CNS	7.0E-04	NA	7.0E-05	7.7E-04
			Vanadium	NA	NA	NA	0.0E+00	Hair, Blood	8.7E-04	NA	1.3E-04	1.0E-03
			Chemical Total	1.0E-06	0.0E+00	4.9E-08	1.1E-06		9.8E-03	0.0E+00	7.2E-04	1.0E-02
		Exposure Point Total					1.1E-06					1.0E-02
	Exposure Medium Total						1.1E-06					1.0E-02
	Air	Emissions from Soil*	Chromium	NA	4.3E-09	NA	4.3E-09	Respiratory System	NA	1.5E-06	NA	1.5E-06
			Chemical Total	0.0E+00	4.3E-09	0.0E+00	4.3E-09		0.0E+00	1.5E-06	0.0E+00	1.5E-06
		Exposure Point Total					4.3E-09					1.5E-06
	Exposure Medium Total						4.3E-09					1.5E-06
Soil* Total							1.1E-06					1.0E-02
Surface Water	Surface Water	Drainage Ditches/ Marshy Area	Iron	NA	NA	NA	0.0E+00	Gastrointestinal	4.4E-05	NA	5.8E-06	4.9E-05
			Thallium	NA	NA	NA	0.0E+00	Skin, Hair follicle atrophy	2.8E-02	NA	3.7E-03	3.2E-02
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		2.8E-02	NA	3.7E-03	3.2E-02
		Exposure Point Total					0.0E+00					3.2E-02
	Exposure Medium Total						0.0E+00					3.2E-02
Surface Water in Drainage Ditches/Marshy Area Total							0.0E+00					3.2E-02
Sediment	Sediment	Drainage Ditches/ Marshy Area	Benzo(a)anthracene	8.7E-10	NA	3.9E-09	4.7E-09	NA	NA	NA	NA	0.0E+00
			Benzo(a)pyrene	1.9E-08	NA	8.4E-08	1.0E-07	NA	NA	NA	NA	0.0E+00
			Benzo(b)fluoranthene	1.2E-09	NA	5.4E-09	6.7E-09	NA	NA	NA	NA	0.0E+00
			Benzo(k)fluoranthene	8.7E-11	NA	3.9E-10	4.7E-10	NA	NA	NA	NA	0.0E+00
			Chrysene	9.2E-12	NA	4.1E-11	5.0E-11	NA	NA	NA	NA	0.0E+00
			Indeno(1,2,3-cd)pyrene	1.6E-10	NA	7.0E-10	8.6E-10	NA	NA	NA	NA	0.0E+00
			Aluminum	NA	NA	NA	0.0E+00	Neurological, Developmental	1.8E-03	NA	6.0E-05	1.8E-03
			Antimony	NA	NA	NA	0.0E+00	Longevity, Blood	2.7E-03	NA	6.1E-04	3.3E-03
			Chromium	3.1E-07	NA	2.7E-10	3.1E-07	Not identified	6.1E-04	NA	8.4E-04	1.4E-03
			Chemical Total	3.4E-07	NA	9.4E-08	4.3E-07		5.1E-03	NA	1.5E-03	6.6E-03
		Exposure Point Total					4.3E-07					6.6E-03
	Exposure Medium Total						4.3E-07					6.6E-03
Sediment in Drainage Ditches/Marshy Area Total							4.3E-07					6.6E-03
Receptor Total							1.5E-06				Receptor HI Total	4.9E-02

TABLE G 9.9.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure

CNS = Central Nervous System

Total CNS/Neurological HI Across All Media =	4.4E-03
Total Developmental HI Across All Media =	3.7E-03
Total Skin HI Across All Media =	3.5E-02
Total Vascular HI Across All Media =	2.9E-03
Total Gastrointestinal HI Across All Media =	2.6E-03
Total Hair HI Across All Media =	3.3E-02
Total Blood HI Across All Media =	4.3E-03
Total Respiratory System HI Across All Media =	1.5E-06
Total Longevity HI Across All Media =	3.3E-03

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 9.10.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Trespasser/Visitor
Receptor Age: Youth

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Soil*	Soil*	Soil*	Aluminum	NA	NA	NA	0.0E+00	Neurological, Developmental	2.9E-03	NA	4.8E-06	2.9E-03
			Arsenic	2.6E-07	NA	1.3E-08	2.8E-07	Skin, Vascular	4.1E-03	NA	2.1E-04	4.3E-03
			Chromium	3.9E-07	NA	1.6E-11	3.9E-07	Not identified	1.8E-03	NA	1.2E-04	1.9E-03
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	4.0E-03	NA	6.7E-06	4.0E-03
			Manganese	NA	NA	NA	0.0E+00	CNS	1.1E-03	NA	4.6E-05	1.1E-03
			Vanadium	NA	NA	NA	0.0E+00	Hair, Blood	1.4E-03	NA	8.8E-05	1.4E-03
			Chemical Total	6.5E-07	0.0E+00	1.3E-08	6.7E-07		1.5E-02	0.0E+00	4.7E-04	1.6E-02
		Exposure Point Total					6.7E-07					1.6E-02
	Exposure Medium Total						6.7E-07					1.6E-02
	Air	Emissions from Soil*	Chromium	NA	1.8E-09	NA	1.8E-09	Respiratory System	NA	1.5E-06	NA	1.5E-06
			Chemical Total	0.0E+00	1.8E-09	0.0E+00	1.8E-09		0.0E+00	1.5E-06	0.0E+00	1.5E-06
		Exposure Point Total					1.8E-09					1.5E-06
	Exposure Medium Total						1.8E-09					1.5E-06
Soil* Total							6.7E-07					1.6E-02
Surface Water	Surface Water	Drainage Ditches/ Marshy Area	Iron	NA	NA	NA	0.0E+00	Gastrointestinal	6.8E-05	NA	5.8E-06	7.4E-05
			Thallium	NA	NA	NA	0.0E+00	Skin, Hair follicle atrophy	4.4E-02	NA	3.7E-03	4.7E-02
			Chemical Total	0.0E+00	NA	0.0E+00	0.0E+00		4.4E-02	NA	3.7E-03	4.7E-02
		Exposure Point Total					0.0E+00					4.7E-02
	Exposure Medium Total						0.0E+00					4.7E-02
Surface Water in Drainage Ditches/Marshy Area Total							0.0E+00					4.7E-02
Sediment	Sediment	Drainage Ditches/ Marshy Area	Benzo(a)anthracene	5.6E-10	NA	3.9E-09	4.4E-09	NA	NA	NA	NA	0.0E+00
			Benzo(a)pyrene	1.2E-08	NA	8.4E-08	9.6E-08	NA	NA	NA	NA	0.0E+00
			Benzo(b)fluoranthene	7.9E-10	NA	5.4E-09	6.2E-09	NA	NA	NA	NA	0.0E+00
			Benzo(k)fluoranthene	5.6E-11	NA	3.9E-10	4.4E-10	NA	NA	NA	NA	0.0E+00
			Chrysene	5.9E-12	NA	4.1E-11	4.7E-11	NA	NA	NA	NA	0.0E+00
			Indeno(1,2,3-cd)pyrene	1.0E-10	NA	7.0E-10	8.0E-10	NA	NA	NA	NA	0.0E+00
			Aluminum	NA	NA	NA	0.0E+00	Neurological, Developmental	2.7E-03	NA	2.4E-05	2.8E-03
			Antimony	NA	NA	NA	0.0E+00	Longevity, Blood	4.2E-03	NA	2.4E-04	4.4E-03
			Chromium	2.0E-07	NA	2.7E-10	2.0E-07	Not identified	9.5E-04	NA	3.3E-04	1.3E-03
			Chemical Total	2.2E-07	NA	9.4E-08	3.1E-07		7.9E-03	NA	5.9E-04	8.5E-03
		Exposure Point Total					3.1E-07					8.5E-03
	Exposure Medium Total						3.1E-07					8.5E-03
Sediment in Drainage Ditches/Marshy Area Total							3.1E-07					8.5E-03
Receptor Total							9.8E-07				Receptor HI Total	7.2E-02

TABLE G 9.10.RME

Summary of Receptor Risks and Hazards for COPCs – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Trespasser/Visitor
Receptor Age: Youth

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure

CNS = Central Nervous System

Total CNS/Neurological HI Across All Media =	6.8E-03
Total Developmental HI Across All Media =	5.6E-03
Total Skin HI Across All Media =	5.2E-02
Total Vascular HI Across All Media =	4.3E-03
Total Gastrointestinal HI Across All Media =	4.0E-03
Total Hair HI Across All Media =	4.9E-02
Total Blood HI Across All Media =	5.9E-03
Total Respiratory System HI Across All Media =	1.5E-06
Total Longevity HI Across All Media =	4.4E-03

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 9.1.CTE

Summary of Receptor Risks and Hazards for COPCs – Central Tendency Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Soil*	Soil*	Soil*	Aluminum	NA	NA	NA	0.0E+00	Neurological, Developmental	2.6E-03	NA	3.0E-06	2.6E-03
			Arsenic	NA	NA	NA	0.0E+00	Skin, Vascular	2.2E-03	NA	7.4E-05	2.2E-03
			Chromium	NA	NA	NA	0.0E+00	Not identified	1.1E-03	NA	5.2E-05	1.2E-03
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	2.5E-03	NA	2.8E-06	2.5E-03
			Manganese	NA	NA	NA	0.0E+00	CNS	9.3E-04	NA	2.6E-05	9.6E-04
			Vanadium	NA	NA	NA	0.0E+00	Hair, Blood	8.9E-04	NA	3.9E-05	9.3E-04
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		1.0E-02	0.0E+00	2.0E-04	1.0E-02
		Exposure Point Total					0.0E+00					1.0E-02
	Exposure Medium Total						0.0E+00					1.0E-02
Soil* Total							0.0E+00					1.0E-02
Groundwater	Groundwater	Surficial Aquifer	1,1,2,2-Tetrachloroethane	NA	NA	NA	0.0E+00	Liver	1.4E-03	NA	1.7E-04	1.6E-03
		Tap Water	1,1,2-Trichloroethane	NA	NA	NA	0.0E+00	Blood	5.9E-03	NA	5.2E-04	6.5E-03
			1,2-Dichloroethane	NA	NA	NA	0.0E+00	Kidney	6.0E-03	NA	2.8E-04	6.3E-03
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	NA	NA	NA	0.0E+00	Liver	6.0E-04	NA	3.8E-04	9.8E-04
			Benzene	NA	NA	NA	0.0E+00	Blood, Immune	1.9E-03	NA	2.7E-04	2.1E-03
			Chloroform	NA	NA	NA	0.0E+00	Liver	1.7E-03	NA	1.4E-04	1.8E-03
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Kidney	3.2E-01	NA	3.8E-02	3.6E-01
			Tetrachloroethene	NA	NA	NA	0.0E+00	Liver, Body Weight	2.4E-04	NA	1.4E-04	3.8E-04
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Blood	3.1E-03	NA	3.7E-04	3.5E-03
			Trichloroethene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Vinyl chloride	NA	NA	NA	0.0E+00	Liver	2.7E-02	NA	1.3E-03	2.8E-02
			alpha-BHC	NA	NA	NA	0.0E+00	CNS	1.2E-04	NA	9.6E-05	2.2E-04
			Aroclor-1260	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			beta-BHC	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			delta-BHC	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Heptachlor epoxide	NA	NA	NA	0.0E+00	Liver	7.8E-02	NA	1.2E-01	1.9E-01
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	1.8E-01	NA	5.7E-04	1.8E-01
			Manganese	NA	NA	NA	0.0E+00	CNS	1.1E-01	NA	9.1E-03	1.2E-01
			Vanadium	NA	NA	NA	0.0E+00	Hair, Blood	2.2E-02	NA	2.7E-03	2.4E-02
			Zinc	NA	NA	NA	0.0E+00	Blood	8.3E-02	NA	2.7E-04	8.3E-02
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		8.5E-01	0.0E+00	1.7E-01	1.0E+00
		Exposure Point Total					0.0E+00					1.0E+00
	Exposure Medium Total						0.0E+00					1.0E+00

TABLE G 9.1.CTE

Summary of Receptor Risks and Hazards for COPCs – Central Tendency Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Groundwater	Air	Surficial Aquifer	1,1,2,2-Tetrachloroethane	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
(cont'd)		Water Vapors at	1,1,2-Trichloroethane	NA	NA	NA	0.0E+00	Nasal	NA	5.2E-02	NA	5.2E-02
		Showerhead	1,2-Dichloroethane	NA	NA	NA	0.0E+00	Liver	NA	2.8E-03	NA	2.8E-03
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	NA	NA	NA	0.0E+00	Liver	NA	2.6E-05	NA	2.6E-05
			Benzene	NA	NA	NA	0.0E+00	Blood, Immune	NA	1.7E-04	NA	1.7E-04
			Chloroform	NA	NA	NA	0.0E+00	Liver	NA	9.5E-05	NA	9.5E-05
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Tetrachloroethene	NA	NA	NA	0.0E+00	Kidney, Liver	NA	4.5E-06	NA	4.5E-06
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Respiratory System	NA	6.5E-04	NA	6.5E-04
			Trichloroethene	NA	NA	NA	0.0E+00	NA	NA	8.5E-04	NA	8.5E-04
			Vinyl chloride	NA	NA	NA	0.0E+00	Liver	NA	6.4E-04	NA	6.4E-04
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		0.0E+00	5.7E-02	0.0E+00	5.7E-02
		Exposure Point Total					0.0E+00					5.7E-02
	Exposure Medium Total						0.0E+00					5.7E-02
Groundwater Surficial Aquifer Total							0.0E+00					1.1E+00
Groundwater	Groundwater	Castle-Hayne	1,2,4-Trichlorobenzene	NA	NA	NA	0.0E+00	Adrenal	1.1E-02	NA	1.4E-02	2.4E-02
		Aquifer - Tap Water	1,2-Dichloroethane	NA	NA	NA	0.0E+00	Kidney	3.6E-03	NA	1.7E-04	3.8E-03
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	NA	NA	NA	0.0E+00	Liver	1.8E-04	NA	1.2E-04	3.0E-04
			Benzene	NA	NA	NA	0.0E+00	Blood, Immune	4.3E-04	NA	6.2E-05	4.9E-04
			Chloroform	NA	NA	NA	0.0E+00	Liver	3.4E-03	NA	2.9E-04	3.7E-03
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Kidney	2.6E+01	NA	3.1E+00	2.9E+01
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Blood	3.9E-02	NA	4.6E-03	4.4E-02
			Trichloroethene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Vinyl chloride	NA	NA	NA	0.0E+00	Liver	1.8E+00	NA	9.0E-02	1.9E+00
			Aroclor-1260	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Dieldrin	NA	NA	NA	0.0E+00	Liver	6.7E-03	NA	5.5E-03	1.2E-02
			Heptachlor epoxide	NA	NA	NA	0.0E+00	Liver	3.7E-02	NA	5.5E-02	9.3E-02
			Chromium	NA	NA	NA	0.0E+00	Not identified	2.8E-02	NA	3.6E-03	3.2E-02
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	2.8E-02	NA	3.6E-03	3.2E-02
			Thallium	NA	NA	NA	0.0E+00	Skin, Hair follicle atrophy	7.2E+00	NA	2.3E-02	7.2E+00
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		3.5E+01	0.0E+00	3.3E+00	3.9E+01
		Exposure Point Total					0.0E+00					3.9E+01
	Exposure Medium Total						0.0E+00					3.9E+01

TABLE G 9.1.CTE

Summary of Receptor Risks and Hazards for COPCs – Central Tendency Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Groundwater	Air	Castle-Hayne Aquifer	1,2,4-Trichlorobenzene	NA	NA	NA	0.0E+00	Liver	NA	2.3E-02	NA	2.3E-02
(cont'd)		Water Vapors at Showerhead	1,2-Dichloroethane	NA	NA	NA	0.0E+00	Liver	NA	4.9E-06	NA	4.9E-06
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	NA	NA	NA	0.0E+00	Liver	NA	7.8E-06	NA	7.8E-06
			Benzene	NA	NA	NA	0.0E+00	Blood, Immune	NA	4.0E-05	NA	4.0E-05
			Chloroform	NA	NA	NA	0.0E+00	Liver	NA	1.9E-04	NA	1.9E-04
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Respiratory System	NA	8.0E-03	NA	8.0E-03
			Trichloroethene	NA	NA	NA	0.0E+00	NA	NA	9.9E-03	NA	9.9E-03
			Vinyl chloride	NA	NA	NA	0.0E+00	Liver	NA	4.4E-02	NA	4.4E-02
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		0.0E+00	8.5E-02	0.0E+00	8.5E-02
		Exposure Point Total					0.0E+00					8.5E-02
	Exposure Medium Total						0.0E+00					8.5E-02
Groundwater Castle-Hayne Aquifer Total							0.0E+00					3.9E+01
Receptor Total							0.0E+00				Receptor HI Total	3.9E+01

Receptor total and target organ totals includes higher of the Surficial Aquifer or Castle-Hayne Aquifer risks and hazards

CNS = Central Nervous System

Total CNS/Neurological HI Across All Media =	3.6E-03
Total Developmental HI Across All Media =	2.6E-03
Total Skin HI Across All Media =	7.2E+00
Total Vascular HI Across All Media =	2.2E-03
Total Gastrointestinal HI Across All Media =	3.4E-02
Total Hair HI Across All Media =	**7.2E+00**
Total Blood HI Across All Media =	4.5E-02
Total Respiratory System HI Across All Media =	8.0E-03
Total Adrenal HI Across All Media =	2.4E-02
Total Kidney HI Across All Media =	**2.9E+01**
Total Liver HI Across All Media =	**2.1E+00**
Total Immune HI Across All Media =	5.3E-04

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 9.2.CTE

Summary of Receptor Risks and Hazards for COPCs – Central Tendency Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Soil*	Soil*	Soil*	Aluminum	NA	NA	NA	0.0E+00	Neurological, Developmental	2.4E-02	NA	2.7E-05	2.4E-02
			Arsenic	NA	NA	NA	0.0E+00	Skin, Vascular	2.0E-02	NA	6.8E-04	2.1E-02
			Chromium	NA	NA	NA	0.0E+00	Not identified	1.1E-02	NA	4.8E-04	1.1E-02
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	2.3E-02	NA	2.6E-05	2.3E-02
			Manganese	NA	NA	NA	0.0E+00	CNS	8.7E-03	NA	2.4E-04	8.9E-03
			Vanadium	NA	NA	NA	0.0E+00	Hair, Blood	8.3E-03	NA	3.6E-04	8.7E-03
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		9.5E-02	0.0E+00	1.8E-03	9.7E-02
		Exposure Point Total					0.0E+00					9.7E-02
	Exposure Medium Total						0.0E+00					9.7E-02
Soil* Total							0.0E+00					9.7E-02
Groundwater	Groundwater	Surficial Aquifer	1,1,2,2-Tetrachloroethane	NA	NA	NA	0.0E+00	Liver	4.8E-03	NA	3.3E-04	5.1E-03
		Tap Water	1,1,2-Trichloroethane	NA	NA	NA	0.0E+00	Blood	2.0E-02	NA	1.0E-03	2.1E-02
			1,2-Dichloroethane	NA	NA	NA	0.0E+00	Kidney	2.0E-02	NA	5.5E-04	2.1E-02
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	NA	NA	NA	0.0E+00	Liver	2.0E-03	NA	7.5E-04	2.8E-03
			Benzene	NA	NA	NA	0.0E+00	Blood, Immune	6.2E-03	NA	5.2E-04	6.7E-03
			Chloroform	NA	NA	NA	0.0E+00	Liver	5.6E-03	NA	2.8E-04	5.8E-03
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Kidney	1.1E+00	NA	7.6E-02	1.2E+00
			Tetrachloroethene	NA	NA	NA	0.0E+00	Liver, Body Weight	8.1E-04	NA	2.7E-04	1.1E-03
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Blood	1.0E-02	NA	7.3E-04	1.1E-02
			Trichloroethene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Vinyl chloride	NA	NA	NA	0.0E+00	Liver	9.0E-02	NA	2.6E-03	9.2E-02
			alpha-BHC	NA	NA	NA	0.0E+00	CNS	4.1E-04	NA	1.9E-04	6.0E-04
			Aroclor-1260	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			beta-BHC	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			delta-BHC	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Heptachlor epoxide	NA	NA	NA	0.0E+00	Liver	2.6E-01	NA	2.3E-01	4.9E-01
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	5.9E-01	NA	1.3E-03	6.0E-01
			Manganese	NA	NA	NA	0.0E+00	CNS	3.8E-01	NA	2.1E-02	4.0E-01
			Vanadium	NA	NA	NA	0.0E+00	Hair, Blood	7.2E-02	NA	6.0E-03	7.8E-02
			Zinc	NA	NA	NA	0.0E+00	Blood	2.8E-01	NA	6.0E-04	2.8E-01
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		2.8E+00	0.0E+00	3.4E-01	3.2E+00
		Exposure Point Total					0.0E+00					3.2E+00
	Exposure Medium Total						0.0E+00					3.2E+00

TABLE G 9.2.CTE

Summary of Receptor Risks and Hazards for COPCs – Central Tendency Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Groundwater	Air	Surficial Aquifer	1,1,2,2-Tetrachloroethane	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
(cont'd)		Water Vapors at	1,1,2-Trichloroethane	NA	NA	NA	0.0E+00	Nasal	NA	7.8E-02	NA	7.8E-02
		Showerhead	1,2-Dichloroethane	NA	NA	NA	0.0E+00	Liver	NA	4.2E-03	NA	4.2E-03
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	NA	NA	NA	0.0E+00	Liver	NA	3.9E-05	NA	3.9E-05
			Benzene	NA	NA	NA	0.0E+00	Blood, Immune	NA	2.6E-04	NA	2.6E-04
			Chloroform	NA	NA	NA	0.0E+00	Liver	NA	1.4E-04	NA	1.4E-04
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Tetrachloroethene	NA	NA	NA	0.0E+00	Kidney, Liver	NA	6.8E-06	NA	6.8E-06
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Respiratory System	NA	9.8E-04	NA	9.8E-04
			Trichloroethene	NA	NA	NA	0.0E+00	NA	NA	1.3E-03	NA	1.3E-03
			Vinyl chloride	NA	NA	NA	0.0E+00	Liver	NA	9.7E-04	NA	9.7E-04
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		0.0E+00	8.6E-02	0.0E+00	8.6E-02
		Exposure Point Total					0.0E+00					8.6E-02
	Exposure Medium Total						0.0E+00					8.6E-02
Groundwater Surficial Aquifer Total							0.0E+00					3.2E+00
Groundwater	Groundwater	Castle-Hayne	1,2,4-Trichlorobenzene	NA	NA	NA	0.0E+00	Adrenal	3.6E-02	NA	2.7E-02	6.3E-02
		Aquifer - Tap Water	1,2-Dichloroethane	NA	NA	NA	0.0E+00	Kidney	1.2E-02	NA	3.3E-04	1.2E-02
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	NA	NA	NA	0.0E+00	Liver	6.1E-04	NA	2.3E-04	8.4E-04
			Benzene	NA	NA	NA	0.0E+00	Blood, Immune	1.4E-03	NA	1.2E-04	1.6E-03
			Chloroform	NA	NA	NA	0.0E+00	Liver	1.1E-02	NA	5.7E-04	1.2E-02
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Kidney	8.7E+01	NA	6.1E+00	9.4E+01
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Blood	1.3E-01	NA	9.1E-03	1.4E-01
			Trichloroethene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Vinyl chloride	NA	NA	NA	0.0E+00	Liver	6.2E+00	NA	1.8E-01	6.3E+00
			Aroclor-1260	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Dieldrin	NA	NA	NA	0.0E+00	Liver	2.2E-02	NA	1.1E-02	3.3E-02
			Heptachlor epoxide	NA	NA	NA	0.0E+00	Liver	1.2E-01	NA	1.1E-01	2.3E-01
			Chromium	NA	NA	NA	0.0E+00	Not identified	9.4E-02	NA	8.2E-03	1.0E-01
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	2.8E-01	NA	6.1E-04	2.8E-01
			Thallium	NA	NA	NA	0.0E+00	Skin, Hair follicle atrophy	2.4E+01	NA	5.2E-02	2.4E+01
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		1.2E+02	0.0E+00	6.5E+00	1.2E+02
		Exposure Point Total					0.0E+00					1.2E+02
	Exposure Medium Total						0.0E+00					1.2E+02

TABLE G 9.2.CTE

Summary of Receptor Risks and Hazards for COPCs – Central Tendency Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Groundwater	Air	Castle-Hayne Aquifer	1,2,4-Trichlorobenzene	NA	NA	NA	0.0E+00	Liver	NA	3.4E-02	NA	3.4E-02
(cont'd)		Water Vapors at Showerhead	1,2-Dichloroethane	NA	NA	NA	0.0E+00	Liver	NA	7.4E-06	NA	7.4E-06
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	NA	NA	NA	0.0E+00	Liver	NA	1.2E-05	NA	1.2E-05
			Benzene	NA	NA	NA	0.0E+00	Blood, Immune	NA	6.0E-05	NA	6.0E-05
			Chloroform	NA	NA	NA	0.0E+00	Liver	NA	2.9E-04	NA	2.9E-04
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Respiratory System	NA	1.2E-02	NA	1.2E-02
			Trichloroethene	NA	NA	NA	0.0E+00	NA	NA	1.5E-02	NA	1.5E-02
			Vinyl chloride	NA	NA	NA	0.0E+00	Liver	NA	6.6E-02	NA	6.6E-02
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		0.0E+00	1.3E-01	0.0E+00	1.3E-01
		Exposure Point Total					0.0E+00					1.3E-01
	Exposure Medium Total						0.0E+00					1.3E-01
Groundwater Castle-Hayne Aquifer Total							0.0E+00					1.2E+02
Receptor Total							0.0E+00				Receptor HI Total	1.2E+02

Receptor total and target organ totals includes higher of the Surficial Aquifer or Castle-Hayne Aquifer risks and hazards

CNS = Central Nervous System

Total CNS/Neurological HI Across All Media =	3.3E-02
Total Developmental HI Across All Media =	2.4E-02
Total Skin HI Across All Media =	**2.4E+01**
Total Vascular HI Across All Media =	2.1E-02
Total Gastrointestinal HI Across All Media =	3.0E-01
Total Hair HI Across All Media =	**2.4E+01**
Total Blood HI Across All Media =	1.5E-01
Total Respiratory System HI Across All Media =	1.2E-02
Total Adrenal HI Across All Media =	6.3E-02
Total Kidney HI Across All Media =	**9.4E+01**
Total Liver HI Across All Media =	**6.7E+00**
Total Immune HI Across All Media =	1.6E-03

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 9.3.CTE

Summary of Receptor Risks and Hazards for COPCs – Central Tendency Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Soil*	Soil*	Soil*	Aluminum	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Arsenic	9.1E-07	NA	3.1E-08	9.4E-07		NA	NA	NA	0.0E+00
			Chromium	8.4E-06	NA	8.2E-09	8.4E-06		NA	NA	NA	0.0E+00
			Iron	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Manganese	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Vanadium	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Chemical Total	9.3E-06	0.0E+00	3.9E-08	9.4E-06		0.0E+00	0.0E+00	0.0E+00	0.0E+00
		Exposure Point Total					9.4E-06					0.0E+00
	Exposure Medium Total						9.4E-06					0.0E+00
Soil* Total							9.4E-06					0.0E+00
Groundwater	Groundwater	Surficial Aquifer	1,1,2,2-Tetrachloroethane	2.4E-06	NA	2.0E-07	2.6E-06		NA	NA	NA	0.0E+00
		Tap Water	1,1,2-Trichloroethane	5.6E-07	NA	3.5E-08	6.0E-07		NA	NA	NA	0.0E+00
			1,2-Dichloroethane	1.4E-06	NA	4.5E-08	1.4E-06		NA	NA	NA	0.0E+00
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	9.5E-08	NA	4.3E-08	1.4E-07		NA	NA	NA	0.0E+00
			Benzene	1.7E-07	NA	1.7E-08	1.9E-07		NA	NA	NA	0.0E+00
			Chloroform	2.1E-07	NA	1.3E-08	2.3E-07		NA	NA	NA	0.0E+00
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Tetrachloroethene	5.5E-07	NA	2.2E-07	7.7E-07		NA	NA	NA	0.0E+00
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Trichloroethene	3.8E-08	NA	4.3E-09	4.2E-08		NA	NA	NA	0.0E+00
			Vinyl chloride	6.3E-05	NA	2.0E-06	6.5E-05		NA	NA	NA	0.0E+00
			alpha-BHC	2.6E-06	NA	1.4E-06	4.0E-06		NA	NA	NA	0.0E+00
			Aroclor-1260	1.3E-05	NA	NA	1.3E-05		NA	NA	NA	0.0E+00
			beta-BHC	4.0E-07	NA	2.2E-07	6.2E-07		NA	NA	NA	0.0E+00
			delta-BHC	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Heptachlor epoxide	3.8E-06	NA	4.1E-06	7.9E-06		NA	NA	NA	0.0E+00
			Iron	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Manganese	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Vanadium	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Zinc	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Chemical Total	8.8E-05	0.0E+00	8.3E-06	9.6E-05		0.0E+00	0.0E+00	0.0E+00	0.0E+00
		Exposure Point Total					9.6E-05					0.0E+00
	Exposure Medium Total						9.6E-05					0.0E+00

TABLE G 9.3.CTE

Summary of Receptor Risks and Hazards for COPCs – Central Tendency Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Groundwater	Air	Surficial Aquifer	1,1,2,2-Tetrachloroethane	NA	1.3E-07	NA	1.3E-07		NA	NA	NA	0.0E+00
(cont'd)		Water Vapors at	1,1,2-Trichloroethane	NA	4.3E-08	NA	4.3E-08		NA	NA	NA	0.0E+00
		Showerhead	1,2-Dichloroethane	NA	1.3E-07	NA	1.3E-07		NA	NA	NA	0.0E+00
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	NA	5.9E-08	NA	5.9E-08		NA	NA	NA	0.0E+00
			Benzene	NA	1.0E-08	NA	1.0E-08		NA	NA	NA	0.0E+00
			Chloroform	NA	5.5E-08	NA	5.5E-08		NA	NA	NA	0.0E+00
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Tetrachloroethene	NA	1.9E-09	NA	1.9E-09		NA	NA	NA	0.0E+00
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Trichloroethene	NA	4.4E-09	NA	4.4E-09		NA	NA	NA	0.0E+00
			Vinyl chloride	NA	7.3E-08	NA	7.3E-08		NA	NA	NA	0.0E+00
			Chemical Total	0.0E+00	5.1E-07	0.0E+00	5.1E-07		0.0E+00	0.0E+00	0.0E+00	0.0E+00
		Exposure Point Total					5.1E-07					0.0E+00
	Exposure Medium Total						5.1E-07					0.0E+00
Groundwater Surficial Aquifer Total							9.7E-05					0.0E+00
Groundwater	Groundwater	Castle-Hayne Aquifer	1,2,4-Trichlorobenzene	1.3E-06	NA	1.2E-06	2.5E-06		NA	NA	NA	0.0E+00
		Aquifer - Tap Water	1,2-Dichloroethane	8.2E-07	NA	2.7E-08	8.5E-07		NA	NA	NA	0.0E+00
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	2.9E-08	NA	1.3E-08	4.2E-08		NA	NA	NA	0.0E+00
			Benzene	3.9E-08	NA	4.0E-09	4.3E-08		NA	NA	NA	0.0E+00
			Chloroform	4.4E-07	NA	2.7E-08	4.6E-07		NA	NA	NA	0.0E+00
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Trichloroethene	4.4E-07	NA	4.9E-08	4.9E-07		NA	NA	NA	0.0E+00
			Vinyl chloride	4.3E-03	NA	5.0E-05	4.4E-03		NA	NA	NA	**0.0E+00**
			Aroclor-1260	3.6E-06	NA	NA	3.6E-06		NA	NA	NA	0.0E+00
			Dieldrin	2.2E-06	NA	1.3E-06	3.5E-06		NA	NA	NA	0.0E+00
			Heptachlor epoxide	1.8E-06	NA	1.9E-06	3.8E-06		NA	NA	NA	**0.0E+00**
			Chromium	1.0E-04	NA	2.4E-06	1.1E-04		NA	NA	NA	0.0E+00
			Thallium	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
												0.0E+00
			Chemical Total	4.4E-03	0.0E+00	5.7E-05	4.5E-03		0.0E+00	0.0E+00	0.0E+00	0.0E+00
		Exposure Point Total					4.5E-03					0.0E+00
	Exposure Medium Total						4.5E-03					0.0E+00

TABLE G 9.3.CTE

Summary of Receptor Risks and Hazards for COPCs – Central Tendency Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Groundwater	Air	Castle-Hayne Aquifer	1,2,4-Trichlorobenzene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
(cont'd)		Water Vapors at Showerhead	1,2-Dichloroethane	NA	7.9E-08	NA	7.9E-08		NA	NA	NA	0.0E+00
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	NA	1.8E-08	NA	1.8E-08		NA	NA	NA	0.0E+00
			Benzene	NA	2.4E-09	NA	2.4E-09		NA	NA	NA	0.0E+00
			Chloroform	NA	1.1E-07	NA	1.1E-07		NA	NA	NA	0.0E+00
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00		NA	NA	NA	0.0E+00
			Trichloroethene	NA	5.1E-08	NA	5.1E-08		NA	NA	NA	0.0E+00
			Vinyl chloride	NA	5.0E-06	NA	5.0E-06		NA	NA	NA	0.0E+00
			Chemical Total	0.0E+00	5.2E-06	0.0E+00	5.2E-06		0.0E+00	0.0E+00	0.0E+00	0.0E+00
		Exposure Point Total					5.2E-06					0.0E+00
	Exposure Medium Total						5.2E-06					0.0E+00
Groundwater Castle-Hayne Aquifer Total							4.5E-03					0.0E+00
Receptor Total							4.5E-03				Receptor HI Total	0.0E+00

Receptor total and target organ totals includes higher of the Surficial Aquifer or Castle-Hayne Aquifer risks and hazards

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 9.4.CTE

Summary of Receptor Risks and Hazards for COPCs – Central Tendency Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Soil*	Soil*	Soil*	Aluminum	NA	NA	NA	0.0E+00	Neurological, Developmental	2.4E-03	NA	3.2E-06	2.4E-03
			Arsenic	1.2E-07	NA	4.7E-09	1.2E-07	Skin, Vascular	2.0E-03	NA	8.1E-05	2.1E-03
			Chromium	2.1E-07	NA	6.8E-12	2.1E-07	Not identified	1.1E-03	NA	5.7E-05	1.1E-03
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	2.3E-03	NA	3.0E-06	2.3E-03
			Manganese	NA	NA	NA	0.0E+00	CNS	8.7E-04	NA	2.9E-05	9.0E-04
			Vanadium	NA	NA	NA	0.0E+00	Hair, Blood	8.4E-04	NA	4.2E-05	8.8E-04
			Chemical Total	3.2E-07	0.0E+00	4.7E-09	3.3E-07		9.6E-03	0.0E+00	2.1E-04	9.8E-03
		Exposure Point Total					3.3E-07					9.8E-03
	Exposure Medium Total						3.3E-07					9.8E-03
Soil* Total							3.3E-07					9.8E-03
Groundwater	Groundwater	Surficial Aquifer	1,1,2,2-Tetrachloroethane	4.9E-07	NA	NA	4.9E-07	Liver	9.6E-04	NA	NA	9.6E-04
		Tap Water	1,1,2-Trichloroethane	1.2E-07	NA	NA	1.2E-07	Blood	4.0E-03	NA	NA	4.0E-03
			1,2-Dichloroethane	2.8E-07	NA	NA	2.8E-07	Kidney	4.0E-03	NA	NA	4.0E-03
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	2.0E-08	NA	NA	2.0E-08	Liver	4.0E-04	NA	NA	4.0E-04
			Benzene	3.5E-08	NA	NA	3.5E-08	Blood, Immune	1.2E-03	NA	NA	1.2E-03
			Chloroform	4.4E-08	NA	NA	4.4E-08	Liver	1.1E-03	NA	NA	1.1E-03
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Kidney	2.2E-01	NA	NA	2.2E-01
			Tetrachloroethene	1.1E-07	NA	NA	1.1E-07	Liver, Body Weight	1.6E-04	NA	NA	1.6E-04
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Blood	2.1E-03	NA	NA	2.1E-03
			Trichloroethene	7.8E-09	NA	NA	7.8E-09	NA	NA	NA	NA	0.0E+00
			Vinyl chloride	5.0E-06	NA	NA	5.0E-06	Liver	1.8E-02	NA	NA	1.8E-02
			alpha-BHC	5.3E-07	NA	NA	5.3E-07	CNS	8.3E-05	NA	NA	8.3E-05
			Aroclor-1260	2.6E-06	NA	NA	2.6E-06	NA	NA	NA	NA	0.0E+00
			beta-BHC	8.3E-08	NA	NA	8.3E-08	NA	NA	NA	NA	0.0E+00
			delta-BHC	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			Heptachlor epoxide	7.9E-07	NA	NA	7.9E-07	Liver	5.2E-02	NA	NA	5.2E-02
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	1.2E-01	NA	NA	1.2E-01
			Manganese	NA	NA	NA	0.0E+00	CNS	7.6E-02	NA	NA	7.6E-02
			Vanadium	NA	NA	NA	0.0E+00	Hair, Blood	1.4E-02	NA	NA	1.4E-02
			Zinc	NA	NA	NA	0.0E+00	Blood	5.5E-02	NA	NA	5.5E-02
			Chemical Total	1.0E-05	0.0E+00	0.0E+00	1.0E-05		5.7E-01	0.0E+00	0.0E+00	5.7E-01
		Exposure Point Total					1.0E-05					5.7E-01
	Exposure Medium Total						1.0E-05					5.7E-01
Groundwater Surficial Aquifer Total							1.0E-05					5.7E-01

TABLE G 9.4.CTE

Summary of Receptor Risks and Hazards for COPCs – Central Tendency Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Groundwater	Groundwater	Castle-Hayne Aquifer	1,2,4-Trichlorobenzene	2.7E-07	NA	NA	2.7E-07	Adrenal	7.3E-03	NA	NA	7.3E-03
		Aquifer - Tap Water	1,2-Dichloroethane	1.7E-07	NA	NA	1.7E-07	Kidney	2.4E-03	NA	NA	2.4E-03
			1,3-Dichlorobenzene	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
			1,4-Dichlorobenzene	6.0E-09	NA	NA	6.0E-09	Liver	1.2E-04	NA	NA	1.2E-04
			Benzene	8.2E-09	NA	NA	8.2E-09	Blood, Immune	2.9E-04	NA	NA	2.9E-04
			Chloroform	9.0E-08	NA	NA	9.0E-08	Liver	2.3E-03	NA	NA	2.3E-03
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Kidney	1.8E+01	NA	NA	1.8E+01
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Blood	2.6E-02	NA	NA	2.6E-02
			Trichloroethene	9.1E-08	NA	NA	9.1E-08	NA	NA	NA	NA	0.0E+00
			Vinyl chloride	3.4E-04	NA	NA	3.4E-04	Liver	1.2E+00	NA	NA	1.2E+00
			Aroclor-1260	7.5E-07	NA	NA	7.5E-07	NA	NA	NA	NA	0.0E+00
			Dieldrin	4.6E-07	NA	NA	4.6E-07	Liver	4.5E-03	NA	NA	4.5E-03
			Heptachlor epoxide	3.8E-07	NA	NA	3.8E-07	Liver	2.5E-02	NA	NA	2.5E-02
			Chromium	3.6E-06	NA	NA	3.6E-06	Not identified	1.9E-02	NA	NA	1.9E-02
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	5.6E-02	NA	NA	5.6E-02
			Thallium	NA	NA	NA	0.0E+00	Skin, Hair follicle atrophy	4.8E+00	NA	NA	4.8E+00
			Chemical Total	3.5E-04	0.0E+00	0.0E+00	3.5E-04		2.4E+01	0.0E+00	0.0E+00	2.4E+01
		Exposure Point Total					3.5E-04					2.4E+01
	Exposure Medium Total						3.5E-04					2.4E+01
Groundwater Castle-Hayne Aquifer Total							3.5E-04					2.4E+01
Receptor Total							3.5E-04				Receptor HI Total	2.4E+01

CNS = Central Nervous System

Total CNS/Neurological HI Across All Media =	3.3E-03
Total Developmental HI Across All Media =	2.4E-03
Total Skin HI Across All Media =	**4.8E+00**
Total Vascular HI Across All Media =	2.1E-03
Total Gastrointestinal HI Across All Media =	5.8E-02
Total Hair HI Across All Media =	**4.8E+00**
Total Blood HI Across All Media =	2.7E-02
Total Adrenal HI Across All Media =	7.3E-03
Total Kidney HI Across All Media =	1.8E+01
Total Liver HI Across All Media =	**1.3E+00**
Total Immune HI Across All Media =	5.2E-02

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 10.1.RME

Risk Summary – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Groundwater	Groundwater	Surficial Aquifer Tap Water	cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Kidney	1.6E+00	NA	2.0E-01	1.8E+00
			Vinyl chloride	NA	NA	NA	0.0E+00	Liver	1.2E-01	NA	6.5E-03	1.3E-01
			Heptachlor epoxide	NA	NA	NA	0.0E+00	Liver	1.7E-01	NA	2.6E-01	4.3E-01
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	7.2E-01	NA	3.7E-03	7.2E-01
			Manganese	NA	NA	NA	0.0E+00	CNS	9.1E-01	NA	1.2E-01	1.0E+00
			Vanadium	NA	NA	NA	0.0E+00	Hair, Blood	1.2E-01	NA	2.5E-02	1.5E-01
			Zinc	NA	NA	NA	0.0E+00	Blood	4.2E-01	NA	2.2E-03	4.2E-01
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		4.0E+00	0.0E+00	6.2E-01	4.7E+00
		Exposure Point Total					0.0E+00					4.7E+00
	Exposure Medium Total						0.0E+00					4.7E+00
	Air	Surficial Aquifer Water Vapors at Showerhead	1,1,2-Trichloroethane	NA	NA	NA	0.0E+00	Nasal	NA	8.6E-01	NA	8.6E-01
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		0.0E+00	8.6E-01	0.0E+00	8.6E-01
		Exposure Point Total					0.0E+00					8.6E-01
	Exposure Medium Total						0.0E+00					8.6E-01
Groundwater Surficial Aquifer Total							0.0E+00					5.5E+00
Groundwater	Groundwater	Castle-Hayne Aquifer - Tap Water	cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Kidney	5.9E+02	NA	7.5E+01	6.7E+02
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Blood	8.8E-01	NA	1.1E-01	9.9E-01
			Vinyl chloride	NA	NA	NA	0.0E+00	Liver	4.3E+01	NA	2.3E+00	4.5E+01
			Heptachlor epoxide	NA	NA	NA	0.0E+00	Liver	1.1E-01	NA	1.8E-01	3.0E-01
			Chromium	NA	NA	NA	0.0E+00	Not identified	9.6E-02	NA	2.0E-02	1.2E-01
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	3.0E-01	NA	1.5E-03	3.0E-01
			Thallium	NA	NA	NA	0.0E+00	Skin, Hair follicle atrophy	1.5E+01	NA	8.0E-02	1.5E+01
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		6.5E+02	0.0E+00	7.8E+01	7.3E+02
		Exposure Point Total					0.0E+00					7.3E+02
	Exposure Medium Total						0.0E+00					7.3E+02

TABLE G 10.1.RME

Risk Summary – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Groundwater (cont'd)	Air	Castle-Hayne Aquifer Water Vapors at Showerhead	1,2,4-Trichlorobenzene	NA	NA	NA	0.0E+00	Liver	NA	1.5E-01	NA	1.5E-01
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Respiratory System	NA	5.7E-01	NA	5.7E-01
			Trichloroethene	NA	NA	NA	0.0E+00	NA	NA	1.4E-01	NA	1.4E-01
			Vinyl chloride	NA	NA	NA	0.0E+00	Liver	NA	3.2E+00	NA	3.2E+00
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		0.0E+00	4.1E+00	0.0E+00	4.1E+00
		Exposure Point Total					0.0E+00					4.1E+00
	Exposure Medium Total						0.0E+00					4.1E+00
Groundwater Castle-Hayne Aquifer Total							0.0E+00					7.3E+02
Receptor Total							0.0E+00				Receptor HI Total	7.3E+02

Receptor total and target organ totals includes higher of the Surficial Aquifer or Castle-Hayne Aquifer risks and hazards

CNS = Central Nervous System

Total Skin HI Across All Media =	**1.5E+01**
Total Gastrointestinal HI Across All Media =	3.0E-01
Total Hair HI Across All Media =	**1.5E+01**
Total Blood HI Across All Media =	9.9E-01
Total Respiratory System HI Across All Media =	5.7E-01
Total Kidney HI Across All Media =	**6.7E+02**
Total Liver HI Across All Media =	**4.9E+01**

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 10.2.RME

Risk Summary – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Soil*	Soil*	Soil*	Aluminum	NA	NA	NA	0.0E+00	Neurological, Developmental	1.2E-01	NA	3.3E-04	1.2E-01
			Arsenic	NA	NA	NA	0.0E+00	Skin, Vascular	1.7E-01	NA	1.4E-02	1.8E-01
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	1.6E-01	NA	4.5E-04	1.6E-01
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		4.4E-01	0.0E+00	1.5E-02	4.6E-01
		Exposure Point Total					0.0E+00					4.6E-01
	Exposure Medium Total						0.0E+00					4.6E-01
Soil* Total							0.0E+00					4.6E-01
Groundwater	Groundwater	Surficial Aquifer Tap Water	cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Kidney	3.7E+00	NA	4.6E-01	4.1E+00
			Vinyl chloride	NA	NA	NA	0.0E+00	Liver	2.9E-01	NA	1.5E-02	3.0E-01
			Heptachlor epoxide	NA	NA	NA	0.0E+00	Liver	3.9E-01	NA	5.9E-01	9.8E-01
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	1.7E+00	NA	1.1E-02	1.7E+00
			Manganese	NA	NA	NA	0.0E+00	CNS	2.1E+00	NA	3.5E-01	2.5E+00
			Vanadium	NA	NA	NA	0.0E+00	Hair, Blood	2.9E-01	NA	7.3E-02	3.6E-01
			Zinc	NA	NA	NA	0.0E+00	Blood	9.8E-01	NA	6.5E-03	9.9E-01
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		9.4E+00	0.0E+00	1.5E+00	1.1E+01
		Exposure Point Total					0.0E+00					1.1E+01
	Exposure Medium Total						0.0E+00					1.1E+01
	Air	Surficial Aquifer Water Vapors at Showerhead	1,1,2-Trichloroethane	NA	NA	NA	0.0E+00	Nasal	NA	2.1E+00	NA	2.1E+00
			1,2-Dichloroethane	NA	NA	NA	0.0E+00	Liver	NA	1.2E-01	NA	1.2E-01
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		0.0E+00	2.3E+00	0.0E+00	2.3E+00
		Exposure Point Total					0.0E+00					2.3E+00
	Exposure Medium Total						0.0E+00					2.3E+00
Groundwater Surficial Aquifer Total							0.0E+00					1.3E+01
Groundwater	Groundwater	Castle-Hayne Aquifer - Tap Water	1,2,4-Trichlorobenzene	NA	NA	NA	0.0E+00	Adrenal	5.4E-02	NA	6.9E-02	1.2E-01
			1,2-Dichloroethane	NA	NA	NA	0.0E+00	Kidney	1.8E-01	NA	8.9E-03	1.9E-01
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Kidney	1.4E+03	NA	1.7E+02	1.6E+03
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Blood	2.0E+00	NA	2.6E-01	2.3E+00
			Vinyl chloride	NA	NA	NA	0.0E+00	Liver	1.0E+02	NA	5.4E+00	1.1E+02
			Heptachlor epoxide	NA	NA	NA	0.0E+00	Liver	2.7E-01	NA	4.1E-01	6.7E-01
			Chromium	NA	NA	NA	0.0E+00	Not identified	2.2E-01	NA	5.9E-02	2.8E-01
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	6.9E-01	NA	4.6E-03	7.0E-01
			Thallium	NA	NA	NA	0.0E+00	Skin, Hair follicle atrophy	3.6E+01	NA	2.4E-01	3.6E+01
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		1.5E+03	0.0E+00	1.8E+02	1.7E+03
		Exposure Point Total					0.0E+00					1.7E+03
	Exposure Medium Total						0.0E+00					1.7E+03

TABLE G 10.2.RME

Risk Summary – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Groundwater	Air	Castle-Hayne Aquifer	1,2,4-Trichlorobenzene	NA	NA	NA	0.0E+00	Liver	NA	3.8E-01	NA	3.8E-01
(cont'd)		Water Vapors at Showerhead	trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Respiratory System	NA	1.4E+00	NA	1.4E+00
			Trichloroethene	NA	NA	NA	0.0E+00	NA	NA	3.6E-01	NA	3.6E-01
			Vinyl chloride	NA	NA	NA	0.0E+00	Liver	NA	8.0E+00	NA	8.0E+00
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		0.0E+00	1.0E+01	0.0E+00	1.0E+01
		Exposure Point Total					0.0E+00					1.0E+01
	Exposure Medium Total						0.0E+00					1.0E+01
Groundwater Castle-Hayne Aquifer Total							0.0E+00					1.7E+03
Receptor Total							0.0E+00				Receptor HI Total	1.7E+03

Receptor total and target organ totals includes higher of the Surficial Aquifer or Castle-Hayne Aquifer risks and hazards

CNS = Central Nervous System

Total CNS/Neurological HI Across All Media =	1.2E-01
Total Developmental HI Across All Media =	1.2E-01
Total Skin HI Across All Media =	**3.6E+01**
Total Vascular HI Across All Media =	1.8E-01
Total Gastrointestinal HI Across All Media =	8.6E-01
Total Hair HI Across All Media =	**3.6E+01**
Total Blood HI Across All Media =	**2.3E+00**
Total Respiratory System HI Across All Media =	**1.4E+00**
Total Adrenal HI Across All Media =	1.2E-01
Total Kidney HI Across All Media =	**1.6E+03**
Total Liver HI Across All Media =	**1.1E+02**

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 10.3.RME

Risk Summary – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Soil*	Soil*	Soil*	Arsenic	9.1E-06	NA	8.6E-07	1.0E-05		NA	NA	NA	0.0E+00
			Chromium	5.8E-05	NA	2.8E-08	5.8E-05		NA	NA	NA	0.0E+00
			Chemical Total	6.7E-05	0.0E+00	8.9E-07	6.8E-05		0.0E+00	0.0E+00	0.0E+00	0.0E+00
		Exposure Point Total					6.8E-05					0.0E+00
	Exposure Medium Total						6.8E-05					0.0E+00
Soil* Total							6.8E-05					0.0E+00
Groundwater	Groundwater	Surficial Aquifer	1,1,2,2-Tetrachloroethane	1.7E-05	NA	2.1E-06	1.9E-05		NA	NA	NA	0.0E+00
		Tap Water	1,1,2-Trichloroethane	3.9E-06	NA	3.6E-07	4.2E-06		NA	NA	NA	0.0E+00
			1,2-Dichloroethane	9.4E-06	NA	4.6E-07	9.9E-06		NA	NA	NA	0.0E+00
			Tetrachloroethene	1.5E-06	NA	9.1E-07	2.4E-06		NA	NA	NA	0.0E+00
			Vinyl chloride	2.0E-04	NA	1.1E-05	2.1E-04		NA	NA	NA	0.0E+00
			alpha-BHC	7.2E-06	NA	5.9E-06	1.3E-05		NA	NA	NA	0.0E+00
			Aroclor-1260	3.6E-05	NA	NA	3.6E-05		NA	NA	NA	0.0E+00
			beta-BHC	5.1E-06	NA	4.1E-06	9.2E-06		NA	NA	NA	0.0E+00
			Heptachlor epoxide	1.1E-05	NA	1.7E-05	2.7E-05		NA	NA	NA	0.0E+00
			Chemical Total	2.9E-04	0.0E+00	4.1E-05	3.3E-04		0.0E+00	0.0E+00	0.0E+00	0.0E+00
		Exposure Point Total					3.3E-04					0.0E+00
	Exposure Medium Total						3.3E-04					0.0E+00
	Air	Surficial Aquifer	1,1,2,2-Tetrachloroethane	NA	4.8E-06	NA	4.8E-06		NA	NA	NA	0.0E+00
		Water Vapors at	1,1,2-Trichloroethane	NA	1.5E-06	NA	1.5E-06		NA	NA	NA	0.0E+00
		Showerhead	1,2-Dichloroethane	NA	4.7E-06	NA	4.7E-06		NA	NA	NA	0.0E+00
			Vinyl chloride	NA	2.2E-06	NA	2.2E-06		NA	NA	NA	0.0E+00
			Chemical Total	0.0E+00	1.3E-05	0.0E+00	1.3E-05		0.0E+00	0.0E+00	0.0E+00	0.0E+00
		Exposure Point Total					1.3E-05					0.0E+00
	Exposure Medium Total						1.3E-05					0.0E+00
Groundwater Surficial Aquifer Total							3.5E-04					0.0E+00

TABLE G 10.3.RME

Risk Summary – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Groundwater	Groundwater	Castle-Hayne Aquifer	1,2,4-Trichlorobenzene	3.7E-06	NA	4.8E-06	8.5E-06		NA	NA	NA	0.0E+00
		Aquifer - Tap Water	1,2-Dichloroethane	2.3E-05	NA	1.1E-06	2.4E-05		NA	NA	NA	0.0E+00
			Benzene	9.9E-07	NA	1.5E-07	1.1E-06		NA	NA	NA	0.0E+00
			Chloroform	1.8E-06	NA	1.6E-07	2.0E-06		NA	NA	NA	0.0E+00
			Trichloroethene	2.6E-06	NA	4.4E-07	3.1E-06		NA	NA	NA	0.0E+00
			Vinyl chloride	6.9E-02	NA	7.2E-05	6.9E-02		NA	NA	NA	0.0E+00
			Aroclor-1260	1.0E-05	NA	NA	1.0E-05		NA	NA	NA	0.0E+00
			Dieldrin	6.2E-06	NA	5.4E-06	1.2E-05		NA	NA	NA	0.0E+00
			Heptachlor epoxide	7.4E-06	NA	1.1E-05	1.9E-05		NA	NA	NA	0.0E+00
			Chromium	2.4E-04	NA	5.9E-06	2.5E-04		NA	NA	NA	0.0E+00
			Chemical Total	6.9E-02	0.0E+00	1.0E-04	6.9E-02		0.0E+00	0.0E+00	0.0E+00	0.0E+00
		Exposure Point Total					6.9E-02					0.0E+00
	Exposure Medium Total						6.9E-02					0.0E+00
Groundwater (cont'd)	Air	Castle-Hayne Aquifer Water Vapors at Showerhead	1,2-Dichloroethane	NA	1.2E-05	NA	1.2E-05		NA	NA	NA	0.0E+00
			Chloroform	NA	2.4E-06	NA	2.4E-06		NA	NA	NA	0.0E+00
			Trichloroethene	NA	1.6E-06	NA	1.6E-06		NA	NA	NA	0.0E+00
			Vinyl chloride	NA	7.8E-04	NA	7.8E-04		NA	NA	NA	0.0E+00
			Chemical Total	0.0E+00	8.0E-04	0.0E+00	8.0E-04		0.0E+00	0.0E+00	0.0E+00	0.0E+00
		Exposure Point Total					8.0E-04					0.0E+00
	Exposure Medium Total						8.0E-04					0.0E+00
Groundwater Castle-Hayne Aquifer Total							7.0E-02					0.0E+00
Receptor Total							7.0E-02				Receptor HI Total	0.0E+00

Receptor total and target organ totals includes higher of the Surficial Aquifer or Castle-Hayne Aquifer risks and hazards

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 10.4.RME

Risk Summary – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Soil*	Soil*	Soil*	Arsenic	2.0E-06	NA	4.0E-07	2.4E-06	Skin, Vascular	1.3E-02	NA	2.5E-03	1.5E-02
			Chromium	3.0E-06	NA	5.0E-10	3.0E-06	Not identified	5.6E-03	NA	1.5E-03	7.1E-03
			Chemical Total	5.0E-06	0.0E+00	4.0E-07	5.4E-06		1.8E-02	0.0E+00	4.0E-03	2.2E-02
		Exposure Point Total					5.4E-06					2.2E-02
	Exposure Medium Total						5.4E-06					2.2E-02
Soil* Total							5.4E-06					2.2E-02
Groundwater	Groundwater	Surficial Aquifer Tap Water	1,1,2,2-Tetrachloroethane	3.9E-06	NA	NA	3.9E-06	Liver	2.7E-03	NA	NA	2.7E-03
			1,2-Dichloroethane	2.2E-06	NA	NA	2.2E-06	Kidney	1.1E-02	NA	NA	1.1E-02
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Kidney	5.6E-01	NA	NA	5.6E-01
			Vinyl chloride	3.4E-05	NA	NA	3.4E-05	Liver	4.4E-02	NA	NA	4.4E-02
			alpha-BHC	1.7E-06	NA	NA	1.7E-06	CNS	9.4E-05	NA	NA	9.4E-05
			Aroclor-1260	8.4E-06	NA	NA	8.4E-06	NA	NA	NA	NA	0.0E+00
			beta-BHC	1.2E-06	NA	NA	1.2E-06	NA	NA	NA	NA	0.0E+00
			Heptachlor epoxide	2.5E-06	NA	NA	2.5E-06	Liver	5.9E-02	NA	NA	5.9E-02
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	2.6E-01	NA	NA	2.6E-01
			Manganese	NA	NA	NA	0.0E+00	CNS	3.3E-01	NA	NA	3.3E-01
			Zinc	NA	NA	NA	0.0E+00	Blood	1.5E-01	NA	NA	1.5E-01
			Chemical Total	5.4E-05	0.0E+00	0.0E+00	5.4E-05		1.4E+00	0.0E+00	0.0E+00	1.4E+00
		Exposure Point Total					5.4E-05					1.4E+00
	Exposure Medium Total						5.4E-05					1.4E+00
Groundwater Surficial Aquifer Total							5.4E-05					1.4E+00
Groundwater	Groundwater	Castle-Hayne Aquifer Aquifer - Tap Water	1,2-Dichloroethane	5.4E-06	NA	NA	5.4E-06	Kidney	2.8E-02	NA	NA	2.8E-02
			cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Kidney	2.1E+02	NA	NA	2.1E+02
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Blood	3.1E-01	NA	NA	3.1E-01
			Vinyl chloride	1.2E-02	NA	NA	1.2E-02	Liver	1.5E+01	NA	NA	1.5E+01
			Aroclor-1260	2.4E-06	NA	NA	2.4E-06	NA	NA	NA	NA	0.0E+00
			Dieldrin	1.5E-06	NA	NA	1.5E-06	Liver	5.1E-03	NA	NA	5.1E-03
			Heptachlor epoxide	1.7E-06	NA	NA	1.7E-06	Liver	4.1E-02	NA	NA	4.1E-02
			Chromium	1.8E-05	NA	NA	1.8E-05	Not identified	3.4E-02	NA	NA	3.4E-02
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	1.1E-01	NA	NA	1.1E-01
			Thallium	NA	NA	NA	0.0E+00	Skin, Hair follicle atrophy	5.5E+00	NA	NA	5.5E+00
			Chemical Total	1.2E-02	0.0E+00	0.0E+00	1.2E-02		2.3E+02	0.0E+00	0.0E+00	2.3E+02
		Exposure Point Total					1.2E-02					2.3E+02
	Exposure Medium Total						1.2E-02					2.3E+02
Groundwater Castle-Hayne Aquifer Total							1.2E-02					2.3E+02
Receptor Total							1.2E-02				Receptor HI Total	2.3E+02

TABLE G 10.4.RME

Risk Summary – Reasonable Maximum Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure

Receptor total and target organ totals includes higher of the Surficial Aquifer or Castle-Hayne Aquifer risks and hazards

CNS = Central Nervous System

Total Skin HI Across All Media =	**5.5E+00**
Total Vascular HI Across All Media =	1.5E-02
Total Gastrointestinal HI Across All Media =	1.1E-01
Total Hair HI Across All Media =	**5.5E+00**
Total Blood HI Across All Media =	3.1E-01
Total Kidney HI Across All Media =	2.1E+02
Total Liver HI Across All Media =	**1.5E+01**
Total Immune HI Across All Media =	5.9E-02

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 10.1.CTE

Risk Summary – Central Tendency Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Groundwater	Groundwater	Castle-Hayne	cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Kidney	2.6E+01	NA	3.1E+00	2.9E+01
		Aquifer - Tap Water	Vinyl chloride	NA	NA	NA	0.0E+00	Liver	1.8E+00	NA	9.0E-02	1.9E+00
			Thallium	NA	NA	NA	0.0E+00	Skin, Hair follicle atrophy	7.2E+00	NA	2.3E-02	7.2E+00
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		3.5E+01	0.0E+00	3.2E+00	3.8E+01
		Exposure Point Total					0.0E+00					3.8E+01
	Exposure Medium Total						0.0E+00					3.8E+01
Groundwater Castle-Hayne Aquifer Total							0.0E+00					3.8E+01
Receptor Total							0.0E+00				Receptor HI Total	3.8E+01

Receptor total and target organ totals includes higher of the Surficial Aquifer or Castle-Hayne Aquifer risks and hazards

CNS = Central Nervous System

Total Skin HI Across All Media =	**7.2E+00**
Total Kidney HI Across All Media =	**2.9E+01**
Total Liver HI Across All Media =	**1.9E+00**

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 10.2.CTE

Risk Summary – Central Tendency Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Groundwater	Groundwater	Surficial Aquifer Tap Water	cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Kidney	1.1E+00	NA	7.6E-02	1.2E+00
			Heptachlor epoxide	NA	NA	NA	0.0E+00	Liver	2.6E-01	NA	2.3E-01	4.9E-01
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	5.9E-01	NA	1.3E-03	6.0E-01
			Manganese	NA	NA	NA	0.0E+00	CNS	3.8E-01	NA	2.1E-02	4.0E-01
			Zinc	NA	NA	NA	0.0E+00	Blood	2.8E-01	NA	6.0E-04	2.8E-01
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		2.6E+00	0.0E+00	3.3E-01	2.9E+00
		Exposure Point Total					0.0E+00					2.9E+00
	Exposure Medium Total						0.0E+00					2.9E+00
Groundwater Surficial Aquifer Total							0.0E+00					2.9E+00
Groundwater	Groundwater	Castle-Hayne Aquifer - Tap Water	cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Kidney	8.7E+01	NA	6.1E+00	9.4E+01
			trans-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Blood	1.3E-01	NA	9.1E-03	1.4E-01
			Vinyl chloride	NA	NA	NA	0.0E+00	Liver	6.2E+00	NA	1.8E-01	6.3E+00
			Heptachlor epoxide	NA	NA	NA	0.0E+00	Liver	1.2E-01	NA	1.1E-01	2.3E-01
			Chromium	NA	NA	NA	0.0E+00	Not identified	9.4E-02	NA	8.2E-03	1.0E-01
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal	2.8E-01	NA	6.1E-04	2.8E-01
			Thallium	NA	NA	NA	0.0E+00	Skin, Hair follicle atrophy	2.4E+01	NA	5.2E-02	2.4E+01
			Chemical Total	0.0E+00	0.0E+00	0.0E+00	0.0E+00		1.2E+02	0.0E+00	6.5E+00	1.2E+02
		Exposure Point Total					0.0E+00					1.2E+02
	Exposure Medium Total						0.0E+00					1.2E+02
Groundwater Castle-Hayne Aquifer Total							0.0E+00					1.2E+02
Receptor Total							0.0E+00				Receptor HI Total	1.2E+02

Receptor total and target organ totals includes higher of the Surficial Aquifer or Castle-Hayne Aquifer risks and hazards

CNS = Central Nervous System

Total Skin HI Across All Media =	**2.4E+01**
Total Gastrointestinal HI Across All Media =	2.8E-01
Total Hair HI Across All Media =	**2.4E+01**
Total Blood HI Across All Media =	1.4E-01
Total Kidney HI Across All Media =	**9.4E+01**
Total Liver HI Across All Media =	**6.6E+00**

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 10.3.CTE

Risk Summary – Central Tendency Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Soil*	Soil*	Soil*	Chromium	8.4E-06	NA	8.2E-09	8.4E-06		NA	NA	NA	0.0E+00
			Chemical Total	8.4E-06	0.0E+00	8.2E-09	8.4E-06		0.0E+00	0.0E+00	0.0E+00	0.0E+00
		Exposure Point Total					8.4E-06					0.0E+00
	Exposure Medium Total						8.4E-06					0.0E+00
Soil* Total							8.4E-06					0.0E+00
Groundwater	Groundwater	Surficial Aquifer Tap Water	1,1,2,2-Tetrachloroethane	2.4E-06	NA	2.0E-07	2.6E-06		NA	NA	NA	0.0E+00
			1,2-Dichloroethane	1.4E-06	NA	4.5E-08	1.4E-06		NA	NA	NA	0.0E+00
			Vinyl chloride	6.3E-05	NA	2.0E-06	6.5E-05		NA	NA	NA	0.0E+00
			alpha-BHC	2.6E-06	NA	1.4E-06	4.0E-06		NA	NA	NA	0.0E+00
			Aroclor-1260	1.3E-05	NA	NA	1.3E-05		NA	NA	NA	0.0E+00
			Heptachlor epoxide	3.8E-06	NA	4.1E-06	7.9E-06		NA	NA	NA	0.0E+00
			Chemical Total	8.6E-05	0.0E+00	7.7E-06	9.4E-05		0.0E+00	0.0E+00	0.0E+00	0.0E+00
		Exposure Point Total					9.4E-05					0.0E+00
	Exposure Medium Total						9.4E-05					0.0E+00
Groundwater Surficial Aquifer Total							9.4E-05					0.0E+00
Groundwater	Groundwater	Castle-Hayne Aquifer Aquifer - Tap Water	1,2,4-Trichlorobenzene	1.3E-06	NA	1.2E-06	2.5E-06		NA	NA	NA	0.0E+00
			Vinyl chloride	4.3E-03	NA	5.0E-05	4.4E-03		NA	NA	NA	0.0E+00
			Aroclor-1260	3.6E-06	NA	NA	3.6E-06		NA	NA	NA	0.0E+00
			Dieldrin	2.2E-06	NA	1.3E-06	3.5E-06		NA	NA	NA	0.0E+00
			Heptachlor epoxide	1.8E-06	NA	1.9E-06	3.8E-06		NA	NA	NA	0.0E+00
			Chromium	1.0E-04	NA	2.4E-06	1.1E-04		NA	NA	NA	0.0E+00
			Chemical Total	4.4E-03	0.0E+00	5.7E-05	4.5E-03		0.0E+00	0.0E+00	0.0E+00	0.0E+00
		Exposure Point Total					4.5E-03					0.0E+00
	Exposure Medium Total						4.5E-03					0.0E+00
	Air	Castle-Hayne Aquifer Water Vapors at Showerhead	Vinyl chloride	NA	5.0E-06	NA	5.0E-06		NA	NA	NA	0.0E+00
			Chemical Total	0.0E+00	5.0E-06	0.0E+00	5.0E-06		0.0E+00	0.0E+00	0.0E+00	0.0E+00
		Exposure Point Total					5.0E-06					0.0E+00
	Exposure Medium Total						5.0E-06					0.0E+00
Groundwater Castle-Hayne Aquifer Total							4.5E-03					0.0E+00
Receptor Total							4.5E-03				Receptor HI Total	0.0E+00

Receptor total and target organ totals includes higher of the Surficial Aquifer or Castle-Hayne Aquifer risks and hazards

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

TABLE G 10.4.CTE

Risk Summary – Central Tendency Exposure

Supplemental Investigation Report Operable Unit No. 14 (Site 69)

MCB CamLej, Jacksonville, North Carolina

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure	Primary	Ingestion	Inhalation	Dermal	Exposure
Groundwater	Groundwater	Castle-Hayne Aquifer	cis-1,2-Dichloroethene	NA	NA	NA	0.0E+00	Kidney	1.8E+01	NA	NA	1.8E+01
		Aquifer - Tap Water	Vinyl chloride	3.4E-04	NA	NA	3.4E-04	Liver	1.2E+00	NA	NA	1.2E+00
			Chromium	3.6E-06	NA	NA	3.6E-06	Not identified	1.9E-02	NA	NA	1.9E-02
			Thallium	NA	NA	NA	0.0E+00	Skin, Hair follicle atrophy	4.8E+00	NA	NA	4.8E+00
			Chemical Total	3.5E-04	0.0E+00	0.0E+00	3.5E-04		2.4E+01	0.0E+00	0.0E+00	2.4E+01
		Exposure Point Total					3.5E-04					2.4E+01
	Exposure Medium Total						3.5E-04					2.4E+01
Groundwater Castle-Hayne Aquifer Total							3.5E-04					2.4E+01
Receptor Total							3.5E-04	Receptor HI Total				2.4E+01

CNS = Central Nervous System

Total Skin HI Across All Media =	**4.8E+00**
Total Hair HI Across All Media =	4.8E+00
Total Kidney HI Across All Media =	**1.8E+01**
Total Liver HI Across All Media =	**1.2E+00**

Generated by: Martha White/ATL

Checked by: Debbie Stannard/WDC

Appendix H
Ecological Risk Assessment Tables

CHECKLIST FOR ECOLOGICAL ASSESSMENTS/SAMPLING

I. SITE LOCATION

1. Site Name_Site 69 – The Rifle Range Chemical Dump
   US EPA ID Number _____
   Location United States Marine Corps Base (MCB), Camp Lejeune
   County_____Onslow_____ City_Jacksonville_____ State__NC_____

2. Latitude___34°34'44.94" N_____ Longitude__72°25'51.44" W_____

3. Attach site maps, including a topographical map, a diagram which illustrates the layout of the facility (e.g., site boundaries, structures, etc.), and maps showing all habitat areas identified in Section III of the checklist. Also, include maps which illustrate known and suspected release areas, sampling locations and any other important features, if available. Figure 2-2 of this report presents site location and site boundaries. Figures 3-1 and 3-2 is an aerial figure showing sample locations.

II. SITE CHARACTERIZATION

1. Indicate the approximate area of the site (i.e., acres or sq. ft.) Approximately 14 acres

2. Is this the first site visit? ☐ Yes X No
   If no, attach trip report of previous site visit(s), if available. No trip report is available
   Dates(s) of previous site visit(s) CH2M HILL performed several site investigations in 2009 and 2010

3. Are aerial or other site photographs available? X Yes ☐ No
   If yes, please attach any available photo(s) to the site map to the report.

4. Provide an approximate breakdown of the land uses on the site:

_____% Heavy Industrial	_____% Light Industrial	_____% Urban
_____% Residential	_____%Rural	_____% Agricultural[b]
_____% Recreational[a]	_100_% Undisturbed	_____% Other[c]

[a]For recreational areas, please describe the use of the area (e.g., park, playing field, etc).
_____

[b]For agricultural areas, please list the crops and/or livestock which are present.
_____

[c]For areas designated as "other," please describe the use of the area.
_____

5. Provide an approximate breakdown of the land uses in the area surrounding the site. Indicate the radius (in miles) of the area described: _____0.5 mile radius_____

_____% Heavy Industrial	_____% Light Industrial	___% Urban
_____% Residential	_____% Rural	___% Agricultural[b]
_____% Recreational[a]	_100_% Undisturbed	___% Other [c]

[a]For recreational areas, please describe the use of the area (e.g., park, playing field, golf course, etc).

_____

[b]For agricultural areas, please list the crops and/or livestock which are present.

_____

[c]For areas designated as "other," please describe the use of the area.

_____

6. Has any movement of soil taken place at the site? X Yes ☐ No
If yes, indicate the likely source of the disturbance, (e.g., erosion, agricultural, mining, industrial activities, removals, etc.) degree of disturbance, and estimate when these events occurred. A dirt road and fence was constructed around the site.

7. Do any sensitive environmental areas exist adjacent to or in proximity to the site, (e.g. Federal and State parks, National and State monuments, wetlands)? *Remember, flood plains and wetlands are not always obvious; do not answer "no" without confirming information. See Table 1 for a list of contacts.* Yes, Wetlands are present approximately 500 feet north of the site and approximately 400 feet east of the site.

Please provide the source(s) of information used to identify these sensitive areas, and indicate their general location on the site map.

MCB Camp Lejeune GIS Layer for Wetlands (NWI).

United States Marine Corps (USMC). 2006. Integrated Natural Resource Management Plan (INRMP) 2007-2011, Marine Corps Base Camp Lejeune, Onslow County, North Carolina. November.

8. What type of facility is located at the site?

☐ Chemical ☐ Manufacturing ☐ Mixing

X Waste Disposal X Other (specify)
Historically, Site 69 was a chemical waste dump site. Currently, the Site is undisturbed and enclosed by a six foot chain link fence.

9. Identify the contaminants of potential concern (COPCs) at the site. If known, include the maximum contaminant levels. Please indicate the source of data cited (e.g., RFI, confirmatory sampling, etc).
According to the unvalidated data, VOCs, SVOCs, pesticides, PCBs, and inorganics were detected in the media onsite. Refer to the ERA for detailed analysis.

10. Check any potential routes of off-site migration of contaminants observed at the site:

☐ Swales ☐ Depressions ☐ Drainage Ditches

X Runoff ☐ Windblown Particulates ☐ Vehicular Traffic

X Other (specify): Groundwater

11. Indicate the approximate depth to groundwater (in feet below ground surface [(bgs)].
Depth to groundwater ranges from 5 to 15 feet bgs.

12. Indicate the direction of groundwater flow (e.g., north, southeast, etc.)
Groundwater generally flows to the east and northeast towards the New River and associated tributaries.

13. Is the direction of surface runoff apparent from site observations? X Yes ☐ No
If yes, to which of the following does the surface runoff discharge? Indicate all that apply.

X Surface water X Groundwater ☐ Sewer

☐ Collection Impoundment

14. Is there a navigable water body or tributary to a navigable water body?
☐ Yes X No

15. Is there a water body anywhere on or in the vicinity of the site? If yes, also complete Section III.B.1: Aquatic Habitat Checklist -- Non-Flowing Systems and/or Section III.B.2: Aquatic Habitat Checklist -- Flowing Systems.

X Yes (approx. distance: within 400 feet) ☐ No

16. Is there evidence of flooding? X Yes: area 500 ft. north of Site 69 and 400 feet east ☐ No
Wetlands and flood plains are not always obvious. Do not answer "no" without confirming information. If yes, complete Section III.C: Wetland Habitat Checklist.

17. If a field guide was used to aid any of the identifications, please provide a reference. Also, estimate the time spent identifying fauna. (Use a blank sheet if additional space is needed for text.)

18. Are any threatened and/or endangered species (plant or animal) known to inhabit the area of the site? ☐ Yes X No
If yes, you are required to verify this information with the U.S. Fish and Wildlife Service or other appropriate agencies (see Table 1 for a list of contacts). If species' identities are known, please list them next.

19. Record weather conditions at the site at the time of the site visit when information for completion of this checklist was prepared:

DATE July 2009

Warm Temperature (°C/°F)

Wind (direction/speed):

Cloud Cover: Cloudy

Normal daily high temperature (°C/°F):

Precipitation (rain, snow): Chance of rain

20. Describe reasonable and likely future land and/or water use(s) at the site.
Land and water use will likely remain the same.

21. Describe the historical uses of the site. Include information on chemical releases that may have occurred as a result of previous land uses. For each chemical release, provide information on the form of the chemical released (i.e., solid, liquid, vapor) and the known or suspected causes or mechanism of the release (i.e., spills, leaks, material disposal, dumping, explosion, etc.).
From 1950 to 1976, Site 69 was reportedly used for the disposal of chemical wastes, including polychlorinated biphenyls (PCBs), solvents, and pesticides. The Site also has a reported history of chemical warfare material (CWM) disposal in the form of 50 to 60 drums containing mustard or nerve agent. Chemical Agent Detector Kits, similar to the M18A2, have also been observed at the site.

22. Identify the media (e.g., soil [surface or subsurface], surface water, air, groundwater) which are known or suspected to contain COCs.
According to the data, VOCs, SVOCs, pesticides, and metals were detected in the surface soil, subsurface soil, and sediment onsite. VOCs and metals were detected in the surface water. VOCs, SVOCs, pesticides, PCBs, and metals were detected in the groundwater.

II.A. SUMMARY OF OBSERVATIONS AND SITE SETTING

Include information on significant source areas and migration pathways that are likely to constitute complete exposure pathways.
Soil exposure and groundwater to surface water and sediment exposures may be complete pathways.

Checklist Completed by__Sara Kent__

Affiliation__CH2M HILL_____

Author Assisted by_____

Date__9/10/2010_____

III. HABITAT EVALUATION

III.A Terrestrial Habitat Checklist

III.A.1 Wooded

Are any wooded areas on or adjacent to the site? X Yes ☐ No

If yes, indicate the wooded area on the attached site map and answer the following questions. If more than one wooded area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual wooded area. Distinguish between wooded areas by using names or other designations, and clearly identify each area on the site map.

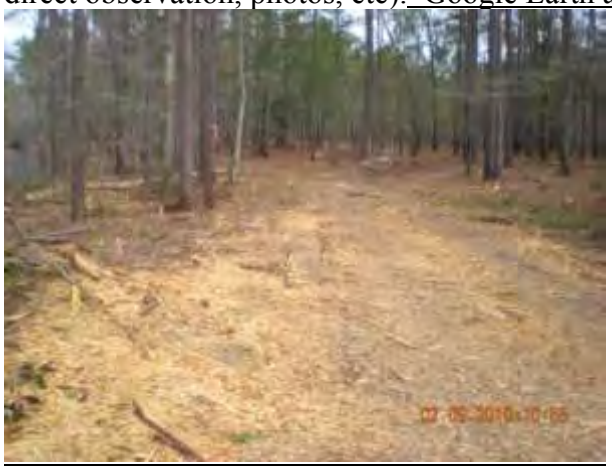
If no, proceed to Section III.A.2: Shrub/Scrub

Wooded Area Questions

X On-site X Off-site

Name or Designation: Rifle Range Chemical Debris Dump Site 69 area

1. Estimate the approximate size of the wooded area (On-site: 100%, 14 acres; Off-site: 100%) Please identify what information was used to determine the wooded area of the site (e.g., direct observation, photos, etc). Google Earth aerial images and site photos.



2. Indicate the dominant type of vegetation in the wooded area. Provide photographs, if available.

   - ❑ Evergreen
   - ❑ Deciduous
   - X Mixed

   Dominant plant species, if known: Loblolly pine (*Pinus taeda*)

3. Estimate the vegetation density of the wooded area.

   - ❑ Dense (i.e., greater than 75% vegetation)
   - X Moderate (i.e., 25% to 75% vegetation)
   - ❑ Sparse (i.e., less than 25% vegetation)

4. Indicate the predominant size of the trees at the site. Use diameter at breast height.

   - ❑ 0-6 inches
   - X 6-12 inches
   - ❑ >12 inches
   - ❑ No single size range is predominant

5. Specify type of understory present, if known. Provide a photograph, if available. Sparse, un-vegetated understory

III.A.2 Shrub/Scrub

Are any shrub/scrub areas on or adjacent to the site? ☐ Yes X No

If yes, indicate the shrub/scrub area on the attached site map and answer the following questions. If more than one shrub/scrub area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual shrub/scrub area. Distinguish between shrub/scrub areas, using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.A.3: Open Field

III.A.3 Open Field

Are any open field areas on or adjacent to the site? ☐ Yes X No

If yes, indicate the open field area on the attached site map and answer the following questions. If more than one open field area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual open field area. Distinguish between open field areas, using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.A.4: Miscellaneous

III.A.4 Miscellaneous

Are other types of terrestrial habitats present at the site, other than woods, scrub/shrub and open field? ☐ Yes X No

If yes, indicate the area on the attached site map and answer the following questions. If more than one of these areas are present on or adjacent to the site, make additional copies of the following questions and fill out for each individual area. Distinguish between areas by using names or other designations. Clearly identify each area on the site map.

If no, proceed to Section III.B: Aquatic Habitats.

III.B Aquatic Habitats

Note: Aquatic systems are often associated with wetland habitats. Please refer to Section III.C, Wetland Habitat Checklist.

III.B.1 Non-Flowing Systems

Are any non-flowing aquatic features (such as ponds or lakes) located at or adjacent to the site?

☐ Yes X No

If yes, indicate the aquatic feature on the attached site map and answer the following questions regarding the non-flowing aquatic features. If more than one non-flowing aquatic feature is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual aquatic feature. Distinguish between aquatic features by using names or other designations. Clearly identify each area on the site map.

If no, proceed to Section III.B.2: Flowing Systems

III.B.2 Flowing Systems

Note: Aquatic systems are often associated with wetland habitats. Please refer to Section III.C, Wetland Habitat Checklist.

Are any flowing aquatic features (such as streams or rivers) located at or adjacent to the site?

X Yes ☐ No

If yes, indicate the system on the attached site map and answer the following questions regarding the flowing system. If more than one flowing system is present on or adjacent to the site, make additional copies of the following questions and complete one set for each individual aquatic feature. Distinguish between flowing systems by using names or other designation. Clearly identify each area on the site map

If no, proceed to Section III.C: Wetlands Habitats.

Flowing Aquatic Systems Questions

☐ On-site X Off-site

Name or Designation: Un-named tributaries to the New River located north and west of the site

1. Indicate the type of flowing aquatic feature present.

   - ☐ River
   - X Stream/Creek/Brook
   - ☐ Intermittent stream
   - ☐ Artificially created (ditch, etc.)
   - ☐ Channeling
   - ☐ Other (specify)

2. For natural systems, are there any indicators of physical alteration (e.g., channeling, debris, etc.)? ☐ Yes X No
   If yes, please describe the indicators observed.

3. Indicate the general composition of the bottom substrate.

☐ Bedrock	☐ Sand (course)	☐ Concrete
☐ Boulder (>10 in.)	X Silt (fine)	X Debris
☐ Cobble (2.5 - 10 in.)	☐ Clay (slick)	X Detritus
☐ Gravel (0.1 - 2.5 in.)	X Muck (fine/black)	☐ Marl (Shells)

   ☐ Other (please specify):_____

4. Describe the condition of the bank (e.g., height, slope, extent of vegetative cover).
   Vertical banks with a 1:2 slope

5. Is the system influenced by tides? X Yes ☐ No
   What information was used to make this determination? Proximity to the New River

6. Is the flow intermittent? ☐ Yes X No
   If yes, please note the information used to make this determination.

7. Is there a discharge from the site to the water body? X Yes ☐ No
   If yes, describe the origin of each discharge and its migration path.
   Surface water runoff (overland flow) and potentially groundwater reach the tributary.

8. Indicate the discharge point of the water body. Specify name of the discharge, if known.
   New River

9. Identify any field measurements and observations of water quality that were made. Provide the measurement and the units of measure in the appropriate space below:

_____ Width (ft.)

_____ Depth (average)

_____ Velocity (specify units):_____

_____ Temperature (depth of water where the reading was taken)_____

_____ pH

_____ Dissolved oxygen

_____ Salinity

_____ Turbidity (clear, slightly turbid, turbid, opaque)
(Secchi disk depth_____)

_____ Other (specify)

10. Describe observed color and area of coloration. None observed

11. Is any aquatic vegetation present? ☐ Yes X No
If yes, please identify the type of vegetation present, if known.

☐ Emergent ☐ Submergent ☐ Floating

12. Mark the flowing water system on the attached site map.

13. What observations were made at the water body regarding the presence and/or absence of benthic macroinvertebrates, fish, birds, mammals, etc? None observed during site visits

III.C Wetland Habitats

Are any wetland[1] areas such as marshes or swamps on or adjacent to the site?

X Yes ☐ No

If yes, indicate the wetland area on the attached site map and answer the following questions regarding the wetland area. If more than one wetland area is present on or adjacent to the site, make additional copies of the following questions and fill out one for each individual wetland area. Distinguish between wetland areas by using names or other designations (such as location). Clearly identify each area on the site map. Also, obtain and attach a National Wetlands Inventory Map (or maps) to illustrate each wetland area.

Identify the sources of the observations and information (e.g., National Wetland Inventory, Federal or State Agency, USGS topographic maps) used to make the determination whether or not wetland areas are present.

MCB, Camp Lejeune, North Carolina 2007-2011 Integrated Natural Resource Management Plan (INRMP), 2006.

MCB Camp Lejeune GIS Layer for Wetlands (NWI)

If no wetland areas are present, proceed to Section III.D: Sensitive Environments and Receptors.

[1]Wetlands are defined in 40 CFR §232.2 as " Areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Examples of typical wetlands plants include: cattails, cordgrass, willows and cypress trees. National wetland inventory maps may be available at http:\\nwi.fws.gov. Additional information on wetland delineation criteria is also available from the Army Corps of Engineers.

Wetland Area Questions

☐ On-site X Off-site

Name or Designation: Wetlands approximately 500 feet north of the site and associated with the unnamed tributary discharging to the New River and approximately 400 feet east of the site near the New River.

1. Indicate the approximate area of the wetland (acres or ft.^{2}) the NWI map indicates wetlands are present in the areas north and east of Site 69. A wetland delineation has not been conducted by CH2M HILL personnel for this area to identify the acreage, but wetland habitats were observed during the site visits.

2. Identify the type(s) of vegetation present in the wetland.

   - ☐ Submergent (i.e., underwater) vegetation
   - X Emergent (i.e., rooted in the water, but rising above it) vegetation
   - ☐ Floating vegetation
   - X Scrub/shrub
   - X Wooded
   - ☐ Other (Please describe):_____

3. Provide a general description of the vegetation present in and around the wetland (height, color, etc). Provide a photograph of the known or suspected wetlands, if available. Observations were not recorded.

4. Estimate the vegetation density of the wetland area.

   - ☐ Dense (i.e., greater than 75% vegetation)
   - X Moderate (i.e., 25% to 75% vegetation)
   - ☐ Sparse (i.e., less than 25% vegetation)

5. Is standing water present? X Yes ☐ No
   If yes, is the water primarily: ☐ Fresh X Brackish
   Indicate the approximate area of the standing water (ft.^{2}): Unknown
   Indicate the approximate depth of the standing water, if known (ft. or in.) Unknown

Wetland Area Questions (Continued)

6. Identify any field measurements and observations of water quality that were made. Provide the measurement and the units of measure in the appropriate space below:

   Depth (average)

   Temperature (depth of water where the reading was taken)

   pH

   Dissolved oxygen

   Salinity

   Turbidity (clear, slightly turbid, turbid, opaque) (Secchi disk depth_____)

   Other (specify)

   Other(specify)

7. Describe observed color and area of coloration. None recorded

8. If known, indicate the source of the water in the wetland.

   X Stream/River/Creek/Lake/Pond
   X Flooding (Potentially)
   X Groundwater (Potentially)
   X Surface runoff

9. Is there a discharge from the site to the wetland? X Yes ☐ No

   If yes, please describe:
   The wetland is in the riparian zone adjacent to the unnamed tributary north of the site. Also, site runoff may enter the wetland areas locate to the east that are present adjacent to the New River. Runoff from the Site may flow into or through the wetlands.

Wetland Area Questions (Continued)

10. Is there a discharge from the wetland? X Yes ☐ No
If yes, to what water body is discharge released?

X Marine (Name: New River)
X Surface stream/River (Name: Unnamed tributary)
❑ Lake/Pond (Name:_____)
❑ Groundwater
❑ Not sure

11. Does the area show evidence of flooding? X Yes ☐ No
If yes, indicate which of the following are present (mark all that apply).

X Standing water
X Water-saturated soils
❑ Water marks
❑ Buttressing
❑ Debris lines
❑ Mud cracks
❑ Other (Please describe)

11. If a soil sample was collected, describe the appearance of the soil in the wetland area. Circle or write in the best response. None collected.

Color (blue/gray, brown, black, mottled) _____

Water content (dry, wet, saturated/unsaturated)_____

13. Mark the observed wetland area(s) on the attached site map.

III.D Sensitive Environments and Receptors

1. Do any other potentially sensitive environmental areas[2] exist adjacent to or within one-half mile of the site? If yes, list these areas and provide the source(s) of information used to identify sensitive areas. *Do not answer "no" without confirmation from the U.S. Fish and Wildlife Service and other appropriate agencies. See Table 1 for a list of contacts.*

   No

4. Are any areas on or near (i.e., within one-half mile) the site owned or used by local tribes? If yes, describe.

   No

3. Does the site serve or potentially serve as a habitat, foraging area or refuge by rare, threatened, endangered, candidate and/or proposed species (plants or animals), or any otherwise protected species? If yes, identify species. *This information should be obtained from the U.S. Fish and Wildlife Service and other appropriate agencies. See Table 1 for a list of contacts.*

   No

5. Is the site potentially used as a breeding, roosting or feeding area by migratory bird species? If yes, identify which species.

   Unknown.

6. Is the site used by any ecologically[3], recreationally or commercially important species? If yes, explain.

   No

---

[3] Areas that provide unique and often protected habitat for wildlife species. These areas are typically used during critical life stages such as breeding, hatching, rearing of young and overwintering. Refer to Table 2 at the end of this document for examples of sensitive environments.

[3] Ecologically important species include populations of species which provide a critical (i.e., not replaceable) food resource for higher organisms. These species' functions would not be replaced by more tolerant species or perform a critical ecological function (such as organic matter decomposition) and will not be replaced by other species. Ecologically important species include pest and opportunistic species that populate an area if they serve as a food source for other species, but do not include domesticated animals (e.g., pets and livestock) or plants/animals whose existence is maintained by continuous human interventions (e.g., fish hatcheries, agricultural crops, etc).

IV. EXPOSURE PATHWAY EVALUATION

1. Do existing data provide sufficient information on the nature, rate and extent of contamination at the site?

   X Yes
   ❑ No
   ❑ Uncertain

   Please provide an explanation for your answer.
   Data were collected from each medium both within Site 69 and outside the boundary within UXO 2, providing representative samples for the area of concern.

2. Do existing data provide sufficient information on the nature, rate and extent of contamination in offsite affected areas?

   X Yes
   ❑ No
   ❑ Uncertain
   ❑ No offsite contamination

   Please provide an explanation for your answer.

   See #1 of this section.

3. Do existing data address potential migration pathways of contaminants at the site?

   X Yes
   ❑ No
   ❑ Uncertain

   Please provide an explanation for your answer.

   Data were collected based on potential migration pathways (i.e. overland flow, leaching, and groundwater transport).

4. Do existing data address potential migration pathways of contaminants in offsite affected areas?

   ❑ Yes
   ❑ No
   ❑ Uncertain
   X No offsite contamination

   Please provide an explanation for your answer. Concentration of COPCs in groundwater are not expected to be high enough to cause any discernable impact to the New River.

5. Are there visible indications of stressed habitats or receptors on or near (i.e., within one-half mile) the site that may be the result of a chemical release? If yes, explain. Attach photographs if available.

No

6. Is the location of the contamination such that receptors might be reasonably expected to come into contact with it? For soil, this means contamination in the soil 0 to 1 foot below ground surface (bgs). If yes, explain.

VOCs, SVOCs, pesticides, and metals were detected in areas where receptors may be exposed.

7. Are receptors located in or using habitats where chemicals exist in air, soil, sediment or surface water? If yes, explain.

Unknown. No receptors were identified during the field visits.

8. Could chemicals reach receptors via groundwater? Can chemicals leach or dissolve to groundwater? Are chemicals mobile in groundwater? Does groundwater discharge into receptor habitats? If yes, explain.

Water level measurement data suggests that shallow groundwater within the vicinity of the site generally flows northeast. The New River is located approximately 0.15 miles northeast of the site. Should the low level concentrations in groundwater migrate toward the river, concentrations will likely dilute and attenuate to the extent that aquatic receptors would not be at risk.

9. Could chemicals reach receptors through runoff or erosion? Answer the following questions.

Overland runoff could contribute COPCs to the un-named tributaries to the New River.

10. What is the approximate distance from the contaminated area to the nearest watercourse?

- ❑ 0 feet (i.e., contamination has reached a watercourse)
- ❑ 1-10 feet
- ❑ 11-20 feet
- ❑ 21-50 feet
- ❑ 51-100 feet
- ❑ 101-200 feet
- X > 200 feet
- ❑ > 500 feet
- ❑ > 1000 feet

11. What is the slope of the ground in the contaminated area?

X 0-10%
❑ 10-30%
❑ > 30%

12. What is the approximate amount of ground and canopy vegetative cover in the contaminated area?

❑ < 25%
X 25-75%
❑ > 75%

13. Is there visible evidence of erosion (e.g., a rill or gully) in or near the contaminated area?

❑ Yes
X No
❑ Do not know

14. Do any structures, pavement or natural drainage features direct run-on flow (i.e., surface flows originating upstream or uphill from the area of concern) into the contaminated area?

❑ Yes
X No
❑ Do not know

15. Could chemicals reach receptors through the dispersion of contaminants in air (e.g., volatilization, vapors, fugitive dust)? If yes, explain.

No

16. Could chemicals reach receptors through migration of non-aqueous phase liquids (NAPLs)? Is a NAPL present at the site that might be migrating towards receptors or habitats? Could NAPL discharge contact receptors or their habitat?

No

TABLE H-1

Threatened and Endangered Species List for Onslow County, North Carolina

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Scientific Name	Common Name	Federal Status
Vertebrates		
Acipenser brevirostrum	Sortnose sturgeon	E
Chelonia mydas	Green sea turtle	T
Caretta caretta	Loggerhead sea turtle	T
Dermochelys coriacea	Leatherback sea turtle	E
Trichechus manatus	West Indian manatee	E
Charadrius melodus	Piping plover	T
Alligator mississippiensis	American Alligator	T(S/A)
Puma concolor couguar	Eastern cougar	E
Picoides borealis	Red-cockaded woodpecker	E
Vascular Plants		
Thalictrum cooleyi	Cooley's meadowrue	E
Carex lutea	Golden sedge	E
Lindera melissifolia	Pondberry	E
Lysimachia asperulaefolia	Rough-leaved loosestrife	E
Amaranthus pumilus	Seabeach amaranth	T

Notes:

E - Endangered - A taxon in danger of extinction throughout all or a significant portion of its range.

T - Threatened - A taxon likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

T(S/A) - Threatened due to similarity of appearance: a species that is threatened due to similarity of appearance with other rare species and is listed for its protection. These species are not biologically endangered or threatened.

Generated By: S.Kent/ATL

Checked By: J.Weier/ATL

TABLE H-2

Sample Locations Used in the Ecological Risk Assessment (ERA) for Site 86

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Sample ID	Sample Depth (ft bgs)	Date
Surface Soil		
IR69-SS01-10A	0–0.5	3/4/2010
IR69-SS01D-10A	0–0.5	3/4/2010
IR69-SS02-10A	0–0.5	2/28/2010
IR69-SS03-10A	0–0.5	3/4/2010
IR69-SS04-10A	0–0.5	3/4/2010
IR69-SS05-10A	0–0.5	3/4/2010
IR69-SS06-10A	0–0.5	3/4/2010
MR02-IR69-SS01-10A	0–0.5	3/4/2010
MR02-IR69-SS01D-10A	0–0.5	3/4/2010
MR02-IR69-SS02-10A	0–0.5	3/13/2010
MR02-IR69-SS03-10A	0–0.5	3/13/2010
MR02-IR69-SS04-10A	0–0.5	3/13/2010
MR02-IR69-SS05-10A	0–0.5	3/13/2010
MR02-IR69-SS06-10A	0–0.5	3/13/2010
Subsurface Soil		
IR69-SB01-01-02-10A	1–2	3/7/2010
IR69-SB01D-01-02-10A	1–2	3/7/2010
IR69-SB03-04-05-10A	4–5	3/16/2010
Surface Water		
IR69-SW01-10A	NA	3/14/2010
IR69-SW01D-10A	NA	3/14/2010
IR69-SW02-10A	NA	3/15/2010
IR69-SW03-10A	NA	03/15/10
Groundwater		
IR69-GW01-10A	NA	3/8/2010
IR69-GW01D-10A	NA	3/8/2010
IR69-GW02-10A	NA	3/2/2010
IR69-GW03-10A	NA	3/7/2010
IR69-GW03D-10A	NA	3/7/2010
IR69-GW04-10A	NA	3/14/2010
IR69-GW05-10A	NA	3/8/2010
IR69-GW05D-10A	NA	3/8/2010
IR69-GW06-10A	NA	3/9/2010

TABLE H-2

Sample Locations Used in the Ecological Risk Assessment (ERA) for Site 86

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Sample ID	Sample Depth (ft bgs)	Date
IR69-GW07-10A	NA	3/9/2010
IR69-GW07D-10A	NA	3/9/2010
IR69-GW08-10A	NA	3/8/2010
IR69-GW08D-10A	NA	3/8/2010
IR69-GW09-10A	NA	3/1/2010
IR69-GW10-10A	NA	3/8/2010
IR69-GW11-10A	NA	3/1/2010
IR69-GW12-10A	NA	2/27/2010
IR69-GW13-10A	NA	3/1/2010
IR69-GW14-10A	NA	2/28/2010
IR69-GW15-10A	NA	03/07/10
Sediment		
IR69-SD01-10A	0–0.5	03/14/10
IR69-SD01D-10A	0–0.5	03/14/10
IR69-SD02-10A	0–0.5	03/15/10
IR69-SD03-10A	0–0.5	03/15/10

Notes:

ft bgs - feet below ground surface

NA - Not applicable

Generated By: Kelly Taylor/DFW

Checked By: Sara Kent/DFW

TABLE H-3

Site 69 Surface Soil Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	2 x Mean Background	Maximum Exceeds 2 x Mean Background?	Step 2 COPC?	Rationale[2]
Volatile Organic Compounds (UG/KG)											
1,1,1-Trichloroethane	3.70 - 340	0 / 10	--	--	100	-- / --	3.40	--	--	YES	(2) Not detected, HQ above one
1,1,2,2-Tetrachloroethane	3.70 - 340	0 / 11	--	--	100	-- / --	3.40	--	--	YES	(2) Not detected, HQ above one
1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	3.70 - 340	0 / 10	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
1,1,2-Trichloroethane	3.70 - 340	0 / 11	--	--	100	-- / --	3.40	--	--	YES	(2) Not detected, HQ above one
1,1-Dichloroethane	3.70 - 340	0 / 10	--	--	100	-- / --	3.40	--	--	YES	(2) Not detected, HQ above one
1,1-Dichloroethene	3.70 - 340	0 / 10	--	--	100	-- / --	3.40	--	--	YES	(2) Not detected, HQ above one
1,2,4-Trichlorobenzene	3.70 - 340	1 / 11	1.10	MR02-IR69-SS06-10A	10.0	0 / 11	0.11	--	--	NO	HQ less than one
1,2-Dibromo-3-chloropropane	3.70 - 340	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
1,2-Dibromoethane	3.70 - 340	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
1,2-Dichlorobenzene	3.70 - 340	0 / 11	--	--	10.0	-- / --	34.0	--	--	YES	(2) Not detected, HQ above one
1,2-Dichloroethane	3.70 - 340	0 / 10	--	--	400	-- / --	0.85	--	--	NO	HQ less than one
1,2-Dichloropropane	3.70 - 340	0 / 10	--	--	700,000	-- / --	4.86E-04	--	--	NO	HQ less than one
1,3-Dichlorobenzene	3.70 - 340	0 / 11	--	--	10.0	-- / --	34.0	--	--	YES	(2) Not detected, HQ above one
1,4-Dichlorobenzene	3.70 - 340	0 / 11	--	--	10.0	-- / --	34.0	--	--	YES	(2) Not detected, HQ above one
2-Butanone	9.20 - 850	3 / 10	110	IR69-SS04-10A	NSV	-- / --	NSV	--	--	YES	(3) Detected, no screening value
2-Hexanone	9.20 - 850	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
4-Methyl-2-pentanone	9.20 - 850	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Acetone	850 - 850	10 / 11	840	IR69-SS05-10A	NSV	-- / --	NSV	--	--	YES	(3) Detected, no screening value
Benzene	3.70 - 340	0 / 10	--	--	50.0	-- / --	6.80	--	--	YES	(2) Not detected, HQ above one
Bromodichloromethane	3.70 - 340	0 / 10	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Bromoform	3.70 - 340	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Bromomethane	3.70 - 340	0 / 10	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Carbon disulfide	3.70 - 340	0 / 10	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Carbon tetrachloride	3.70 - 340	0 / 10	--	--	1,000,000	-- / --	3.40E-04	--	--	NO	HQ less than one
Chlorobenzene	3.70 - 340	0 / 11	--	--	50.0	-- / --	6.80	--	--	YES	(2) Not detected, HQ above one
Chloroethane	3.70 - 340	0 / 10	--	--	100	-- / --	3.40	--	--	YES	(2) Not detected, HQ above one
Chloroform	3.70 - 340	0 / 10	--	--	1.00	-- / --	340	--	--	YES	(2) Not detected, HQ above one
Chloromethane	3.70 - 340	0 / 10	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
cis-1,2-Dichloroethene	3.70 - 340	0 / 10	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
cis-1,3-Dichloropropene	3.70 - 340	0 / 10	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Cyclohexane	3.70 - 340	2 / 11	0.44	MR02-IR69-SS04-10A	100	0 / 11	0.0044	--	--	NO	HQ less than one
Dibromochloromethane	3.70 - 340	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Dichlorodifluoromethane (Freon-12)	3.70 - 340	0 / 10	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Ethylbenzene	3.70 - 340	1 / 11	3.30	IR69-SS04-10A	50.0	0 / 11	0.066	--	--	NO	HQ less than one
Isopropylbenzene	3.70 - 340	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
m- and p-Xylene	7.30 - 680	1 / 11	11.0	IR69-SS04-10A	NSV	-- / --	NSV	--	--	YES	(3) Detected, no screening value
Methyl acetate	-- - --	11 / 11	710	MR02-IR69-SS02-10A	NSV	-- / --	NSV	--	--	YES	(3) Detected, no screening value
Methylcyclohexane	3.70 - 340	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Methylene chloride	3.70 - 340	0 / 10	--	--	2,000	-- / --	0.17	--	--	NO	HQ less than one
Methyl-tert-butyl ether (MTBE)	3.70 - 340	0 / 10	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
o-Xylene	3.70 - 340	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Styrene	3.70 - 340	0 / 11	--	--	100	-- / --	3.40	--	--	YES	(2) Not detected, HQ above one
Tetrachloroethene	3.70 - 340	0 / 11	--	--	10.0	-- / --	34.0	--	--	YES	(2) Not detected, HQ above one
Toluene	3.70 - 340	1 / 11	58.0	IR69-SS04-10A	50.0	1 / 11	1.16	--	--	YES	(1) HQ above one, detected
trans-1,2-Dichloroethene	3.70 - 340	0 / 10	--	--	100	-- / --	3.40	--	--	YES	(2) Not detected, HQ above one
trans-1,3-Dichloropropene	3.70 - 340	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Trichloroethene	3.70 - 340	0 / 10	--	--	1.00	-- / --	340	--	--	YES	(2) Not detected, HQ above one
Trichlorofluoromethane(Freon-11)	3.70 - 340	0 / 10	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Vinyl chloride	3.70 - 340	0 / 10	--	--	10.0	-- / --	34.0	--	--	YES	(2) Not detected, HQ above one
Xylene, total	3.70 - 340	1 / 11	14.0	IR69-SS04-10A	50.0	0 / 11	0.28	--	--	NO	HQ less than one
Semivolatile Organic Compounds (UG/KG)											
1,1-Biphenyl	200 - 330	0 / 11	--	--	60,000	-- / --	0.0055	--	--	NO	HQ less than one

TABLE H-3

Site 69 Surface Soil Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	2 x Mean Background	Maximum Exceeds 2 x Mean Background?	Step 2 COPC?	Rationale[2]
2,2'-Oxybis(1-chloropropane)	200 - 330	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2,4,5-Trichlorophenol	380 - 630	0 / 11	--	--	4,000	-- / --	0.16	--	--	NO	HQ less than one
2,4,6-Trichlorophenol	380 - 630	0 / 11	--	--	10,000	-- / --	0.063	--	--	NO	HQ less than one
2,4-Dichlorophenol	380 - 630	0 / 11	--	--	3.00	-- / --	210	--	--	YES	(2) Not detected, HQ above one
2,4-Dimethylphenol	380 - 630	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2,4-Dinitrophenol	380 - 630	0 / 11	--	--	20,000	-- / --	0.032	--	--	NO	HQ less than one
2,4-Dinitrotoluene	200 - 580	0 / 12	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2,6-Dinitrotoluene	200 - 580	0 / 12	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2-Chloronaphthalene	200 - 330	0 / 11	--	--	1,000	-- / --	0.33	--	--	NO	HQ less than one
2-Chlorophenol	380 - 630	0 / 11	--	--	10.0	-- / --	63.0	--	--	YES	(2) Not detected, HQ above one
2-Methylnaphthalene	9.50 - 11.0	9 / 11	3.60	MR02-IR69-SS06-10A	29,000	0 / 11	1.24E-04	--	--	NO	HQ less than one
2-Methylphenol	380 - 630	0 / 11	--	--	500	-- / --	1.26	--	--	YES	(2) Not detected, HQ above one
2-Nitroaniline	380 - 630	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2-Nitrophenol	380 - 630	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
3,3'-Dichlorobenzidine	200 - 330	0 / 10	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
3-Nitroaniline	380 - 630	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
4,6-Dinitro-2-methylphenol	380 - 630	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
4-Bromophenyl-phenylether	200 - 330	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
4-Chloro-3-methylphenol	380 - 630	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
4-Chloroaniline	380 - 630	0 / 11	--	--	20,000	-- / --	0.032	--	--	NO	HQ less than one
4-Chlorophenyl-phenylether	200 - 330	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
4-Methylphenol	380 - 630	0 / 11	--	--	500	-- / --	1.26	--	--	YES	(2) Not detected, HQ above one
4-Nitroaniline	380 - 630	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
4-Nitrophenol	380 - 630	0 / 11	--	--	7,000	-- / --	0.090	--	--	NO	HQ less than one
Acenaphthene	9.50 - 16.0	9 / 11	4.60	IR69-SS06-10A	29,000	0 / 11	1.59E-04	--	--	NO	HQ less than one
Acenaphthylene	9.50 - 16.0	3 / 11	1.10	MR02-IR69-SS04-10A	29,000	0 / 11	3.79E-05	--	--	NO	HQ less than one
Acetophenone	200 - 330	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Anthracene	9.50 - 16.0	8 / 11	1.70	MR02-IR69-SS06-10A	29,000	0 / 11	5.86E-05	--	--	NO	HQ less than one
Atrazine	200 - 330	0 / 11	--	--	0.050	-- / --	6,600	--	--	YES	(2) Not detected, HQ above one
Benzaldehyde	-- - --	11 / 11	170	MR02-IR69-SS06-10A	NSV	-- / --	NSV	--	--	YES	(3) Detected, no screening value
Benzo(a)anthracene	11.0 - 12.0	9 / 11	3.20	MR02-IR69-SS01-10A	1,100	0 / 11	0.0029	--	--	NO	HQ less than one
Benzo(a)pyrene	-- - --	11 / 11	7.30	MR02-IR69-SS04-10A	1,100	0 / 11	0.0066	--	--	NO	HQ less than one
Benzo(b)fluoranthene	-- - --	11 / 11	6.20	MR02-IR69-SS06-10A	1,100	0 / 11	0.0056	--	--	NO	HQ less than one
Benzo(g,h,i)perylene	9.90 - 16.0	5 / 11	1.80	IR69-SS02-10A	1,100	0 / 11	0.0016	--	--	NO	HQ less than one
Benzo(k)fluoranthene	-- - --	11 / 11	3.90	MR02-IR69-SS04-10A	1,100	0 / 11	0.0035	--	--	NO	HQ less than one
bis(2-Chloroethoxy)methane	200 - 330	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
bis(2-Chloroethyl)ether	200 - 330	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
bis(2-Ethylhexyl)phthalate	200 - 330	2 / 11	310	MR02-IR69-SS06-10A	100	2 / 11	3.10	--	--	YES	(1) HQ above one, detected
Butylbenzylphthalate	200 - 330	0 / 11	--	--	100	-- / --	3.30	--	--	YES	(2) Not detected, HQ above one
Caprolactam	200 - 260	1 / 11	81.0	IR69-SS05-10A	NSV	-- / --	NSV	--	--	YES	(3) Detected, no screening value
Carbazole	200 - 330	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Chrysene	12.0 - 12.0	10 / 11	4.20	MR02-IR69-SS04-10A	1,100	0 / 11	0.0038	--	--	NO	HQ less than one
Dibenz(a,h)anthracene	9.50 - 16.0	0 / 11	--	--	1,100	-- / --	0.015	--	--	NO	HQ less than one
Dibenzofuran	200 - 330	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Diethylphthalate	200 - 330	0 / 11	--	--	100,000	-- / --	0.0033	--	--	NO	HQ less than one
Dimethoate	77.0 - 140	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Dimethyl phthalate	200 - 330	0 / 11	--	--	200,000	-- / --	0.0017	--	--	NO	HQ less than one
Di-n-butylphthalate	200 - 330	0 / 11	--	--	200,000	-- / --	0.0017	--	--	NO	HQ less than one
Di-n-octylphthalate	200 - 330	0 / 11	--	--	100	-- / --	3.30	--	--	YES	(2) Not detected, HQ above one
Famphur	77.0 - 140	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Fluoranthene	11.0 - 12.0	9 / 11	5.80	IR69-SS01-10A	1,100	0 / 11	0.0053	--	--	NO	HQ less than one
Fluorene	9.50 - 16.0	6 / 11	1.20	MR02-IR69-SS01-10A	29,000	0 / 11	4.14E-05	--	--	NO	HQ less than one
Hexachlorobenzene	200 - 330	0 / 11	--	--	2.50	-- / --	132	--	--	YES	(2) Not detected, HQ above one

TABLE H-3

Site 69 Surface Soil Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	2 x Mean Background	Maximum Exceeds 2 x Mean Background?	Step 2 COPC?	Rationale[2]
Hexachlorobutadiene	200 - 330	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Hexachlorocyclopentadiene	200 - 330	0 / 11	--	--	10,000	-- / --	0.033	--	--	NO	HQ less than one
Hexachloroethane	200 - 330	0 / 11	--	--	100	-- / --	3.30	--	--	YES	(2) Not detected, HQ above one
Indeno(1,2,3-cd)pyrene	9.90 - 11.0	8 / 11	2.10	IR69-SS02-10A	1,100	0 / 11	0.0019	--	--	NO	HQ less than one
Isophorone	200 - 330	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Naphthalene	9.50 - 11.0	6 / 11	3.20	IR69-SS03-10A	29,000	0 / 11	1.10E-04	--	--	NO	HQ less than one
n-Nitroso-di-n-propylamine	200 - 330	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
n-Nitrosodiphenylamine	200 - 330	0 / 11	--	--	20,000	-- / --	0.017	--	--	NO	HQ less than one
Nitrobenzene	200 - 580	0 / 12	--	--	40,000	-- / --	0.015	--	--	NO	HQ less than one
Pentachlorophenol	380 - 630	0 / 11	--	--	2,100	-- / --	0.30	--	--	NO	HQ less than one
Phenanthrene	-- - --	11 / 11	6.00	MR02-IR69-SS06-10A	29,000	0 / 11	2.07E-04	--	--	NO	HQ less than one
Phenol	380 - 630	0 / 11	--	--	50.0	-- / --	12.6	--	--	YES	(2) Not detected, HQ above one
Phorate	38.0 - 68.0	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Pyrene	12.0 - 12.0	10 / 11	4.40	IR69-SS01-10A	1,100	0 / 11	0.0040	--	--	NO	HQ less than one
Pesticide/Polychlorinated Biphenyls (UG/KG)											
4,4'-DDD	3.80 - 21.0	7 / 11	3.50	IR69-SS01-10A	21.0	0 / 11	0.17	--	--	NO	HQ less than one
4,4'-DDE	-- - --	11 / 11	110	IR69-SS01-10A	21.0	4 / 11	5.24	--	--	YES	(1) HQ above one, detected
4,4'-DDT	-- - --	10 / 10	56.0	IR69-SS01-10A	21.0	3 / 10	2.67	--	--	YES	(1) HQ above one, detected
Aldrin	4.70 - 11.0	7 / 11	2.00	IR69-SS02-10A	2.50	0 / 11	0.80	--	--	NO	HQ less than one
alpha-BHC	2.00 - 13.0	5 / 11	3.30	MR02-IR69-SS01-10A	2.50	4 / 11	1.32	--	--	YES	(1) HQ above one, detected
alpha-Chlordane	4.70 - 11.0	9 / 11	10.0	MR02-IR69-SS02-10A	100	0 / 11	0.10	--	--	NO	HQ less than one
Aroclor-1016	28.0 - 180	0 / 11	--	--	20.0	-- / --	9.00	--	--	YES	(2) Not detected, HQ above one
Aroclor-1221	39.0 - 260	0 / 11	--	--	20.0	-- / --	13.0	--	--	YES	(2) Not detected, HQ above one
Aroclor-1232	20.0 - 130	0 / 11	--	--	20.0	-- / --	6.50	--	--	YES	(2) Not detected, HQ above one
Aroclor-1242	20.0 - 130	0 / 11	--	--	20.0	-- / --	6.50	--	--	YES	(2) Not detected, HQ above one
Aroclor-1248	20.0 - 130	0 / 11	--	--	20.0	-- / --	6.50	--	--	YES	(2) Not detected, HQ above one
Aroclor-1254	20.0 - 130	0 / 11	--	--	20.0	-- / --	6.50	--	--	YES	(2) Not detected, HQ above one
Aroclor-1260	20.0 - 130	0 / 11	--	--	20.0	-- / --	6.50	--	--	YES	(2) Not detected, HQ above one
Azinphos methyl	38.0 - 68.0	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
beta-BHC	0.98 - 6.40	1 / 11	2.00	MR02-IR69-SS02-10A	1.00	1 / 11	2.00	--	--	YES	(1) HQ above one, detected
Bolstar	38.0 - 68.0	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Chlorpyrifos	38.0 - 68.0	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Coumaphos	38.0 - 68.0	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
delta-BHC	2.00 - 13.0	4 / 11	2.10	MR02-IR69-SS02-10A	100	0 / 11	0.021	--	--	NO	HQ less than one
Demeton-O	95.0 - 170	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Demeton-S	95.0 - 170	0 / 10	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Diazinon	38.0 - 68.0	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Dichlorvos	77.0 - 140	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Dieldrin	3.80 - 25.0	0 / 11	--	--	4.90	-- / --	5.10	--	--	YES	(2) Not detected, HQ above one
Disulfoton	77.0 - 140	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Endosulfan I	2.00 - 13.0	5 / 11	2.30	IR69-SS03-10A	100	0 / 11	0.023	--	--	NO	HQ less than one
Endosulfan II	3.80 - 25.0	2 / 11	1.90	IR69-SS06-10A	100	0 / 11	0.019	--	--	NO	HQ less than one
Endosulfan sulfate	-- - --	11 / 11	43.0	MR02-IR69-SS04-10A	100	0 / 11	0.43	--	--	NO	HQ less than one
Endrin	3.80 - 25.0	3 / 11	3.90	IR69-SS05-10A	1.00	2 / 11	3.90	--	--	YES	(1) HQ above one, detected
Endrin aldehyde	3.80 - 25.0	4 / 11	25.0	IR69-SS04-10A	100	0 / 11	0.25	--	--	NO	HQ less than one
Endrin ketone	3.80 - 3.80	10 / 11	20.0	MR02-IR69-SS01-10A	100	0 / 11	0.20	--	--	NO	HQ less than one
Ethoprop	20.0 - 35.0	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Fensulfothion	200 - 350	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Ethyl p-nitrophenyl phenylphosphorothioate	38.0 - 68.0	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Fenthion	38.0 - 68.0	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
gamma-BHC (Lindane)	2.00 - 13.0	4 / 11	8.40	IR69-SS04-10A	0.050	4 / 11	168	--	--	YES	(1) HQ above one, detected
gamma-Chlordane	2.00 - 13.0	7 / 11	3.90	MR02-IR69-SS04-10A	100	0 / 11	0.039	--	--	NO	HQ less than one
Heptachlor	2.00 - 13.0	6 / 11	1.50	MR02-IR69-SS02-10A	100	0 / 11	0.015	--	--	NO	HQ less than one

TABLE H-3

Site 69 Surface Soil Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	2 x Mean Background	Maximum Exceeds 2 x Mean Background?	Step 2 COPC?	Rationale[2]
Heptachlor epoxide	2.00 - 13.0	1 / 11	1.60	MR02-IR69-SS06-10A	100	0 / 11	0.016	--	--	NO	HQ less than one
Malathion	38.0 - 68.0	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Merphos	57.0 - 100	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Methoxychlor	20.0 - 130	2 / 11	11.0	IR69-SS04-10A	100	0 / 11	0.11	--	--	NO	HQ less than one
Methyl parathion	20.0 - 35.0	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Mevinphos	77.0 - 140	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Monocrotophos	380 - 680	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Naled	200 - 350	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Parathion	38.0 - 68.0	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Ronnel	38.0 - 68.0	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Sulfotepp	20.0 - 35.0	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Tetrachlorvinphos	38.0 - 68.0	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Thionazin	38.0 - 68.0	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Tokuthion (Prothiophos)	38.0 - 68.0	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Toxaphene	95.0 - 630	0 / 11	--	--	100	-- / --	6.30	--	--	YES	(2) Not detected, HQ above one
Trichloronate	38.0 - 68.0	0 / 11	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Inorganics (MG/KG)											
Aluminum	-- - --	12 / 12	6,390	IR69-SS05-10A	50.0	12 / 12	128	5487	Yes	NO	Within background range
Antimony	1.30 - 2.70	3 / 12	1.10	IR69-SS02-10A	0.27	2 / 12	4.07	0.45	Yes	YES	(1) HQ above one, detected
Arsenic	1.10 - 1.90	7 / 12	1.30	IR69-SS01-10A	18.0	0 / 12	0.072	0.63	Yes	NO	HQ less than one, within background range
Barium	-- - --	12 / 12	64.5	IR69-SS05-10A	330	0 / 12	0.20	14.5	Yes	NO	HQ less than one
Beryllium	0.57 - 1.30	3 / 12	0.15	IR69-SS05-10A	21.0	0 / 12	0.0071	0.10	Yes	NO	HQ less than one
Cadmium	0.57 - 0.97	1 / 12	0.090	IR69-SS01-10A	0.36	0 / 12	0.25	0.03	Yes	NO	HQ less than one
Calcium [3]	572 - 1,300	5 / 12	3,860	IR69-SS05-10A	NSV	-- / --	NSV	6360	No	NO	Consistent with background
Chromium	2.00 - 2.50	8 / 12	8.80	IR69-SS01-10A	26.0	0 / 12	0.34	6.1	Yes	NO	HQ less than one
Cobalt	0.57 - 13.0	3 / 12	0.50	IR69-SS01-10A	13.0	0 / 12	0.038	0.29	Yes	NO	HQ less than one
Copper	5.00 - 6.70	6 / 12	4.90	IR69-SS01-10A	28.0	0 / 12	0.18	4.8	Yes	NO	HQ less than one
Iron	-- - --	12 / 12	4,960	IR69-SS01-10A	200	11 / 12	24.8	3245	Yes	NO	Within background range
Lead	-- - --	12 / 12	15.9	IR69-SS05-10A	11.0	1 / 12	1.45	12.3	Yes	NO	Within background range
Magnesium [3]	572 - 1,300	5 / 12	551	IR69-SS05-10A	NSV	-- / --	NSV	238	Yes	NO	Macronutrient
Manganese	-- - --	12 / 12	347	IR69-SS05-10A	220	1 / 12	1.58	13.7	Yes	YES	(1) HQ above one, detected
Mercury	0.19 - 0.19	11 / 12	0.31	IR69-SS05-10A	0.10	3 / 12	3.10	0.08	Yes	YES	(1) HQ above one, detected
Nickel	0.57 - 11.0	4 / 12	2.20	IR69-SS05-10A	38.0	0 / 12	0.058	1.2	Yes	NO	HQ less than one
Potassium [3]	-- - --	12 / 12	533	IR69-SS01-10A	NSV	-- / --	NSV	116	Yes	NO	Macronutrient
Selenium	0.57 - 1.20	3 / 12	0.86	IR69-SS01-10A	0.52	1 / 12	1.65	0.56	Yes	NO	Within background range
Silver	0.57 - 2.70	0 / 12	--	--	4.20	-- / --	0.64	0.14	Yes	NO	HQ less than one
Sodium [3]	1,000 - 1,300	6 / 12	262	IR69-SS05-10A	NSV	-- / --	NSV	80.9	Yes	NO	Macronutrient
Thallium	0.50 - 1.90	2 / 12	0.050	MR02-IR69-SS01-10A	1.00	0 / 12	0.050	0.36	No	NO	HQ less than one
Vanadium	-- - --	12 / 12	12.1	IR69-SS01-10A	7.80	1 / 12	1.55	8.9	Yes	NO	Within background range
Zinc	4.00 - 5.00	8 / 12	14.4	MR02-IR69-SS01-10A	46.0	0 / 12	0.31	10.8	Yes	NO	HQ less than one

NOTES

The categorized analytes were retained for quantitative refinement in the Step 3 table.

[1] - Count of detected samples exceeding or equaling Screening Value

[2] - Categories are assigned to those analytes retained as Step 2 COPCs and are as follows:

Category 1 – Contaminants with a maximum detection exceeding the ESV

Category 2– Undetected contaminants with a laboratory sample quantitation limit (SQL) exceeding the ESV

Category 3 – Detected contaminants with no ESV

Category 4 – Undetected contaminants with no ESV

[3] - Macronutrient - Not considered to be a COPC

µg/kg - Micrograms per kilogram

COPC - Contaminant of potential concern

mg/kg - Milligrams per kilogram

HQ - Hazard quotient

NSV - No Screening Value

Generated By: Kelly Taylor/DFW

Checked By: Sara Kent/ATL

TABLE H-4

Site 69 Subsurface Soil Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	2 x Mean Background	Maximum Exceeds 2 x Mean Background?	Step 2 COPC?	Rationale[2]
Volatile Organic Compounds (UG/KG)											
1,1,1-Trichloroethane	4.70 - 5.10	0 / 2	--	--	100	-- / --	0.051	--	--	NO	HQ less than one, not detected
1,1,2,2-Tetrachloroethane	4.70 - 5.10	0 / 2	--	--	100	-- / --	0.051	--	--	NO	HQ less than one, not detected
1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	4.70 - 5.10	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
1,1,2-Trichloroethane	4.70 - 5.10	0 / 2	--	--	100	-- / --	0.051	--	--	NO	HQ less than one, not detected
1,1-Dichloroethane	4.70 - 5.10	0 / 2	--	--	100	-- / --	0.051	--	--	NO	HQ less than one, not detected
1,1-Dichloroethene	4.70 - 5.10	0 / 2	--	--	100	-- / --	0.051	--	--	NO	HQ less than one, not detected
1,2,4-Trichlorobenzene	4.70 - 5.10	0 / 2	--	--	10.0	-- / --	0.51	--	--	NO	HQ less than one, not detected
1,2-Dibromo-3-chloropropane	4.70 - 5.10	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
1,2-Dibromoethane	4.70 - 5.10	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
1,2-Dichlorobenzene	4.70 - 5.10	0 / 2	--	--	10.0	-- / --	0.51	--	--	NO	HQ less than one, not detected
1,2-Dichloroethane	4.70 - 5.10	0 / 2	--	--	400	-- / --	0.013	--	--	NO	HQ less than one, not detected
1,2-Dichloropropane	4.70 - 5.10	0 / 2	--	--	700,000	-- / --	7.29E-06	--	--	NO	HQ less than one, not detected
1,3-Dichlorobenzene	4.70 - 5.10	0 / 2	--	--	10.0	-- / --	0.51	--	--	NO	HQ less than one, not detected
1,4-Dichlorobenzene	4.70 - 5.10	0 / 2	--	--	10.0	-- / --	0.51	--	--	NO	HQ less than one, not detected
2-Butanone	12.0 - 13.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2-Hexanone	12.0 - 13.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
4-Methyl-2-pentanone	12.0 - 13.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Acetone	26.0 - 26.0	1 / 2	44.0	IR69-SB03-04-05-10A	NSV	-- / --	NSV	--	--	YES	(3) Detected, no screening value
Benzene	4.70 - 5.10	0 / 2	--	--	50.0	-- / --	0.10	--	--	NO	HQ less than one, not detected
Bromodichloromethane	4.70 - 5.10	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Bromoform	4.70 - 5.10	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Bromomethane	4.70 - 5.10	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Carbon disulfide	4.70 - 4.70	1 / 2	0.53	IR69-SB03-04-05-10A	NSV	-- / --	NSV	--	--	YES	(3) Detected, no screening value
Carbon tetrachloride	4.70 - 5.10	0 / 2	--	--	1,000,000	-- / --	5.10E-06	--	--	NO	HQ less than one, not detected
Chlorobenzene	4.70 - 5.10	0 / 2	--	--	50.0	-- / --	0.10	--	--	NO	HQ less than one, not detected
Chloroethane	4.70 - 5.10	0 / 2	--	--	100	-- / --	0.051	--	--	NO	HQ less than one, not detected
Chloroform	4.70 - 5.10	0 / 2	--	--	1.00	-- / --	5.10	--	--	YES	(2) Not detected, HQ above one
Chloromethane	4.70 - 5.10	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
cis-1,2-Dichloroethene	4.70 - 5.10	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
cis-1,3-Dichloropropene	4.70 - 5.10	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Cyclohexane	4.70 - 5.10	0 / 2	--	--	100	-- / --	0.051	--	--	NO	HQ less than one, not detected
Dibromochloromethane	4.70 - 5.10	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Dichlorodifluoromethane (Freon-12)	4.70 - 5.10	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Ethylbenzene	4.70 - 5.10	0 / 2	--	--	50.0	-- / --	0.10	--	--	NO	HQ less than one, not detected
Isopropylbenzene	4.70 - 5.10	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
m- and p-Xylene	9.50 - 10.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Methyl acetate	-- - --	2 / 2	63.0	IR69-SB03-04-05-10A	NSV	-- / --	NSV	--	--	YES	(3) Detected, no screening value
Methylcyclohexane	4.70 - 5.10	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Methylene chloride	4.70 - 5.10	0 / 2	--	--	2,000	-- / --	0.0026	--	--	NO	HQ less than one, not detected
Methyl-tert-butyl ether (MTBE)	4.70 - 5.10	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
o-Xylene	4.70 - 5.10	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Styrene	4.70 - 5.10	0 / 2	--	--	100	-- / --	0.051	--	--	NO	HQ less than one, not detected
Tetrachloroethene	4.70 - 5.10	0 / 2	--	--	10.0	-- / --	0.51	--	--	NO	HQ less than one, not detected
Toluene	4.70 - 5.10	0 / 2	--	--	50.0	-- / --	0.10	--	--	NO	HQ less than one, not detected
trans-1,2-Dichloroethene	4.70 - 5.10	0 / 2	--	--	100	-- / --	0.051	--	--	NO	HQ less than one, not detected
trans-1,3-Dichloropropene	4.70 - 5.10	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Trichloroethene	4.70 - 5.10	0 / 2	--	--	1.00	-- / --	5.10	--	--	YES	(2) Not detected, HQ above one
Trichlorofluoromethane(Freon-11)	4.70 - 5.10	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value

TABLE H-4

Site 69 Subsurface Soil Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	2 x Mean Background	Maximum Exceeds 2 x Mean Background?	Step 2 COPC?	Rationale[2]
Vinyl chloride	4.70 - 5.10	0 / 2	--	--	10.0	-- / --	0.51	--	--	NO	HQ less than one, not detected
Xylene, total	4.70 - 5.10	0 / 2	--	--	50.0	-- / --	0.10	--	--	NO	HQ less than one, not detected
Semivolatile Organic Compounds (UG/KG)											
1,1-Biphenyl	210 - 210	0 / 2	--	--	60,000	-- / --	0.0035	--	--	NO	HQ less than one, not detected
2,2'-Oxybis(1-chloropropane)	210 - 210	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2,4,5-Trichlorophenol	410 - 410	0 / 2	--	--	4,000	-- / --	0.10	--	--	NO	HQ less than one, not detected
2,4,6-Trichlorophenol	410 - 410	0 / 2	--	--	10,000	-- / --	0.041	--	--	NO	HQ less than one, not detected
2,4-Dichlorophenol	410 - 410	0 / 2	--	--	3.00	-- / --	137	--	--	YES	(2) Not detected, HQ above one
2,4-Dimethylphenol	410 - 410	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2,4-Dinitrophenol	410 - 410	0 / 2	--	--	20,000	-- / --	0.021	--	--	NO	HQ less than one, not detected
2,4-Dinitrotoluene	210 - 210	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2,6-Dinitrotoluene	210 - 210	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2-Chloronaphthalene	210 - 210	0 / 2	--	--	1,000	-- / --	0.21	--	--	NO	HQ less than one, not detected
2-Chlorophenol	410 - 410	0 / 2	--	--	10.0	-- / --	41.0	--	--	YES	(2) Not detected, HQ above one
2-Methylnaphthalene	10.0 - 10.0	0 / 2	--	--	29,000	-- / --	3.45E-04	--	--	NO	HQ less than one, not detected
2-Methylphenol	410 - 410	0 / 2	--	--	500	-- / --	0.82	--	--	NO	HQ less than one, not detected
2-Nitroaniline	410 - 410	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2-Nitrophenol	410 - 410	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
3,3'-Dichlorobenzidine	210 - 210	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
3-Nitroaniline	410 - 410	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
4,6-Dinitro-2-methylphenol	410 - 410	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
4-Bromophenyl-phenylether	210 - 210	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
4-Chloro-3-methylphenol	410 - 410	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
4-Chloroaniline	410 - 410	0 / 2	--	--	20,000	-- / --	0.021	--	--	NO	HQ less than one, not detected
4-Chlorophenyl-phenylether	210 - 210	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
4-Methylphenol	410 - 410	0 / 2	--	--	500	-- / --	0.82	--	--	NO	HQ less than one, not detected
4-Nitroaniline	410 - 410	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
4-Nitrophenol	410 - 410	0 / 2	--	--	7,000	-- / --	0.059	--	--	NO	HQ less than one, not detected
Acenaphthene	10.0 - 10.0	0 / 2	--	--	29,000	-- / --	3.45E-04	--	--	NO	HQ less than one, not detected
Acenaphthylene	10.0 - 10.0	0 / 2	--	--	29,000	-- / --	3.45E-04	--	--	NO	HQ less than one, not detected
Acetophenone	210 - 210	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Anthracene	10.0 - 10.0	0 / 2	--	--	29,000	-- / --	3.45E-04	--	--	NO	HQ less than one, not detected
Atrazine	210 - 210	0 / 2	--	--	0.050	-- / --	4,200	--	--	YES	(2) Not detected, HQ above one
Benzaldehyde	210 - 210	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Benzo(a)anthracene	10.0 - 10.0	0 / 2	--	--	1,100	-- / --	0.0091	--	--	NO	HQ less than one, not detected
Benzo(a)pyrene	10.0 - 10.0	0 / 2	--	--	1,100	-- / --	0.0091	--	--	NO	HQ less than one, not detected
Benzo(b)fluoranthene	10.0 - 10.0	1 / 2	0.79	IR69-SB03-04-05-10A	1,100	0 / 2	7.18E-04	--	--	NO	HQ less than one, detected
Benzo(g,h,i)perylene	10.0 - 10.0	0 / 2	--	--	1,100	-- / --	0.0091	--	--	NO	HQ less than one, not detected
Benzo(k)fluoranthene	10.0 - 10.0	1 / 2	0.52	IR69-SB01-01-02-10A	1,100	0 / 2	4.73E-04	--	--	NO	HQ less than one, detected
bis(2-Chloroethoxy)methane	210 - 210	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
bis(2-Chloroethyl)ether	210 - 210	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
bis(2-Ethylhexyl)phthalate	210 - 210	0 / 2	--	--	100	-- / --	2.10	--	--	YES	(2) Not detected, HQ above one
Butylbenzylphthalate	210 - 210	0 / 2	--	--	100	-- / --	2.10	--	--	YES	(2) Not detected, HQ above one
Caprolactam	210 - 210	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Carbazole	210 - 210	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Chrysene	10.0 - 10.0	0 / 2	--	--	1,100	-- / --	0.0091	--	--	NO	HQ less than one, not detected
Dibenz(a,h)anthracene	10.0 - 10.0	0 / 2	--	--	1,100	-- / --	0.0091	--	--	NO	HQ less than one, not detected
Dibenzofuran	210 - 210	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Diethylphthalate	210 - 210	0 / 2	--	--	100,000	-- / --	0.0021	--	--	NO	HQ less than one, not detected

TABLE H-4

Site 69 Subsurface Soil Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	2 x Mean Background	Maximum Exceeds 2 x Mean Background?	Step 2 COPC?	Rationale[2]
Dimethoate	85.0 - 87.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Dimethyl phthalate	210 - 210	0 / 2	--	--	200,000	-- / --	0.0011	--	--	NO	HQ less than one, not detected
Di-n-butylphthalate	210 - 210	0 / 2	--	--	200,000	-- / --	0.0011	--	--	NO	HQ less than one, not detected
Di-n-octylphthalate	210 - 210	0 / 2	--	--	100	-- / --	2.10	--	--	YES	(2) Not detected, HQ above one
Famphur	85.0 - 87.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Fluoranthene	10.0 - 10.0	0 / 2	--	--	1,100	-- / --	0.0091	--	--	NO	HQ less than one, not detected
Fluorene	10.0 - 10.0	0 / 2	--	--	29,000	-- / --	3.45E-04	--	--	NO	HQ less than one, not detected
Hexachlorobenzene	210 - 210	0 / 2	--	--	2.50	-- / --	84.0	--	--	YES	(2) Not detected, HQ above one
Hexachlorobutadiene	210 - 210	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Hexachlorocyclopentadiene	210 - 210	0 / 2	--	--	10,000	-- / --	0.021	--	--	NO	HQ less than one, not detected
Hexachloroethane	210 - 210	0 / 2	--	--	100	-- / --	2.10	--	--	YES	(2) Not detected, HQ above one
Indeno(1,2,3-cd)pyrene	10.0 - 10.0	0 / 2	--	--	1,100	-- / --	0.0091	--	--	NO	HQ less than one, not detected
Isophorone	210 - 210	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Naphthalene	10.0 - 10.0	0 / 2	--	--	29,000	-- / --	3.45E-04	--	--	NO	HQ less than one, not detected
n-Nitroso-di-n-propylamine	210 - 210	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
n-Nitrosodiphenylamine	210 - 210	0 / 2	--	--	20,000	-- / --	0.011	--	--	NO	HQ less than one, not detected
Nitrobenzene	210 - 210	0 / 2	--	--	40,000	-- / --	0.0053	--	--	NO	HQ less than one, not detected
Pentachlorophenol	410 - 410	0 / 2	--	--	2,100	-- / --	0.20	--	--	NO	HQ less than one, not detected
Phenanthrene	10.0 - 10.0	0 / 2	--	--	29,000	-- / --	3.45E-04	--	--	NO	HQ less than one, not detected
Phenol	410 - 410	0 / 2	--	--	50.0	-- / --	8.20	--	--	YES	(2) Not detected, HQ above one
Phorate	42.0 - 43.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Pyrene	10.0 - 10.0	0 / 2	--	--	1,100	-- / --	0.0091	--	--	NO	HQ less than one, not detected
Pesticide/Polychlorinated Biphenyls (UG/KG)											
4,4'-DDD	4.10 - 4.10	1 / 2	0.60	IR69-SB03-04-05-10A	21.0	0 / 2	0.029	--	--	NO	HQ less than one, detected
4,4'-DDE	4.10 - 4.10	1 / 2	6.00	IR69-SB01-01-02-10A	21.0	0 / 2	0.29	--	--	NO	HQ less than one, detected
4,4'-DDT	-- - --	1 / 1	4.50	IR69-SB01-01-02-10A	21.0	0 / 1	0.21	--	--	NO	HQ less than one, detected
Aldrin	2.10 - 2.10	0 / 2	--	--	2.50	-- / --	0.84	--	--	NO	HQ less than one, not detected
alpha-BHC	2.10 - 2.10	0 / 2	--	--	2.50	-- / --	0.84	--	--	NO	HQ less than one, not detected
alpha-Chlordane	-- - --	2 / 2	2.40	IR69-SB01-01-02-10A	100	0 / 2	0.024	--	--	NO	HQ less than one, detected
Aroclor-1016	30.0 - 30.0	0 / 2	--	--	20.0	-- / --	1.50	--	--	YES	(2) Not detected, HQ above one
Aroclor-1221	43.0 - 43.0	0 / 2	--	--	20.0	-- / --	2.15	--	--	YES	(2) Not detected, HQ above one
Aroclor-1232	21.0 - 21.0	0 / 2	--	--	20.0	-- / --	1.05	--	--	YES	(2) Not detected, HQ above one
Aroclor-1242	21.0 - 21.0	0 / 2	--	--	20.0	-- / --	1.05	--	--	YES	(2) Not detected, HQ above one
Aroclor-1248	21.0 - 21.0	0 / 2	--	--	20.0	-- / --	1.05	--	--	YES	(2) Not detected, HQ above one
Aroclor-1254	21.0 - 21.0	0 / 2	--	--	20.0	-- / --	1.05	--	--	YES	(2) Not detected, HQ above one
Aroclor-1260	21.0 - 21.0	0 / 2	--	--	20.0	-- / --	1.05	--	--	YES	(2) Not detected, HQ above one
Azinphos methyl	42.0 - 43.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
beta-BHC	1.10 - 1.10	1 / 2	0.45	IR69-SB01-01-02-10A	1.00	0 / 2	0.45	--	--	NO	HQ less than one, detected
Bolstar	42.0 - 43.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Chlorpyrifos	42.0 - 43.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Coumaphos	42.0 - 43.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
delta-BHC	2.10 - 2.10	0 / 2	--	--	100	-- / --	0.021	--	--	NO	HQ less than one, not detected
Demeton-O	110 - 110	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Demeton-S	110 - 110	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Diazinon	42.0 - 43.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Dichlorvos	85.0 - 87.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Dieldrin	4.10 - 4.10	0 / 2	--	--	4.90	-- / --	0.84	--	--	NO	HQ less than one, not detected
Disulfoton	85.0 - 87.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Endosulfan I	2.10 - 2.10	1 / 2	0.22	IR69-SB01-01-02-10A	100	0 / 2	0.0022	--	--	NO	HQ less than one, detected

TABLE H-4

Site 69 Subsurface Soil Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	2 x Mean Background	Maximum Exceeds 2 x Mean Background?	Step 2 COPC?	Rationale[2]
Endosulfan II	4.10 - 4.10	0 / 2	--	--	100	-- / --	0.041	--	--	NO	HQ less than one, not detected
Endosulfan sulfate	4.10 - 4.10	1 / 2	0.85	IR69-SB03-04-05-10A	100	0 / 2	0.0085	--	--	NO	HQ less than one, detected
Endrin	4.10 - 4.10	1 / 2	1.10	IR69-SB01-01-02-10A	1.00	1 / 2	1.10	--	--	YES	(1) HQ above one, detected
Endrin aldehyde	4.10 - 4.10	0 / 2	--	--	100	-- / --	0.041	--	--	NO	HQ less than one, not detected
Endrin ketone	4.10 - 4.10	0 / 2	--	--	100	-- / --	0.041	--	--	NO	HQ less than one, not detected
Ethoprop	22.0 - 22.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Fensulfothion	220 - 220	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Ethyl p-nitrophenyl phenylphosphorothioate	42.0 - 43.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Fenthion	42.0 - 43.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
gamma-BHC (Lindane)	2.10 - 2.10	0 / 2	--	--	0.050	-- / --	42.0	--	--	YES	(2) Not detected, HQ above one
gamma-Chlordane	2.10 - 2.10	1 / 2	0.49	IR69-SB03-04-05-10A	100	0 / 2	0.0049	--	--	NO	HQ less than one, detected
Heptachlor	-- - --	2 / 2	0.55	IR69-SB01-01-02-10A	100	0 / 2	0.0055	--	--	NO	HQ less than one, detected
Heptachlor epoxide	2.10 - 2.10	0 / 2	--	--	100	-- / --	0.021	--	--	NO	HQ less than one, not detected
Malathion	42.0 - 43.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Merphos	64.0 - 65.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Methoxychlor	21.0 - 21.0	0 / 1	--	--	100	-- / --	0.21	--	--	NO	HQ less than one, not detected
Methyl parathion	22.0 - 22.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Mevinphos	85.0 - 87.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Monocrotophos	420 - 430	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Naled	220 - 220	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Parathion	42.0 - 43.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Ronnel	42.0 - 43.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Sulfotepp	22.0 - 22.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Tetrachlorvinphos	42.0 - 43.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Thionazin	42.0 - 43.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Tokuthion (Prothiophos)	42.0 - 43.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Toxaphene	100 - 100	0 / 2	--	--	100	-- / --	1.00	--	--	YES	HQ does not exceed 1, not detected
Trichloronate	42.0 - 43.0	0 / 2	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Inorganics (MG/KG)											
Aluminum	-- - --	2 / 2	15,900	IR69-SB01-01-02-10A	50.0	2 / 2	318	10,369	Yes	NO	Within background range
Antimony	-- - --	2 / 2	1.40	IR69-SB03-04-05-10A	0.27	2 / 2	5.19	0.36	Yes	YES	(1) HQ above one, detected
Arsenic	1.20 - 1.20	1 / 2	3.70	IR69-SB01-01-02-10A	18.0	0 / 2	0.21	2.12	Yes	NO	HQ less than one, detected
Barium	-- - --	2 / 2	19.9	IR69-SB01-01-02-10A	330	0 / 2	0.060	16.6	Yes	NO	HQ less than one, detected
Beryllium	0.60 - 0.60	1 / 2	0.21	IR69-SB01-01-02-10A	21.0	0 / 2	0.010	0.165	Yes	NO	HQ less than one, detected
Cadmium	0.60 - 0.60	1 / 2	0.27	IR69-SB01-01-02-10A	0.36	0 / 2	0.75	0.02	Yes	NO	HQ less than one, detected
Calcium [3]	597 - 597	1 / 2	129	IR69-SB01-01-02-10A	NSV	-- / --	NSV	441.3	No	NO	Consistent with background
Chromium	-- - --	2 / 2	24.1	IR69-SB01-01-02-10A	26.0	0 / 2	0.93	14.49	Yes	NO	HQ less than one, detected
Cobalt	0.60 - 0.60	1 / 2	1.30	IR69-SB01-01-02-10A	13.0	0 / 2	0.10	0.82	Yes	NO	HQ less than one, detected
Copper	-- - --	2 / 2	3.40	IR69-SB01-01-02-10A	28.0	0 / 2	0.12	2.56	Yes	NO	HQ less than one, detected
Iron	-- - --	2 / 2	13,300	IR69-SB01-01-02-10A	200	2 / 2	66.5	5438.6	Yes	NO	Within background range
Lead	-- - --	2 / 2	6.80	IR69-SB01-01-02-10A	11.0	0 / 2	0.62	8.49	No	NO	HQ less than one, detected
Magnesium [3]	-- - --	2 / 2	1,080	IR69-SB01-01-02-10A	NSV	-- / --	NSV	362.6	Yes	NO	Macronutrient
Manganese	-- - --	2 / 2	20.3	IR69-SB01-01-02-10A	220	0 / 2	0.092	9.246	Yes	NO	HQ less than one, detected
Mercury	-- - --	2 / 2	0.15	IR69-SB01-01-02-10A	0.10	1 / 2	1.50	0.07	Yes	YES	(1) HQ above one, detected
Nickel	-- - --	2 / 2	3.40	IR69-SB01-01-02-10A	38.0	0 / 2	0.089	2.266	Yes	NO	HQ less than one, detected
Potassium [3]	-- - --	2 / 2	1,160	IR69-SB01-01-02-10A	NSV	-- / --	NSV	361.2	Yes	NO	Macronutrient
Selenium	0.60 - 0.60	1 / 2	0.71	IR69-SB01-01-02-10A	0.52	1 / 2	1.37	0.50	Yes	NO	Within background range
Silver	0.57 - 0.60	0 / 2	--	--	4.20	-- / --	0.14	0.13	Yes	NO	HQ less than one, not detected
Sodium [3]	571 - 571	1 / 2	73.2	IR69-SB03-04-05-10A	NSV	-- / --	NSV	68.3	Yes	NO	Macronutrient

TABLE H-4

Site 69 Subsurface Soil Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	2 x Mean Background	Maximum Exceeds 2 x Mean Background?	Step 2 COPC?	Rationale[2]
Thallium	1.10 - 1.20	0 / 2	--	--	1.00	-- / --	1.20	0.38	Yes	YES	(2) Not detected, HQ above one
Vanadium	-- - --	2 / 2	30.4	IR69-SB01-01-02-10A	7.80	1 / 2	3.90	17.21	Yes	NO	Within background range
Zinc	2.40 - 2.40	1 / 2	10.9	IR69-SB01-01-02-10A	46.0	0 / 2	0.24	6.59	Yes	NO	HQ less than one, detected

NOTES

The categorized analytes were retained for quantitative refinement in the Step 3 table.

[1] - Count of detected samples exceeding or equaling Screening Value

[2] - Categories are assigned to those analytes retained as Step 2 COPCs and are as follows:

Category 1 – Contaminants with a maximum detection exceeding the ESV

Category 2– Undetected contaminants with a laboratory sample quantitation limit (SQL) exceeding the ESV

Category 3 – Detected contaminants with no ESV

Category 4 – Undetected contaminants with no ESV

[3] - Macronutrient - Not considered to be a COPC

µg/kg - Micrograms per kilogram

COPC - Contaminant of potential concern

HQ - Hazard quotient

mg/kg - Milligrams per kilogram

NSV - No Screening Value

Generated By: Kelly Taylor/DFW

Checked By: Sara Kent/ATL

TABLE H-5

Site 69 Surface Water Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	Step 2 COPC?	Rationale[2]
Volatile Organic Compounds (UG/L)									
1,1,1-Trichloroethane	0.50 - 0.50	0 / 3	--	--	312	-- / --	0.0016	NO	HQ less than one, not detected
1,1,2,2-Tetrachloroethane	0.50 - 0.50	0 / 3	--	--	90.2	-- / --	0.0055	NO	HQ less than one, not detected
1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	0.50 - 0.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
1,1,2-Trichloroethane	0.50 - 0.50	0 / 3	--	--	940	-- / --	0.0005	YES	HQ less than one, not detected
1,1-Dichloroethane	0.50 - 0.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
1,1-Dichloroethene	0.50 - 0.50	0 / 3	--	--	303	-- / --	1.65E-03	NO	HQ less than one, not detected
1,2,4-Trichlorobenzene	0.50 - 0.50	0 / 3	--	--	4.50	-- / --	0.11	NO	HQ less than one, not detected
1,2-Dibromo-3-chloropropane	0.50 - 0.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
1,2-Dibromoethane	0.50 - 0.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
1,2-Dichlorobenzene	0.50 - 0.50	0 / 3	--	--	15.8	-- / --	0.032	NO	HQ less than one, not detected
1,2-Dichloroethane	0.50 - 0.50	0 / 3	--	--	1,130	-- / --	4.42E-04	NO	HQ less than one, not detected
1,2-Dichloropropane	0.50 - 0.50	0 / 3	--	--	525	-- / --	9.52E-04	NO	HQ less than one, not detected
1,3-Dichlorobenzene	0.50 - 0.50	0 / 3	--	--	28.5	-- / --	0.018	NO	HQ less than one, not detected
1,4-Dichlorobenzene	0.50 - 0.50	0 / 3	--	--	11.2	-- / --	0.045	NO	HQ less than one, not detected
2-Hexanone	2.50 - 2.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
4-Methyl-2-pentanone	2.50 - 2.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Benzene	0.50 - 0.50	0 / 3	--	--	53.0	-- / --	0.0094	NO	HQ less than one, not detected
Bromodichloromethane	0.50 - 0.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Bromoform	0.50 - 0.50	0 / 3	--	--	293	-- / --	1.71E-03	NO	HQ less than one, not detected
Bromomethane	0.50 - 0.50	0 / 3	--	--	110	-- / --	0.0045	NO	HQ less than one, not detected
Carbon disulfide	0.50 - 0.50	2 / 3	0.036	IR69-SW02-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Carbon tetrachloride	0.50 - 0.50	0 / 3	--	--	352	-- / --	1.42E-03	NO	HQ less than one, not detected
Chlorobenzene	0.50 - 0.50	0 / 3	--	--	105	-- / --	0.0048	NO	HQ less than one, not detected
Chloroethane	0.50 - 0.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Chloroform	0.50 - 0.50	0 / 3	--	--	289	-- / --	1.73E-03	NO	HQ less than one, not detected
Chloromethane	0.50 - 0.50	0 / 3	--	--	2,700	-- / --	1.85E-04	NO	HQ less than one, not detected
cis-1,2-Dichloroethene	0.50 - 0.50	2 / 3	1.20	IR69-SW01-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
cis-1,3-Dichloropropene	0.50 - 0.50	0 / 3	--	--	7.90	-- / --	0.063	NO	HQ less than one, not detected
Cyclohexane	0.50 - 0.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Dibromochloromethane	0.50 - 0.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Dichlorodifluoromethane (Freon-12)	0.50 - 0.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Ethylbenzene	0.50 - 0.50	0 / 3	--	--	4.30	-- / --	0.12	NO	HQ less than one, not detected
Isopropylbenzene	0.50 - 0.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
m- and p-Xylene	1.00 - 1.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Methyl acetate	0.50 - 0.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Methylcyclohexane	0.50 - 0.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Methylene chloride	0.50 - 0.50	0 / 3	--	--	1,930	-- / --	2.59E-04	NO	HQ less than one, not detected
Methyl-tert-butyl ether (MTBE)	0.50 - 0.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
o-Xylene	0.50 - 0.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Styrene	0.50 - 0.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Tetrachloroethene	0.50 - 0.50	0 / 3	--	--	45.0	-- / --	0.011	NO	HQ less than one, not detected
Toluene	0.50 - 0.50	0 / 3	--	--	37.0	-- / --	0.014	NO	HQ less than one, not detected
trans-1,2-Dichloroethene	0.50 - 0.50	1 / 3	0.068	IR69-SW01-10A	1,350	-- / --	0.00005	YES	HQ less than one, detected
trans-1,3-Dichloropropene	0.50 - 0.50	0 / 3	--	--	7.90	-- / --	0.063	NO	HQ less than one, not detected
Trichloroethene	0.50 - 0.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Trichlorofluoromethane(Freon-11)	0.50 - 0.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Vinyl chloride	0.50 - 0.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Xylene, total	0.50 - 0.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value

TABLE H-5

Site 69 Surface Water Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	Step 2 COPC?	Rationale[2]
Semivolatile Organic Compounds (UG/L)									
1,1-Biphenyl	5.00 - 5.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
2,2'-Oxybis(1-chloropropane)	5.00 - 5.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
2,4,5-Trichlorophenol	10.0 - 10.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
2,4,6-Trichlorophenol	10.0 - 10.0	0 / 3	--	--	3.20	-- / --	3.13	YES	(2) Not detected, HQ above one
2,4-Dichlorophenol	10.0 - 10.0	0 / 3	--	--	36.5	-- / --	0.27	NO	HQ less than one, not detected
2,4-Dimethylphenol	10.0 - 10.0	0 / 3	--	--	21.2	-- / --	0.47	NO	HQ less than one, not detected
2,4-Dinitrophenol	10.0 - 10.0	0 / 3	--	--	6.20	-- / --	1.61	YES	(2) Not detected, HQ above one
2,4-Dinitrotoluene	5.00 - 5.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
2,6-Dinitrotoluene	5.00 - 5.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
2-Chloronaphthalene	5.00 - 5.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
2-Chlorophenol	10.0 - 10.0	0 / 3	--	--	43.8	-- / --	0.23	NO	HQ less than one, not detected
2-Methylnaphthalene	0.20 - 0.20	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
2-Methylphenol	10.0 - 10.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
2-Nitroaniline	10.0 - 10.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
2-Nitrophenol	10.0 - 10.0	0 / 3	--	--	3,500	-- / --	0.003	NO	HQ less than one, not detected
3,3'-Dichlorobenzidine	5.00 - 5.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
3-Nitroaniline	10.0 - 10.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
4,6-Dinitro-2-methylphenol	10.0 - 10.0	0 / 3	--	--	2.30	-- / --	4.35	YES	(2) Not detected, HQ above one
4-Bromophenyl-phenylether	5.00 - 5.00	0 / 3	--	--	12.2	-- / --	0.41	NO	HQ less than one, not detected
4-Chloro-3-methylphenol	10.0 - 10.0	0 / 3	--	--	0.30	-- / --	33.33	YES	(2) Not detected, HQ above one
4-Chloroaniline	10.0 - 10.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
4-Chlorophenyl-phenylether	5.00 - 5.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
4-Methylphenol	10.0 - 10.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
4-Nitroaniline	10.0 - 10.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
4-Nitrophenol	10.0 - 10.0	0 / 3	--	--	71.7	-- / --	0.14	NO	HQ less than one, not detected
Acenaphthene	0.20 - 0.20	0 / 3	--	--	9.70	-- / --	0.021	NO	HQ less than one, not detected
Acenaphthylene	0.20 - 0.20	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Acetophenone	5.00 - 5.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Anthracene	0.20 - 0.20	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Atrazine	5.00 - 5.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Benzaldehyde	5.00 - 5.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Benzo(a)anthracene	0.20 - 0.20	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Benzo(a)pyrene	0.20 - 0.20	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Benzo(b)fluoranthene	0.20 - 0.20	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Benzo(g,h,i)perylene	0.20 - 0.20	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Benzo(k)fluoranthene	0.20 - 0.20	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
bis(2-Chloroethoxy)methane	5.00 - 5.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
bis(2-Chloroethyl)ether	5.00 - 5.00	0 / 3	--	--	2,380	-- / --	0.002	NO	HQ less than one, not detected
bis(2-Ethylhexyl)phthalate	5.00 - 5.00	0 / 3	--	--	0.30	-- / --	16.67	YES	(2) Not detected, HQ above one
Butylbenzylphthalate	5.00 - 5.00	0 / 3	--	--	22.0	-- / --	0.23	NO	HQ less than one, not detected
Caprolactam	5.00 - 5.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Carbazole	5.00 - 5.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Chrysene	0.20 - 0.20	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Dibenz(a,h)anthracene	0.20 - 0.20	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Dibenzofuran	5.00 - 5.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Diethylphthalate	5.00 - 5.00	0 / 3	--	--	521	-- / --	0.0096	NO	HQ less than one, not detected
Dimethoate	1.90 - 2.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value

TABLE H-5

Site 69 Surface Water Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	Step 2 COPC?	Rationale[2]
Dimethyl phthalate	5.00 - 5.00	0 / 3	--	--	330	-- / --	0.0152	NO	HQ less than one, not detected
Di-n-butylphthalate	5.00 - 5.00	0 / 3	--	--	3.40	-- / --	1.47	YES	(2) Not detected, HQ above one
Di-n-octylphthalate	5.00 - 5.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Famphur	1.90 - 2.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Fluoranthene	0.20 - 0.20	0 / 3	--	--	1.60	-- / --	0.13	NO	HQ less than one, not detected
Fluorene	0.20 - 0.20	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Hexachlorobenzene	5.00 - 5.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Hexachlorobutadiene	5.00 - 5.00	0 / 3	--	--	0.32	-- / --	15.6	YES	(2) Not detected, HQ above one
Hexachlorocyclopentadiene	5.00 - 5.00	0 / 3	--	--	0.070	-- / --	71.4	YES	(2) Not detected, HQ above one
Hexachloroethane	5.00 - 5.00	0 / 3	--	--	9.40	-- / --	0.53	NO	HQ less than one, not detected
Indeno(1,2,3-cd)pyrene	0.20 - 0.20	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Isophorone	5.00 - 5.00	0 / 3	--	--	129	-- / --	0.039	NO	HQ less than one, not detected
Naphthalene	0.20 - 0.20	0 / 3	--	--	23.5	-- / --	0.0085	NO	HQ less than one, not detected
n-Nitroso-di-n-propylamine	5.00 - 5.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
n-Nitrosodiphenylamine	5.00 - 5.00	0 / 3	--	--	58.5	-- / --	8.55E-02	NO	HQ less than one, not detected
Nitrobenzene	5.00 - 5.00	0 / 3	--	--	66.8	-- / --	0.075	NO	HQ less than one, not detected
Pentachlorophenol	10.0 - 10.0	0 / 3	--	--	7.90	-- / --	1.27	YES	(2) Not detected, HQ above one
Phenanthrene	0.20 - 0.20	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Phenol	10.0 - 10.0	0 / 3	--	--	58.0	-- / --	0.17	NO	HQ less than one, not detected
Phorate	0.95 - 1.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Pyrene	0.20 - 0.20	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Pesticide/Polychlorinated Biphenyls (UG/L)									
4,4'-DDD	0.10 - 0.10	0 / 3	--	--	0.0064	-- / --	15.63	YES	(2) Not detected, HQ above one
4,4'-DDE	0.10 - 0.10	0 / 3	--	--	0.14	-- / --	0.71	NO	HQ less than one, not detected
4,4'-DDT	0.10 - 0.10	0 / 3	--	--	0.0010	-- / --	100	YES	(2) Not detected, HQ above one
Aldrin	0.050 - 0.051	0 / 3	--	--	0.13	-- / --	0.39	NO	HQ less than one, not detected
alpha-BHC	0.050 - 0.051	0 / 3	--	--	500	-- / --	1.02E-04	NO	HQ less than one, not detected
alpha-Chlordane	0.050 - 0.051	0 / 3	--	--	0.0040	-- / --	12.8	YES	(2) Not detected, HQ above one
Aroclor-1016	0.93 - 0.95	0 / 3	--	--	0.014	-- / --	67.9	YES	(2) Not detected, HQ above one
Aroclor-1221	1.30 - 1.30	0 / 3	--	--	0.014	-- / --	92.9	YES	(2) Not detected, HQ above one
Aroclor-1232	0.93 - 0.95	0 / 3	--	--	0.014	-- / --	67.9	YES	(2) Not detected, HQ above one
Aroclor-1242	0.63 - 0.64	0 / 3	--	--	0.014	-- / --	45.7	YES	(2) Not detected, HQ above one
Aroclor-1248	0.63 - 0.64	0 / 3	--	--	0.014	-- / --	45.7	YES	(2) Not detected, HQ above one
Aroclor-1254	0.63 - 0.64	0 / 3	--	--	0.014	-- / --	45.7	YES	(2) Not detected, HQ above one
Aroclor-1260	0.93 - 0.95	0 / 3	--	--	0.014	-- / --	67.9	YES	(2) Not detected, HQ above one
Azinphos methyl	0.95 - 1.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
beta-BHC	0.050 - 0.051	0 / 3	--	--	5,000	-- / --	1.02E-05	NO	HQ less than one, not detected
Bolstar	0.95 - 1.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Chlorpyrifos	0.95 - 1.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Coumaphos	0.95 - 1.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
delta-BHC	0.050 - 0.051	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Demeton-O	2.40 - 2.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Demeton-S	2.40 - 2.40	0 / 2	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Diazinon	0.95 - 1.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Dichlorvos	1.90 - 2.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Dieldrin	0.10 - 0.10	0 / 3	--	--	0.0019	-- / --	52.6	YES	(2) Not detected, HQ above one
Disulfoton	1.90 - 2.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Endosulfan I	0.050 - 0.051	0 / 3	--	--	0.0087	-- / --	5.86	YES	(2) Not detected, HQ above one

TABLE H-5

Site 69 Surface Water Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	Step 2 COPC?	Rationale[2]
Endosulfan II	0.10 - 0.10	0 / 3	--	--	0.0087	-- / --	11.5	YES	(2) Not detected, HQ above one
Endosulfan sulfate	0.10 - 0.10	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Endrin	0.10 - 0.10	0 / 3	--	--	0.0023	-- / --	43.5	YES	(2) Not detected, HQ above one
Endrin aldehyde	0.10 - 0.10	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Endrin ketone	0.10 - 0.10	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Ethoprop	0.48 - 0.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Fensulfothion	4.80 - 5.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Ethyl p-nitrophenyl phenylphosphorothioate	0.95 - 1.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Fenthion	0.95 - 1.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
gamma-BHC (Lindane)	0.050 - 0.051	0 / 3	--	--	0.016	-- / --	3.19	YES	(2) Not detected, HQ above one
gamma-Chlordane	0.050 - 0.051	0 / 3	--	--	0.0040	-- / --	12.8	YES	(2) Not detected, HQ above one
Heptachlor	0.050 - 0.051	0 / 3	--	--	0.0036	-- / --	14.2	YES	(2) Not detected, HQ above one
Heptachlor epoxide	0.050 - 0.051	0 / 3	--	--	0.0036	-- / --	14.2	YES	(2) Not detected, HQ above one
Malathion	0.95 - 1.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Merphos	1.40 - 1.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Methoxychlor	0.50 - 0.51	0 / 3	--	--	0.030	-- / --	17.0	YES	(2) Not detected, HQ above one
Methyl parathion	0.48 - 0.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Mevinphos	1.90 - 2.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Monocrotophos	9.50 - 10.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Naled	4.80 - 5.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Parathion	0.95 - 1.00	0 / 3	--	--	0.013	-- / --	76.92	YES	(2) Not detected, HQ above one
Ronnel	0.95 - 1.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Sulfotepp	0.48 - 0.50	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Tetrachlorvinphos	0.95 - 1.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Thionazin	0.95 - 1.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Tokuthion (Prothiophos)	0.95 - 1.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Toxaphene	2.50 - 2.60	0 / 3	--	--	0.0020	-- / --	1,300	YES	(2) Not detected, HQ above one
Trichloronate	0.95 - 1.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Inorganics (UG/L)									
Aluminum	200 - 200	1 / 3	474	IR69-SW03-10A	87.0	1 / 3	5.45	YES	(3) Detected, no screening value
Antimony	10.0 - 10.0	0 / 3	--	--	160	-- / --	0.063	YES	(4) Not detected, no screening value
Arsenic	10.0 - 10.0	0 / 3	--	--	36.0	-- / --	0.28	NO	HQ less than one, not detected
Barium	-- - --	3 / 3	32.3	IR69-SW03-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Beryllium	5.00 - 5.00	0 / 3	--	--	0.53	-- / --	NSV	YES	(4) Not detected, no screening value
Cadmium	5.00 - 5.00	0 / 3	--	--	0.25	-- / --	20	YES	(2) Not detected, HQ above one
Calcium [3]	-- - --	3 / 3	4,300	IR69-SW02-10A	NSV	-- / --	NSV	NO	Macronutrient
Chromium	10.0 - 10.0	0 / 3	--	--	50.0	-- / --	0.20	NO	HQ less than one, not detected
Cobalt	5.00 - 5.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Copper	5.00 - 5.00	0 / 3	--	--	3.10	-- / --	1.61	YES	(2) Not detected, HQ above one
Iron	-- - --	3 / 3	752	IR69-SW03-10A	1,000	0 / 3	0.75	NO	HQ less than one, detected
Lead	-- - --	3 / 3	2.90	IR69-SW02-10A	2.50	2 / 3	1.16	YES	(1) HQ above one, detected
Magnesium [3]	5,000 - 5,000	2 / 3	2,150	IR69-SW01-10A	NSV	-- / --	NSV	NO	Macronutrient
Manganese	-- - --	3 / 3	27.5	IR69-SW03-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Mercury	0.20 - 0.20	0 / 3	--	--	0.77	-- / --	0.26	NO	HQ less than one, not detected
Nickel	5.00 - 5.00	0 / 3	--	--	8.20	-- / --	0.61	NO	HQ less than one, not detected
Potassium [3]	-- - --	3 / 3	2,080	IR69-SW02-10A	NSV	-- / --	NSV	NO	Macronutrient
Selenium	5.00 - 5.00	2 / 3	6.20	IR69-SW02-10A	5.00	2 / 3	1.24	YES	(1) HQ above one, detected
Silver	5.00 - 5.00	0 / 3	--	--	0.012	-- / --	416.7	YES	(2) Not detected, HQ above one

TABLE H-5

Site 69 Surface Water Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	Step 2 COPC?	Rationale[2]
Sodium [3]	-- - --	3 / 3	56,800	IR69-SW02-10A	NSV	-- / --	NSV	NO	Macronutrient
Thallium	10.0 - 10.0	1 / 3	6.90	IR69-SW02-10A	4.00	1 / 3	1.73	YES	(1) HQ above one, detected
Vanadium	20.0 - 20.0	1 / 3	0.71	IR69-SW03-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Zinc	20.0 - 20.0	1 / 3	104	IR69-SW03-10A	81.0	1 / 3	1.28	YES	(1) HQ above one, detected
Dissolved Metals (UG/L)									
Aluminum, Dissolved	200 - 200	2 / 3	329	IR69-SW03-10A	87.0	2 / 3	3.78	YES	(1) HQ above one, detected
Antimony, Dissolved	10.0 - 10.0	0 / 3	--	--	160	-- / --	NSV	YES	(4) Not detected, no screening value
Arsenic, Dissolved	10.0 - 10.0	0 / 3	--	--	36.0	-- / --	0.28	NO	HQ less than one, not detected
Barium, Dissolved	200 - 200	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Beryllium, Dissolved	5.00 - 5.00	0 / 3	--	--	0.53	-- / --	9.43	YES	(2) Not detected, HQ above one
Cadmium, Dissolved	5.00 - 5.00	0 / 3	--	--	0.25	-- / --	20.00	YES	(2) Not detected, HQ above one
Calcium, Dissolved [3]	5,000 - 5,000	2 / 3	3,390	IR69-SW01-10A	NSV	-- / --	NSV	NO	Macronutrient
Chromium, Dissolved	10.0 - 10.0	0 / 3	--	--	50.0	-- / --	0.20	NO	HQ less than one, not detected
Cobalt, Dissolved	5.00 - 5.00	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Copper, Dissolved	5.00 - 5.00	0 / 3	--	--	3.10	-- / --	1.61	YES	(2) Not detected, HQ above one
Iron, Dissolved	-- - --	3 / 3	408	IR69-SW03-10A	1,000	0 / 3	0.41	NO	HQ less than one, detected
Lead, Dissolved	3.00 - 3.00	0 / 3	--	--	2.50	-- / --	1.20	YES	(2) Not detected, HQ above one
Magnesium, Dissolved [3]	-- - --	3 / 3	5,190	IR69-SW02-10A	NSV	-- / --	NSV	NO	Macronutrient
Manganese, Dissolved	-- - --	3 / 3	29.4	IR69-SW03-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Mercury, Dissolved	0.20 - 0.20	0 / 3	--	--	0.77	-- / --	0.26	NO	HQ less than one, not detected
Nickel, Dissolved	5.00 - 5.00	0 / 3	--	--	8.20	-- / --	0.61	NO	HQ less than one, not detected
Potassium, Dissolved [3]	5,000 - 5,000	1 / 3	2,840	IR69-SW02-10A	NSV	-- / --	NSV	NO	Macronutrient
Selenium, Dissolved	5.00 - 5.00	0 / 3	--	--	5.00	-- / --	1.00	NO	HQ less than one, not detected
Silver, Dissolved	5.00 - 5.00	1 / 3	1.00	IR69-SW01-10A	0.012	1 / 3	83.33	YES	(1) HQ above one, detected
Sodium, Dissolved [3]	-- - --	3 / 3	65,800	IR69-SW02-10A	NSV	-- / --	NSV	NO	Macronutrient
Thallium, Dissolved	10.0 - 10.0	0 / 3	--	--	4.00	-- / --	2.50	YES	(2) Not detected, HQ above one
Vanadium, Dissolved	20.0 - 20.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Zinc, Dissolved	20.0 - 20.0	1 / 3	113	IR69-SW03-10A	81.0	1 / 3	1.40	YES	(1) HQ above one, detected

NOTES

The categorized analytes were retained for quantitative refinement in the Step 3 table.

[1] - Count of detected samples exceeding or equaling Screening Value

[2] - Categories are assigned to those analytes retained as Step 2 COPCs and are as follows:

Category 1 – Contaminants with a maximum detection exceeding the ESV

Category 2– Undetected contaminants with a laboratory sample quantitation limit (SQL) exceeding the ESV

Category 3 – Detected contaminants with no ESV

Category 4 – Undetected contaminants with no ESV

[3] - Macronutrient - Not considered to be a COPC

µg/L - Micrograms per liter

COPC - Contaminant of potential concern

HQ - Hazard quotient

NSV - No Screening Value

Generated By: Kelly Taylor/DFW

Checked By: Sara Kent/ATL

TABLE H-6

Site 69 Groundwater Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	2 x Mean Background	Maximum Exceeds 2 x Mean Background?	Step 2 COPC?	Rationale[2]
Volatile Organic Compounds (UG/L)											
1,1,1-Trichloroethane	0.50 - 3.10	0 / 15	--	--	312	-- / --	0.0099	--	--	NO	HQ less than one, not detected
1,1,2,2-Tetrachloroethane	0.50 - 0.50	4 / 15	9.80	IR69-GW02-10A	90.2	0 / 15	0.11	--	--	NO	HQ less than one, detected
1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	0.50 - 3.10	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
1,1,2-Trichloroethane	0.50 - 0.50	3 / 15	7.80	IR69-GW02-10A	NSV	-- / --	NSV	--	--	YES	(3) Detected, no screening value
1,1-Dichloroethane	0.50 - 0.50	1 / 15	0.043	IR69-GW03-10A	NSV	-- / --	NSV	--	--	YES	(3) Detected, no screening value
1,1-Dichloroethene	0.50 - 0.50	2 / 15	0.53	IR69-GW03-10A	2,240	0 / 15	2.37E-04	--	--	NO	HQ less than one, detected
1,2,4-Trichlorobenzene	0.50 - 3.10	1 / 15	0.13	IR69-GW15-10A	4.50	0 / 15	0.029	--	--	NO	HQ less than one, detected
1,2-Dibromo-3-chloropropane	0.50 - 3.10	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
1,2-Dibromoethane	0.50 - 3.10	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
1,2-Dichlorobenzene	0.50 - 3.10	0 / 15	--	--	19.7	-- / --	0.16	--	--	NO	HQ less than one, not detected
1,2-Dichloroethane	0.50 - 0.50	4 / 15	13.0	IR69-GW15-10A	1,130	0 / 15	0.012	--	--	NO	HQ less than one, detected
1,2-Dichloropropane	0.50 - 3.10	0 / 15	--	--	2,400	-- / --	0.0013	--	--	NO	HQ less than one, not detected
1,3-Dichlorobenzene	0.50 - 3.10	2 / 15	0.55	IR69-GW15-10A	28.5	0 / 15	0.019	--	--	NO	HQ less than one, detected
1,4-Dichlorobenzene	0.50 - 3.10	1 / 15	3.30	IR69-GW15-10A	19.9	0 / 15	0.17	--	--	NO	HQ less than one, detected
2-Butanone	2.50 - 16.0	0 / 4	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2-Hexanone	2.50 - 16.0	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
4-Methyl-2-pentanone	2.50 - 16.0	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Acetone	2.50 - 16.0	0 / 5	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Benzene	0.50 - 0.50	1 / 15	0.58	IR69-GW03-10A	109	0 / 15	0.0053	--	--	NO	HQ less than one, detected
Bromodichloromethane	0.50 - 3.10	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Bromoform	0.50 - 3.10	0 / 15	--	--	640	-- / --	0.0048	--	--	NO	HQ less than one, not detected
Bromomethane	0.50 - 3.10	0 / 15	--	--	120	-- / --	0.026	--	--	NO	HQ less than one, not detected
Carbon disulfide	0.50 - 3.10	3 / 15	0.14	IR69-GW15-10A	NSV	-- / --	NSV	--	--	YES	(3) Detected, no screening value
Carbon tetrachloride	0.50 - 3.10	0 / 15	--	--	1,500	-- / --	0.0021	--	--	NO	HQ less than one, not detected
Chlorobenzene	0.50 - 0.50	2 / 15	7.50	IR69-GW03-10A	105	0 / 15	0.071	--	--	NO	HQ less than one, detected
Chloroethane	0.50 - 3.10	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Chloroform	0.50 - 3.10	3 / 15	1.50	IR69-GW06-10A	815	0 / 15	0.0018	--	--	NO	HQ less than one, detected
Chloromethane	0.50 - 3.10	0 / 15	--	--	2,700	-- / --	0.0011	--	--	NO	HQ less than one, not detected
cis-1,2-Dichloroethene	0.50 - 0.50	6 / 15	180	IR69-GW03-10A	NSV	-- / --	NSV	--	--	YES	(3) Detected, no screening value
cis-1,3-Dichloropropene	0.50 - 3.10	0 / 15	--	--	7.90	-- / --	0.39	--	--	NO	HQ less than one, not detected
Cyclohexane	0.50 - 3.10	1 / 15	0.27	IR69-GW10-10A	NSV	-- / --	NSV	--	--	YES	(3) Detected, no screening value
Dibromochloromethane	0.50 - 3.10	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Dichlorodifluoromethane (Freon-12)	0.50 - 3.10	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Ethylbenzene	0.50 - 3.10	0 / 15	--	--	4.30	-- / --	0.72	--	--	NO	HQ less than one, not detected
Isopropylbenzene	0.50 - 3.10	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
m- and p-Xylene	1.00 - 6.30	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Methyl acetate	0.50 - 3.10	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Methylcyclohexane	0.50 - 3.10	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Methylene chloride	0.50 - 3.10	0 / 15	--	--	2,560	-- / --	0.0012	--	--	NO	HQ less than one, not detected
Methyl-tert-butyl ether (MTBE)	0.50 - 3.10	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
o-Xylene	0.50 - 3.10	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Styrene	0.50 - 3.10	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Tetrachloroethene	0.50 - 3.10	1 / 15	0.19	IR69-GW02-10A	45.0	0 / 15	0.0042	--	--	NO	HQ less than one, detected
Toluene	0.50 - 0.50	2 / 15	8.30	IR69-GW04-10A	37.0	0 / 15	0.22	--	--	NO	HQ less than one, detected
trans-1,2-Dichloroethene	0.50 - 0.50	6 / 15	23.0	IR69-GW02-10A	NSV	-- / --	NSV	--	--	YES	(3) Detected, no screening value
trans-1,3-Dichloropropene	0.50 - 3.10	0 / 15	--	--	7.90	-- / --	0.39	--	--	NO	HQ less than one, not detected
Trichloroethene	0.50 - 0.50	6 / 15	3.50	IR69-GW03-10A	NSV	-- / --	NSV	--	--	YES	(3) Detected, no screening value
Trichlorofluoromethane(Freon-11)	0.50 - 3.10	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value

TABLE H-6

Site 69 Groundwater Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	2 x Mean Background	Maximum Exceeds 2 x Mean Background?	Step 2 COPC?	Rationale[2]
Vinyl chloride	0.50 - 0.50	4 / 15	20.0	IR69-GW02-10A	NSV	-- / --	NSV	--	--	YES	(3) Detected, no screening value
Xylene, total	0.50 - 3.10	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Semivolatile Organic Compounds (UG/L)											
1,1-Biphenyl	5.00 - 5.60	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2,2'-Oxybis(1-chloropropane)	5.00 - 5.60	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2,4,5-Trichlorophenol	10.0 - 11.0	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2,4,6-Trichlorophenol	10.0 - 11.0	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2,4-Dichlorophenol	10.0 - 11.0	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2,4-Dimethylphenol	10.0 - 11.0	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2,4-Dinitrophenol	10.0 - 11.0	0 / 15	--	--	48.5	-- / --	0.23	--	--	NO	HQ less than one, not detected
2,4-Dinitrotoluene	5.00 - 5.60	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2,6-Dinitrotoluene	5.00 - 5.60	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2-Chloronaphthalene	5.00 - 5.60	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2-Chlorophenol	10.0 - 11.0	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2-Methylnaphthalene	0.20 - 0.22	3 / 15	0.13	IR69-GW03-10A	NSV	-- / --	NSV	--	--	YES	(3) Detected, no screening value
2-Methylphenol	10.0 - 11.0	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2-Nitroaniline	10.0 - 11.0	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
2-Nitrophenol	10.0 - 11.0	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
3,3'-Dichlorobenzidine	5.00 - 5.60	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
3-Nitroaniline	10.0 - 11.0	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
4,6-Dinitro-2-methylphenol	10.0 - 11.0	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
4-Bromophenyl-phenylether	5.00 - 5.60	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
4-Chloro-3-methylphenol	10.0 - 11.0	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
4-Chloroaniline	10.0 - 11.0	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
4-Chlorophenyl-phenylether	5.00 - 5.60	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
4-Methylphenol	10.0 - 11.0	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
4-Nitroaniline	10.0 - 11.0	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
4-Nitrophenol	10.0 - 11.0	0 / 15	--	--	71.7	-- / --	0.15	--	--	NO	HQ less than one, not detected
Acenaphthene	0.20 - 0.22	0 / 15	--	--	9.70	-- / --	0.023	--	--	NO	HQ less than one, not detected
Acenaphthylene	0.20 - 0.22	1 / 15	0.010	IR69-GW03-10A	NSV	-- / --	NSV	--	--	YES	(3) Detected, no screening value
Acetophenone	5.00 - 5.60	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Anthracene	0.20 - 0.22	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Atrazine	5.00 - 5.60	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Benzaldehyde	5.00 - 5.60	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Benzo(a)anthracene	0.20 - 0.22	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Benzo(a)pyrene	0.20 - 0.22	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Benzo(b)fluoranthene	0.20 - 0.22	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Benzo(g,h,i)perylene	0.20 - 0.22	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Benzo(k)fluoranthene	0.20 - 0.22	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
bis(2-Chloroethoxy)methane	5.00 - 5.60	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
bis(2-Chloroethyl)ether	5.00 - 5.60	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
bis(2-Ethylhexyl)phthalate	5.00 - 5.60	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Butylbenzylphthalate	5.00 - 5.60	0 / 15	--	--	29.4	-- / --	0.19	--	--	NO	HQ less than one, not detected
Caprolactam	5.00 - 5.60	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Carbazole	5.00 - 5.60	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Chrysene	0.20 - 0.22	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Dibenz(a,h)anthracene	0.20 - 0.22	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Dibenzofuran	5.00 - 5.60	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Diethylphthalate	5.00 - 5.60	0 / 15	--	--	759	-- / --	0.0074	--	--	NO	HQ less than one, not detected

TABLE H-6

Site 69 Groundwater Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	2 x Mean Background	Maximum Exceeds 2 x Mean Background?	Step 2 COPC?	Rationale[2]
Dimethoate	1.90 - 2.00	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Dimethyl phthalate	5.00 - 5.60	0 / 15	--	--	580	-- / --	0.0097	--	--	NO	HQ less than one, not detected
Di-n-butylphthalate	5.00 - 5.60	0 / 15	--	--	3.40	-- / --	1.65	--	--	YES	(2) Not detected, HQ above one
Di-n-octylphthalate	5.00 - 5.60	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Famphur	1.90 - 2.00	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Fluoranthene	0.20 - 0.22	4 / 15	0.013	IR69-GW01-10A	1.60	0 / 15	0.0081	--	--	NO	HQ less than one, detected
Fluorene	0.20 - 0.22	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Hexachlorobenzene	5.00 - 5.60	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Hexachlorobutadiene	5.00 - 5.60	0 / 15	--	--	0.32	-- / --	17.5	--	--	YES	(2) Not detected, HQ above one
Hexachlorocyclopentadiene	5.00 - 5.60	0 / 15	--	--	0.070	-- / --	80.0	--	--	YES	(2) Not detected, HQ above one
Hexachloroethane	5.00 - 5.60	0 / 15	--	--	9.40	-- / --	0.60	--	--	NO	HQ less than one, not detected
Indeno(1,2,3-cd)pyrene	0.20 - 0.22	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Isophorone	5.00 - 5.60	0 / 15	--	--	129	-- / --	0.043	--	--	NO	HQ less than one, not detected
Naphthalene	0.20 - 0.22	0 / 15	--	--	23.5	-- / --	0.0094	--	--	NO	HQ less than one, not detected
n-Nitroso-di-n-propylamine	5.00 - 5.60	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
n-Nitrosodiphenylamine	5.00 - 5.60	0 / 15	--	--	33,000	-- / --	1.70E-04	--	--	NO	HQ less than one, not detected
Nitrobenzene	5.00 - 5.60	0 / 15	--	--	66.8	-- / --	0.084	--	--	NO	HQ less than one, not detected
Pentachlorophenol	10.0 - 11.0	0 / 15	--	--	7.90	-- / --	1.39	--	--	YES	(2) Not detected, HQ above one
Phenanthrene	0.20 - 0.22	1 / 15	0.037	IR69-GW01-10A	NSV	-- / --	NSV	--	--	YES	(3) Detected, no screening value
Phenol	10.0 - 11.0	0 / 15	--	--	58.0	-- / --	0.19	--	--	NO	HQ less than one, not detected
Phorate	0.94 - 1.00	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Pyrene	0.20 - 0.22	4 / 15	0.018	IR69-GW01-10A	NSV	-- / --	NSV	--	--	YES	(3) Detected, no screening value
Pesticide/Polychlorinated Biphenyls (UG/L)											
4,4'-DDD	0.10 - 0.11	0 / 15	--	--	0.025	-- / --	4.40	--	--	YES	(2) Not detected, HQ above one
4,4'-DDE	0.10 - 0.11	0 / 15	--	--	0.14	-- / --	0.79	--	--	NO	HQ less than one, not detected
4,4'-DDT	0.10 - 0.11	1 / 15	0.0052	IR69-GW03-10A	0.0010	1 / 15	5.20	--	--	YES	(1) HQ above one, detected
Aldrin	0.050 - 0.056	0 / 15	--	--	0.13	-- / --	0.43	--	--	NO	HQ less than one, not detected
alpha-BHC	0.050 - 0.056	1 / 15	0.077	IR69-GW03-10A	1,400	0 / 15	5.50E-05	--	--	NO	HQ less than one, detected
alpha-Chlordane	0.050 - 0.056	0 / 15	--	--	0.0040	-- / --	14.0	--	--	YES	(2) Not detected, HQ above one
Aroclor-1016	0.93 - 1.00	0 / 15	--	--	0.030	-- / --	33.3	--	--	YES	(2) Not detected, HQ above one
Aroclor-1221	1.30 - 1.40	0 / 15	--	--	0.030	-- / --	46.7	--	--	YES	(2) Not detected, HQ above one
Aroclor-1232	0.93 - 1.00	0 / 15	--	--	0.030	-- / --	33.3	--	--	YES	(2) Not detected, HQ above one
Aroclor-1242	0.63 - 0.69	0 / 15	--	--	0.030	-- / --	23.0	--	--	YES	(2) Not detected, HQ above one
Aroclor-1248	0.63 - 0.69	0 / 15	--	--	0.030	-- / --	23.0	--	--	YES	(2) Not detected, HQ above one
Aroclor-1254	0.63 - 0.69	0 / 15	--	--	0.030	-- / --	23.0	--	--	YES	(2) Not detected, HQ above one
Aroclor-1260	0.93 - 1.00	1 / 15	1.20	IR69-GW15-10A	0.030	1 / 15	40.0	--	--	YES	(1) HQ above one, detected
Azinphos methyl	0.94 - 1.00	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
beta-BHC	0.050 - 0.056	2 / 15	0.19	IR69-GW03-10A	NSV	-- / --	NSV	--	--	YES	(3) Detected, no screening value
Bolstar	0.94 - 1.00	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Chlorpyrifos	0.94 - 1.00	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Coumaphos	0.94 - 1.00	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
delta-BHC	0.050 - 0.056	2 / 15	1.50	IR69-GW03-10A	NSV	-- / --	NSV	--	--	YES	(3) Detected, no screening value
Demeton-O	2.40 - 2.50	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Demeton-S	2.40 - 2.50	0 / 12	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Diazinon	0.94 - 1.00	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Dichlorvos	1.90 - 2.00	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Dieldrin	0.10 - 0.11	0 / 15	--	--	0.0019	-- / --	57.9	--	--	YES	(2) Not detected, HQ above one
Disulfoton	1.90 - 2.00	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Endosulfan I	0.050 - 0.056	0 / 15	--	--	0.0087	-- / --	6.44	--	--	YES	(2) Not detected, HQ above one

TABLE H-6

Site 69 Groundwater Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	2 x Mean Background	Maximum Exceeds 2 x Mean Background?	Step 2 COPC?	Rationale[2]
Endosulfan II	0.10 - 0.11	0 / 15	--	--	0.0087	-- / --	12.6	--	--	YES	(2) Not detected, HQ above one
Endosulfan sulfate	0.10 - 0.11	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Endrin	0.10 - 0.11	1 / 15	0.029	IR69-GW15-10A	0.0023	1 / 15	12.6	--	--	YES	(1) HQ above one, detected
Endrin aldehyde	0.10 - 0.11	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Endrin ketone	0.10 - 0.11	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Ethoprop	0.47 - 0.50	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Fensulfothion	4.70 - 5.00	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Ethyl p-nitrophenyl phenylphosphorothioate	0.94 - 1.00	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Fenthion	0.94 - 1.00	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
gamma-BHC (Lindane)	0.050 - 0.056	0 / 15	--	--	0.016	-- / --	3.50	--	--	YES	(2) Not detected, HQ above one
gamma-Chlordane	0.050 - 0.056	2 / 15	0.060	IR69-GW15-10A	0.0040	2 / 15	15.0	--	--	YES	(1) HQ above one, detected
Heptachlor	0.050 - 0.056	0 / 15	--	--	0.0036	-- / --	15.6	--	--	YES	(2) Not detected, HQ above one
Heptachlor epoxide	0.050 - 0.056	1 / 15	0.079	IR69-GW15-10A	0.0036	1 / 15	21.9	--	--	YES	(1) HQ above one, detected
Malathion	0.94 - 1.00	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Merphos	1.40 - 1.50	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Methoxychlor	0.50 - 0.56	1 / 15	0.32	IR69-GW04-10A	0.030	1 / 15	10.7	--	--	YES	(1) HQ above one, detected
Methyl parathion	0.47 - 0.50	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Mevinphos	1.90 - 2.00	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Monocrotophos	9.40 - 10.0	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Naled	4.70 - 5.00	0 / 14	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Parathion	0.94 - 1.00	0 / 15	--	--	0.18	-- / --	5.62	--	--	YES	(2) Not detected, HQ above one
Ronnel	0.94 - 1.00	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Sulfotepp	0.47 - 0.50	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Tetrachlorvinphos	0.94 - 1.00	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Thionazin	0.94 - 1.00	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Tokuthion (Prothiophos)	0.94 - 1.00	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Toxaphene	2.50 - 2.80	0 / 15	--	--	0.0020	-- / --	1,400	--	--	YES	(2) Not detected, HQ above one
Trichloronate	0.94 - 1.00	0 / 15	--	--	NSV	-- / --	NSV	--	--	YES	(4) Not detected, no screening value
Inorganics (UG/L)											
Aluminum	200 - 200	13 / 15	1,770	IR69-GW09-10A	NSV	-- / --	NSV	1886	No	NO	Consistent with background
Antimony	10.0 - 10.0	0 / 15	--	--	NSV	-- / --	NSV	3.3	Yes	YES	(4) Not detected, no screening value
Arsenic	10.0 - 10.0	1 / 15	2.90	IR69-GW15-10A	36.0	0 / 15	0.081	5.77	No	NO	Consistent with background
Barium	-- - --	15 / 15	97.2	IR69-GW15-10A	NSV	-- / --	NSV	86.2	Yes	NO	Within background range
Beryllium	5.00 - 5.00	0 / 15	--	--	NSV	-- / --	NSV	0.3	Yes	YES	(4) Not detected, no screening value
Cadmium	5.00 - 5.00	0 / 15	--	--	8.80	-- / --	0.57	0.36	Yes	NO	HQ less than one, not detected
Calcium [3]	5,000 - 5,000	12 / 15	65,200	IR69-GW15-10A	NSV	-- / --	NSV	69078	No	NO	Consistent with background
Chromium	10.0 - 10.0	8 / 15	3.10	IR69-GW09-10A	50.0	0 / 15	0.062	3.1	No	NO	Consistent with background
Cobalt	5.00 - 5.00	4 / 15	2.80	IR69-GW04-10A	NSV	-- / --	NSV	3.4	No	NO	Consistent with background
Copper	5.00 - 5.00	1 / 15	2.30	IR69-GW01-10A	3.10	0 / 15	0.74	2.76	No	NO	Consistent with background
Iron	100 - 100	14 / 15	29,100	IR69-GW15-10A	NSV	-- / --	NSV	5999	Yes	NO	Within background range
Lead	3.00 - 3.00	5 / 15	3.10	IR69-GW12-10A	8.10	0 / 15	0.38	2.80	Yes	NO	HQ less than one, detected
Magnesium [3]	5,000 - 5,000	0 / 15	--	--	NSV	-- / --	NSV	6363	Yes	NO	Macronutrient
Manganese	-- - --	15 / 15	800	IR69-GW15-10A	NSV	-- / --	NSV	213.5	Yes	NO	Consistent with background based on filtered samples
Mercury	0.20 - 0.20	0 / 15	--	--	0.94	-- / --	0.21	0.10	Yes	NO	HQ less than one, not detected
Nickel	5.00 - 5.00	3 / 15	4.20	IR69-GW04-10A	8.20	0 / 15	0.51	7.97	No	NO	Consistent with background
Potassium [3]	5,000 - 5,000	11 / 15	1,210	IR69-GW07-10A	NSV	-- / --	NSV	3277	No	NO	Macronutrient
Selenium	5.00 - 5.00	2 / 15	3.90	IR69-GW09-10A	71.0	0 / 15	0.055	3.1	Yes	NO	HQ less than one, detected
Silver	5.00 - 5.00	0 / 15	--	--	0.23	-- / --	21.7	0.8	Yes	YES	(2) Not detected, HQ above one
Sodium [3]	-- - --	15 / 15	29,800	IR69-GW01-10A	NSV	-- / --	NSV	22508	Yes	NO	Macronutrient

TABLE H-6

Site 69 Groundwater Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	2 x Mean Background	Maximum Exceeds 2 x Mean Background?	Step 2 COPC?	Rationale[2]
Thallium	10.0 - 10.0	0 / 15	--	--	21.3	-- / --	0.47	3.78	Yes	NO	HQ less than one, not detected
Vanadium	20.0 - 20.0	8 / 15	26.0	IR69-GW02-10A	NSV	-- / --	NSV	4.72	Yes	YES	(3) Detected, no screening value
Zinc	20.0 - 20.0	10 / 15	6,840	IR69-GW04-10A	81.0	2 / 15	84.4	42.1	Yes	NO	HQ less than one based on filtered samples
Dissolved Metals (UG/L)											
Aluminum, Dissolved	200 - 200	3 / 4	773	IR69-GW11-10A	NSV	-- / --	NSV	1886	No	NO	Consistent with background
Antimony, Dissolved	10.0 - 10.0	0 / 4	--	--	NSV	-- / --	NSV	3.3	Yes	YES	(4) Not detected, no screening value
Arsenic, Dissolved	10.0 - 10.0	0 / 4	--	--	36.0	-- / --	0.28	5.77	Yes	NO	HQ less than one, not detected
Barium, Dissolved	-- - --	4 / 4	34.1	IR69-GW09-10A	NSV	-- / --	NSV	86.2	No	NO	Consistent with background
Beryllium, Dissolved	5.00 - 5.00	0 / 4	--	--	NSV	-- / --	NSV	0.3	Yes	YES	(4) Not detected, no screening value
Cadmium, Dissolved	5.00 - 5.00	0 / 4	--	--	8.80	-- / --	0.57	0.36	Yes	NO	HQ less than one, not detected
Calcium, Dissolved [3]	5,000 - 5,000	1 / 4	1,660	IR69-GW12-10A	NSV	-- / --	NSV	69078	No	NO	Consistent with background
Chromium, Dissolved	10.0 - 10.0	1 / 4	1.20	IR69-GW11-10A	50.0	0 / 4	0.024	3.1	No	NO	Consistent with background
Cobalt, Dissolved	5.00 - 5.00	0 / 4	--	--	NSV	-- / --	NSV	3.4	Yes	YES	(4) Not detected, no screening value
Copper, Dissolved	5.00 - 5.00	0 / 4	--	--	3.10	-- / --	1.61	2.76	Yes	YES	(2) Not detected, HQ above one
Iron, Dissolved	100 - 100	3 / 4	4,850	IR69-GW12-10A	NSV	-- / --	NSV	5999	No	NO	Consistent with background
Lead, Dissolved	3.00 - 3.00	1 / 4	3.10	IR69-GW11-10A	8.10	0 / 4	0.38	2.80	Yes	NO	HQ less than one, detected
Magnesium, Dissolved [3]	5,000 - 5,000	0 / 4	--	--	NSV	-- / --	NSV	6363	Yes	NO	Macronutrient
Manganese, Dissolved	-- - --	4 / 4	33.7	IR69-GW09-10A	NSV	-- / --	NSV	213.5	No	NO	Consistent with background
Mercury, Dissolved	0.20 - 0.20	0 / 4	--	--	0.94	-- / --	0.21	0.10	Yes	NO	HQ less than one, not detected
Nickel, Dissolved	5.00 - 5.00	1 / 4	1.20	IR69-GW09-10A	8.20	0 / 4	0.15	7.97	No	NO	Consistent with background
Potassium, Dissolved [3]	-- - --	4 / 4	552	IR69-GW09-10A	NSV	-- / --	NSV	3277	No	NO	Consistent with background
Selenium, Dissolved	5.00 - 5.00	0 / 4	--	--	71.0	-- / --	0.070	3.1	Yes	NO	HQ less than one, not detected
Silver, Dissolved	5.00 - 5.00	0 / 4	--	--	0.23	-- / --	21.7	0.8	Yes	YES	(2) Not detected, HQ above one
Sodium, Dissolved [3]	-- - --	4 / 4	13,400	IR69-GW09-10A	NSV	-- / --	NSV	22508	No	NO	Consistent with background
Thallium, Dissolved	10.0 - 10.0	0 / 4	--	--	21.3	-- / --	0.47	3.78	Yes	NO	HQ less than one, not detected
Vanadium, Dissolved	20.0 - 20.0	0 / 4	--	--	NSV	-- / --	NSV	4.72	Yes	YES	(4) Not detected, no screening value
Zinc, Dissolved	20.0 - 20.0	1 / 4	80.0	IR69-GW12-10A	81.0	0 / 4	0.99	42.1	Yes	NO	HQ less than one, detected

NOTES

The categorized analytes were retained for quantitative refinement in the Step 3 table.

[1] - Count of detected samples exceeding or equaling Screening Value

[2] - Categories are assigned to those analytes retained as Step 2 COPCs and are as follows:

Category 1 – Contaminants with a maximum detection exceeding the ESV

Category 2– Undetected contaminants with a laboratory sample quantitation limit (SQL) exceeding the ESV

Category 3 – Detected contaminants with no ESV

Category 4 – Undetected contaminants with no ESV

[3] - Macronutrient - Not considered to be a COPC

µg/L - Micrograms per liter

COPC - Contaminant of potential concern

HQ - Hazard quotient

NSV - No Screening Value

Generated By: Kelly Taylor/DFW

Checked By: Sara Kent/ATL

TABLE H-7

Site 69 Sediment Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	Step 2 COPC?	Rationale[2]
Volatile Organic Compounds (UG/KG)									
1,1,1-Trichloroethane	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
1,1,2,2-Tetrachloroethane	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
1,1,2-Trichloroethane	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
1,1-Dichloroethane	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
1,1-Dichloroethene	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
1,2,4-Trichlorobenzene	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
1,2-Dibromo-3-chloropropane	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
1,2-Dibromoethane	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
1,2-Dichlorobenzene	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
1,2-Dichloroethane	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
1,2-Dichloropropane	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
1,3-Dichlorobenzene	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
1,4-Dichlorobenzene	4.80 - 23.0	1 / 3	1.10	IR69-SD02-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
2-Butanone	12.0 - 58.0	1 / 3	66.0	IR69-SD02-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
2-Hexanone	12.0 - 58.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
4-Methyl-2-pentanone	12.0 - 58.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Acetone	-- - --	3 / 3	760	IR69-SD02-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Benzene	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Bromodichloromethane	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Bromoform	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Bromomethane	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Carbon disulfide	4.80 - 4.80	2 / 3	17.0	IR69-SD01D-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Carbon tetrachloride	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Chlorobenzene	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Chloroethane	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Chloroform	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Chloromethane	4.80 - 20.0	1 / 3	2.50	IR69-SD01D-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
cis-1,2-Dichloroethene	4.80 - 20.0	1 / 3	51.0	IR69-SD01D-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
cis-1,3-Dichloropropene	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Cyclohexane	4.80 - 20.0	1 / 3	1.80	IR69-SD01D-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Dibromochloromethane	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Dichlorodifluoromethane (Freon-12)	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Ethylbenzene	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Isopropylbenzene	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
m- and p-Xylene	9.60 - 40.0	1 / 3	0.77	IR69-SD01D-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Methyl acetate	-- - --	3 / 3	570	IR69-SD02-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Methylcyclohexane	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Methylene chloride	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Methyl-tert-butyl ether (MTBE)	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
o-Xylene	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Styrene	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Tetrachloroethene	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Toluene	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
trans-1,2-Dichloroethene	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
trans-1,3-Dichloropropene	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Trichloroethene	4.80 - 20.0	1 / 3	2.80	IR69-SD01D-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Trichlorofluoromethane(Freon-11)	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value

TABLE H-7

Site 69 Sediment Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	Step 2 COPC?	Rationale[2]
Vinyl chloride	4.80 - 20.0	1 / 3	6.00	IR69-SD01D-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Xylene, total	4.80 - 23.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Semivolatile Organic Compounds (UG/KG)									
1,1-Biphenyl	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
2,2'-Oxybis(1-chloropropane)	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
2,4,5-Trichlorophenol	440 - 1,400	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
2,4,6-Trichlorophenol	440 - 1,400	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
2,4-Dichlorophenol	440 - 1,400	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
2,4-Dimethylphenol	440 - 1,400	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
2,4-Dinitrophenol	440 - 1,400	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
2,4-Dinitrotoluene	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
2,6-Dinitrotoluene	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
2-Chloronaphthalene	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
2-Chlorophenol	440 - 1,400	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
2-Methylnaphthalene	-- - --	3 / 3	10.0	IR69-SD01D-10A	20.2	0 / 3	0.49	NO	HQ less than one, detected
2-Methylphenol	440 - 1,400	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
2-Nitroaniline	440 - 1,400	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
2-Nitrophenol	440 - 1,400	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
3,3'-Dichlorobenzidine	230 - 740	0 / 2	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
3-Nitroaniline	440 - 1,400	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
4,6-Dinitro-2-methylphenol	440 - 1,400	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
4-Bromophenyl-phenylether	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
4-Chloro-3-methylphenol	440 - 1,400	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
4-Chloroaniline	440 - 1,400	0 / 2	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
4-Chlorophenyl-phenylether	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
4-Methylphenol	440 - 1,400	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
4-Nitroaniline	440 - 1,400	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
4-Nitrophenol	440 - 1,400	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Acenaphthene	11.0 - 35.0	1 / 3	4.30	IR69-SD01D-10A	6.71	0 / 3	0.64	NO	HQ less than one, detected
Acenaphthylene	11.0 - 36.0	0 / 3	--	--	5.87	-- / --	6.13	YES	(2) Not detected, HQ above one
Acetophenone	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Anthracene	11.0 - 11.0	2 / 3	14.0	IR69-SD01D-10A	46.9	0 / 3	0.30	NO	HQ less than one, detected
Atrazine	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Benzaldehyde	230 - 230	2 / 3	400	IR69-SD02-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Benzo(a)anthracene	11.0 - 11.0	2 / 3	17.0	IR69-SD01D-10A	74.8	0 / 3	0.23	NO	HQ less than one, detected
Benzo(a)pyrene	-- - --	3 / 3	37.0	IR69-SD01D-10A	88.8	0 / 3	0.42	NO	HQ less than one, detected
Benzo(b)fluoranthene	11.0 - 11.0	2 / 3	24.0	IR69-SD01D-10A	655	0 / 3	0.037	NO	HQ less than one, detected
Benzo(g,h,i)perylene	11.0 - 36.0	1 / 3	5.90	IR69-SD02-10A	655	0 / 3	0.0090	NO	HQ less than one, detected
Benzo(k)fluoranthene	11.0 - 11.0	2 / 3	17.0	IR69-SD01D-10A	655	0 / 3	0.026	NO	HQ less than one, detected
bis(2-Chloroethoxy)methane	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
bis(2-Chloroethyl)ether	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
bis(2-Ethylhexyl)phthalate	230 - 710	1 / 3	400	IR69-SD01D-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Butylbenzylphthalate	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Caprolactam	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Carbazole	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Chrysene	11.0 - 11.0	2 / 3	18.0	IR69-SD01D-10A	108	0 / 3	0.17	NO	HQ less than one, detected
Dibenz(a,h)anthracene	11.0 - 36.0	0 / 3	--	--	6.22	-- / --	5.79	YES	(2) Not detected, HQ above one
Dibenzofuran	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Diethylphthalate	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value

TABLE H-7

Site 69 Sediment Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	Step 2 COPC?	Rationale[2]
Dimethoate	93.0 - 390	0 / 2	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Dimethyl phthalate	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Di-n-butylphthalate	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Di-n-octylphthalate	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Famphur	93.0 - 390	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Fluoranthene	11.0 - 11.0	2 / 3	25.0	IR69-SD01D-10A	113	0 / 3	0.22	NO	HQ less than one, detected
Fluorene	11.0 - 11.0	2 / 3	5.40	IR69-SD01D-10A	21.2	0 / 3	0.25	NO	HQ less than one, detected
Hexachlorobenzene	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Hexachlorobutadiene	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Hexachlorocyclopentadiene	230 - 740	0 / 2	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Hexachloroethane	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Indeno(1,2,3-cd)pyrene	11.0 - 36.0	1 / 3	3.10	IR69-SD02-10A	655	0 / 3	0.0047	NO	HQ less than one, detected
Isophorone	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Naphthalene	11.0 - 36.0	0 / 3	--	--	34.6	-- / --	1.04	YES	(2) Not detected, HQ above one
n-Nitroso-di-n-propylamine	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
n-Nitrosodiphenylamine	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Nitrobenzene	230 - 740	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Pentachlorophenol	440 - 1,400	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Phenanthrene	-- - --	3 / 3	21.0	IR69-SD01D-10A	86.7	0 / 3	0.24	NO	HQ less than one, detected
Phenol	440 - 1,400	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Phorate	46.0 - 190	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Pyrene	-- - --	3 / 3	22.0	IR69-SD01D-10A	153	0 / 3	0.14	NO	HQ less than one, detected
Pesticide/Polychlorinated Biphenyls (UG/KG)									
4,4'-DDD	4.40 - 4.40	2 / 3	13.0	IR69-SD01D-10A	1.22	2 / 3	10.7	YES	(1) HQ above one, detected
4,4'-DDE	-- - --	3 / 3	14.0	IR69-SD02-10A	2.07	2 / 3	6.76	YES	(1) HQ above one, detected
4,4'-DDT	-- - --	2 / 2	5.50	IR69-SD01D-10A	1.19	2 / 2	4.62	YES	(1) HQ above one, detected
Aldrin	2.30 - 35.0	1 / 3	2.30	IR69-SD01D-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
alpha-BHC	2.30 - 35.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
alpha-Chlordane	35.0 - 35.0	2 / 3	6.00	IR69-SD01D-10A	0.50	2 / 3	12.0	YES	(1) HQ above one, detected
Aroclor-1016	32.0 - 500	0 / 3	--	--	21.6	-- / --	23.1	YES	(2) Not detected, HQ above one
Aroclor-1221	45.0 - 710	0 / 3	--	--	21.6	-- / --	32.9	YES	(2) Not detected, HQ above one
Aroclor-1232	23.0 - 350	0 / 3	--	--	21.6	-- / --	16.2	YES	(2) Not detected, HQ above one
Aroclor-1242	23.0 - 350	0 / 3	--	--	21.6	-- / --	16.2	YES	(2) Not detected, HQ above one
Aroclor-1248	23.0 - 350	0 / 3	--	--	21.6	-- / --	16.2	YES	(2) Not detected, HQ above one
Aroclor-1254	23.0 - 350	0 / 3	--	--	21.6	-- / --	16.2	YES	(2) Not detected, HQ above one
Aroclor-1260	23.0 - 350	0 / 3	--	--	21.6	-- / --	16.2	YES	(2) Not detected, HQ above one
Azinphos methyl	46.0 - 190	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
beta-BHC	18.0 - 18.0	2 / 3	2.30	IR69-SD01D-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Bolstar	46.0 - 190	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Chlorpyrifos	46.0 - 190	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Coumaphos	46.0 - 190	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
delta-BHC	2.30 - 35.0	1 / 3	6.70	IR69-SD01D-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Demeton-O	120 - 490	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Demeton-S	120 - 490	0 / 2	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Diazinon	46.0 - 190	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Dichlorvos	93.0 - 390	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Dieldrin	69.0 - 69.0	2 / 3	2.70	IR69-SD01D-10A	0.020	2 / 3	135	YES	(1) HQ above one, detected
Disulfoton	93.0 - 390	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Endosulfan I	35.0 - 35.0	2 / 3	13.0	IR69-SD01D-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value

TABLE H-7

Site 69 Sediment Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	Step 2 COPC?	Rationale[2]
Endosulfan II	4.40 - 69.0	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Endosulfan sulfate	-- - --	3 / 3	170	IR69-SD02-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Endrin	14.0 - 69.0	1 / 3	0.97	IR69-SD03-10A	0.020	1 / 3	48.5	YES	(1) HQ above one, detected
Endrin aldehyde	4.40 - 4.40	2 / 3	560	IR69-SD02-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Endrin ketone	-- - --	3 / 3	130	IR69-SD02-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Ethoprop	24.0 - 100	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Fensulfothion	240 - 1,000	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Ethyl p-nitrophenyl phenylphosphorothioate	46.0 - 190	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Fenthion	46.0 - 190	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
gamma-BHC (Lindane)	7.40 - 35.0	1 / 3	2.00	IR69-SD03-10A	0.32	1 / 3	6.25	YES	(1) HQ above one, detected
gamma-Chlordane	-- - --	3 / 3	9.10	IR69-SD01D-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Heptachlor	35.0 - 35.0	2 / 3	6.00	IR69-SD01D-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Heptachlor epoxide	2.30 - 35.0	1 / 3	3.70	IR69-SD01D-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Malathion	46.0 - 190	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Merphos	70.0 - 290	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Methoxychlor	23.0 - 74.0	1 / 3	150	IR69-SD02-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Methyl parathion	24.0 - 100	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Mevinphos	93.0 - 390	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Monocrotophos	1,900 - 1,900	1 / 2	420	IR69-SD03-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Naled	240 - 1,000	0 / 2	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Parathion	46.0 - 190	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Ronnel	46.0 - 190	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Sulfotepp	24.0 - 100	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Tetrachlorvinphos	46.0 - 190	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Thionazin	46.0 - 190	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Tokuthion (Prothiophos)	46.0 - 190	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Toxaphene	110 - 1,700	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Trichloronate	46.0 - 190	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Inorganics (MG/KG)									
Aluminum	-- - --	3 / 3	8,650	IR69-SD02-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Antimony	4.10 - 4.10	2 / 3	5.30	IR69-SD02-10A	2.00	1 / 3	2.65	YES	(1) HQ above one, detected
Arsenic	1.30 - 4.10	0 / 3	--	--	7.24	-- / --	0.57	NO	HQ less than one, not detected
Barium	-- - --	3 / 3	36.5	IR69-SD01D-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Beryllium	0.64 - 0.64	2 / 3	0.67	IR69-SD02-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Cadmium	0.64 - 2.10	0 / 3	--	--	0.68	-- / --	3.11	YES	(2) Not detected, HQ above one
Calcium [3]	643 - 643	2 / 3	3,970	IR69-SD01D-10A	NSV	-- / --	NSV	NO	Macronutrient
Chromium	-- - --	3 / 3	9.00	IR69-SD02-10A	52.3	0 / 3	0.17	NO	HQ less than one, detected
Cobalt	0.64 - 2.10	1 / 3	0.69	IR69-SD01D-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Copper	-- - --	3 / 3	9.50	IR69-SD01D-10A	18.7	0 / 3	0.51	NO	HQ less than one, detected
Iron	-- - --	3 / 3	3,100	IR69-SD01D-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Lead	-- - --	3 / 3	13.7	IR69-SD02-10A	30.2	0 / 3	0.45	NO	HQ less than one, detected
Magnesium [3]	2,070 - 2,070	2 / 3	1,320	IR69-SD02-10A	NSV	-- / --	NSV	NO	Macronutrient
Manganese	-- - --	3 / 3	98.2	IR69-SD01D-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Mercury	0.040 - 0.14	1 / 3	0.19	IR69-SD01D-10A	0.13	1 / 3	1.46	YES	(1) HQ above one, detected
Nickel	0.64 - 0.64	2 / 3	4.30	IR69-SD02-10A	15.9	0 / 3	0.27	NO	HQ less than one, detected
Potassium [3]	2,070 - 2,070	2 / 3	520	IR69-SD02-10A	NSV	-- / --	NSV	NO	Macronutrient
Selenium	0.64 - 2.10	1 / 3	0.94	IR69-SD02-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Silver	0.64 - 2.10	0 / 3	--	--	0.73	-- / --	2.86	YES	(2) Not detected, HQ above one
Sodium [3]	2,070 - 2,070	2 / 3	1,400	IR69-SD02-10A	NSV	-- / --	NSV	NO	Macronutrient

TABLE H-7

Site 69 Sediment Screen - Step 2

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance[1]	Maximum Hazard Quotient	Step 2 COPC?	Rationale[2]
Thallium	1.30 - 4.10	0 / 3	--	--	NSV	-- / --	NSV	YES	(4) Not detected, no screening value
Vanadium	-- - --	3 / 3	12.7	IR69-SD01D-10A	NSV	-- / --	NSV	YES	(3) Detected, no screening value
Zinc	-- - --	3 / 3	17.0	IR69-SD02-10A	124	0 / 3	0.14	NO	HQ less than one, detected

NOTES

The categorized analytes were retained for quantitative refinement in the Step 3 table.

[1] - Count of detected samples exceeding or equaling Screening Value

[2] - Categories are assigned to those analytes retained as Step 2 COPCs and are as follows:

Category 1 – Contaminants with a maximum detection exceeding the ESV

Category 2– Undetected contaminants with a laboratory sample quantitation limit (SQL) exceeding the ESV

Category 3 – Detected contaminants with no ESV

Category 4 – Undetected contaminants with no ESV

[3] - Macronutrient - Not considered to be a COPC

µg/kg - Micrograms per kilogram

COPC - Contaminant of potential concern

HQ - Hazard quotient

mg/kg - Milligrams per kilogram

NSV - No Screening Value

Generated By: Kelly Taylor/DFW

Checked By: Sara Kent/ATL

TABLE H-8

Analytes that Failed Step 2 and Will be Retained for Step 3 Screening

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Media	Category 1					Category 2					Category 3					Category 4				
	VOCs	SVOCs	Pesticides	PCBs	Inorganics	VOCs	SVOCs	Pesticides	PCBs	Inorganics	VOCs	SVOCs	Pesticides	PCBs	Inorganics	VOCs	SVOCs	Pesticides	PCBs	Inorganics
Surface Soil	1	1	6	--	3	17	10	2	7	--	4	1	1	--	--	20	24	26	--	--
Subsurface Soil	--	--	1	--	2	2	9	1	7	1	3	--	--	--	--	21	26	26	--	--
Surface Water	--	--	--	--	2	--	4	14	7	2	2	--	--	--	5	23	51	30	--	5
Groundwater	--	--	5	1	1	--	4	9	6	2	8	4	2	--	2	20	47	28	--	4
Sediment	--	--	7	--	2	--	3	--	7	2	11	2	12	--	8	39	49	28	--	1

Notes

Category 1 – Contaminants with a maximum detection exceeding the ESV

Category 2– Undetected contaminants with a laboratory sample quantitation limit (SQL) exceeding the ESV

Category 3 – Detected contaminants with no ESV

Category 4 – Undetected contaminants with no ESV

-- - no analytes were retained

ESV - ecological screening value

PCB - polychlorinated biphenyl

SVOC - semivolatile organic compounds

VOC - volatile organic compoun

Generated By: Kelly Taylor/DFW

Checked By: Sara Kent/ATL

TABLE H-9

Site 69 Surface Soil Screen - Step 3

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Exposure Point Concentration	EPC Basis	Ecological Screening Value	Supplemental Screening Value	Supplemental Screening Value Source	Frequency of Exceedance[1]	EPC Hazard Quotient	Step 3 COPC?	Rationale
Volatile Organic Compounds (UG/KG)													
1,1,1-Trichloroethane	3.7 - 340	0 / 10	--	--	--	--	100	--	--	-- / --	3.40	NO	Not detected
1,1,2,2-Tetrachloroethane	3.7 - 340	0 / 11	--	--	--	--	100	--	--	-- / --	3.40	NO	Not detected
1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	3.7 - 340	0 / 10	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,1,2-Trichloroethane	3.7 - 340	0 / 11	--	--	--	--	100	--	--	-- / --	3.40	NO	Not detected
1,1-Dichloroethane	3.7 - 340	0 / 10	--	--	--	--	100	--	--	-- / --	3.40	NO	Not detected
1,1-Dichloroethene	3.7 - 340	0 / 10	--	--	--	--	100	--	--	-- / --	3.40	NO	Not detected
1,2-Dibromo-3-chloropropane	3.7 - 340	0 / 11	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,2-Dibromoethane	3.7 - 340	0 / 11	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,2-Dichlorobenzene	3.7 - 340	0 / 11	--	--	--	--	10.0	--	--	-- / --	34.0	NO	Not detected
1,3-Dichlorobenzene	3.7 - 340	0 / 11	--	--	--	--	10.0	--	--	-- / --	34.0	NO	Not detected
1,4-Dichlorobenzene	3.7 - 340	0 / 11	--	--	--	--	10.0	--	--	-- / --	34.0	NO	Not detected
2-Butanone	9.2 - 850	3 / 10	110	IR69-SS04-10A	54.6	95% KM (t) UCL	NSV	89600	Buchman, 2008	-- / --	0.001	NO	Supplemental HQ less than one
2-Hexanone	9.2 - 850	0 / 11	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Methyl-2-pentanone	9.2 - 850	0 / 11	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Acetone	850 - 850	10 / 11	840	IR69-SS05-10A	579	95% KM (t) UCL	NSV	2500	Buchman, 2008	-- / --	0.232	NO	Supplemental HQ less than one
Benzene	3.7 - 340	0 / 10	--	--	--	--	50.0	--	--	-- / --	6.80	NO	Not detected
Bromodichloromethane	3.7 - 340	0 / 10	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Bromoform	3.7 - 340	0 / 11	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Bromomethane	3.7 - 340	0 / 10	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Carbon disulfide	3.7 - 340	0 / 10	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Chlorobenzene	3.7 - 340	0 / 11	--	--	--	--	50.0	--	--	-- / --	6.80	NO	Not detected
Chloroethane	3.7 - 340	0 / 10	--	--	--	--	100	--	--	-- / --	3.40	NO	Not detected
Chloroform	3.7 - 340	0 / 10	--	--	--	--	1.00	--	--	-- / --	340	NO	Not detected
Chloromethane	3.7 - 340	0 / 10	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
cis-1,2-Dichloroethene	3.7 - 340	0 / 10	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
cis-1,3-Dichloropropene	3.7 - 340	0 / 10	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dibromochloromethane	3.7 - 340	0 / 11	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dichlorodifluoromethane (Freon-12)	3.7 - 340	0 / 10	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Isopropylbenzene	3.7 - 340	0 / 11	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
m- and p-Xylene	7.3 - 680	1 / 11	11.0	IR69-SS04-10A	11.00	Maximum*	NSV	100	Buchman, 2008	-- / --	0.110	NO	Supplemental HQ less than one
Methyl acetate	-- - --	11 / 11	710	MR02-IR69-SS02-10A	366	95% Approximate Gamma UCL	NSV	--	--	-- / --	NSV	NO	Uncertainty, no screening value
Methylcyclohexane	3.7 - 340	0 / 11	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Methyl-tert-butyl ether (MTBE)	3.7 - 340	0 / 10	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
o-Xylene	3.7 - 340	0 / 11	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Styrene	3.7 - 340	0 / 11	--	--	--	--	100	--	--	-- / --	3.40	NO	Not detected
Tetrachloroethene	3.7 - 340	0 / 11	--	--	--	--	10.0	--	--	-- / --	34.0	NO	Not detected
Toluene	3.7 - 340	1 / 11	58.0	IR69-SS04-10A	23.60	Arithmentic mean*	50.0	--	--	1 / 11	0.47	NO	HQ less than one
trans-1,2-Dichloroethene	3.7 - 340	0 / 10	--	--	--	--	100	--	--	-- / --	3.40	NO	Not detected
trans-1,3-Dichloropropene	3.7 - 340	0 / 11	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Trichloroethene	3.7 - 340	0 / 10	--	--	--	--	1.00	--	--	-- / --	340	NO	Not detected
Trichlorofluoromethane(Freon-11)	3.7 - 340	0 / 10	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Vinyl chloride	3.7 - 340	0 / 10	--	--	--	--	10.0	--	--	-- / --	34.0	NO	Not detected
Semivolatile Organic Compounds (UG/KG)													
2,2'-Oxybis(1-chloropropane)	200 - 330	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
2,4-Dichlorophenol	380 - 630	0 / 11	--	--			3.00	--	--	-- / --	210	NO	Not detected
2,4-Dimethylphenol	380 - 630	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
2,4-Dinitrotoluene	200 - 580	0 / 12	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
2,6-Dinitrotoluene	200 - 580	0 / 12	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
2-Chlorophenol	380 - 630	0 / 11	--	--			10.00	--	--	-- / --	63	NO	Not detected
2-Methylphenol	380 - 630	0 / 11	--	--			500.00	--	--	-- / --	1	NO	Not detected
2-Nitroaniline	380 - 630	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
2-Nitrophenol	380 - 630	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
3,3'-Dichlorobenzidine	200 - 330	0 / 10	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
3-Nitroaniline	380 - 630	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
4,6-Dinitro-2-methylphenol	380 - 630	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
4-Bromophenyl-phenylether	200 - 330	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
4-Chloro-3-methylphenol	380 - 630	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
4-Chlorophenyl-phenylether	200 - 330	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
4-Methylphenol	380 - 630	0 / 11	--	--			500.00	--	--	-- / --	1	NO	Not detected
4-Nitroaniline	380 - 630	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Acetophenone	200 - 330	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Atrazine	200 - 330	0 / 11	--	--			0.05	--	--	-- / --	6,600	NO	Not detected
Benzaldehyde	-- - --	11 / 11	170	MR02-IR69-SS06-10A	112	95% Student's-t UCL	NSV	--	--	-- / --	NSV	NO	Uncertainty, no screening value

TABLE H-9

Site 69 Surface Soil Screen - Step 3

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Exposure Point Concentration	EPC Basis	Ecological Screening Value	Supplemental Screening Value	Supplemental Screening Value Source	Frequency of Exceedance[1]	EPC Hazard Quotient	Step 3 COPC?	Rationale
bis(2-Chloroethoxy)methane	200 - 330	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
bis(2-Chloroethyl)ether	200 - 330	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
bis(2-Ethylhexyl)phthalate	200 - 330	2 / 11	310	MR02-IR69-SS06-10A	238	95% KM (t) UCL	100.00	--	--	2 / 11	2.4	NO	See text for discussion
Butylbenzylphthalate	200 - 330	0 / 11	--	--			100.00	--	--	-- / --	3	NO	Not detected
Caprolactam	200 - 260	1 / 11	81	IR69-SS05-10A	81.0	Maximum*	NSV	--	--	-- / --	NSV	NO	Uncertainty, no screening value
Carbazole	200 - 330	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Dibenzofuran	200 - 330	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Dimethoate	77 - 140	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Di-n-octylphthalate	200 - 330	0 / 11	--	--			100.00	--	--	-- / --	3	NO	Not detected
Famphur	77 - 140	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Hexachlorobenzene	200 - 330	0 / 11	--	--			2.50	--	--	-- / --	132	NO	Not detected
Hexachlorobutadiene	200 - 330	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Hexachloroethane	200 - 330	0 / 11	--	--			100.00	--	--	-- / --	3	NO	Not detected
Isophorone	200 - 330	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
n-Nitroso-di-n-propylamine	200 - 330	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Phenol	380 - 630	0 / 11	--	--			50.00	--	--	-- / --	13	NO	Not detected
Phorate	38 - 68	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Pesticide/Polychlorinated Biphenyls (UG/KG)													
4,4'-DDE	-- - --	11 / 11	110	IR69-SS01-10A	25	Arithmentic mean*	21.0	--	--	4 / 11	1.20	NO	Low magnitude of exceedance; no food chain effects
4,4'-DDT	-- - --	10 / 10	56.0	IR69-SS01-10A	34.0	95% Approximate Gamma UCL	21.0	--	--	3 / 10	1.62	NO	Low magnitude of exceedance; no food chain effects
alpha-BHC	2.00 - 13.0	5 / 11	3.30	MR02-IR69-SS01-10A	3.20	95% KM (t) UCL	2.50	--	--	4 / 11	1.28	NO	Low magnitude of exceedance; no food chain effects
Aroclor-1016	28.0 - 180	0 / 11	--	--			20.0	--	--	-- / --	9.00	NO	Not detected
Aroclor-1221	39.0 - 260	0 / 11	--	--			20.0	--	--	-- / --	13.0	NO	Not detected
Aroclor-1232	20.0 - 130	0 / 11	--	--			20.0	--	--	-- / --	6.50	NO	Not detected
Aroclor-1242	20.0 - 130	0 / 11	--	--			20.0	--	--	-- / --	6.50	NO	Not detected
Aroclor-1248	20.0 - 130	0 / 11	--	--			20.0	--	--	-- / --	6.50	NO	Not detected
Aroclor-1254	20.0 - 130	0 / 11	--	--			20.0	--	--	-- / --	6.50	NO	Not detected
Aroclor-1260	20.0 - 130	0 / 11	--	--			20.0	--	--	-- / --	6.50	NO	Not detected
Azinphos methyl	38.0 - 68.0	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
beta-BHC	0.98 - 6.40	1 / 11	2.00	MR02-IR69-SS02-10A	1.51	Arithmentic mean*	1.00	--	--	1 / 11	1.51	NO	Low magnitude of exceedance; no food chain effects
Bolstar	38.0 - 68.0	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Chlorpyrifos	38.0 - 68.0	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Coumaphos	38.0 - 68.0	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Demeton-O	95.0 - 170	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Demeton-S	95.0 - 170	0 / 10	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Diazinon	38.0 - 68.0	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Dichlorvos	77.0 - 140	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Dieldrin	3.80 - 25.0	0 / 11	--	--			4.90	--	--	-- / --	5.10	NO	Not detected
Disulfoton	77.0 - 140	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Endrin	3.80 - 25.0	3 / 11	3.90	IR69-SS05-10A	3.2	95% KM (t) UCL	1.00	--	--	2 / 11	3.22	**YES**	EPC HQ above one.
Ethoprop	20.0 - 35.0	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Fensulfothion	200 - 350	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Ethyl p-nitrophenyl phenylphosphorothioate	38.0 - 68.0	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Fenthion	38.0 - 68.0	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
gamma-BHC (Lindane)	2.00 - 13.0	4 / 11	8.40	IR69-SS04-10A	4.1	95% KM (t) UCL	0.050	--	--	4 / 11	82.4	**YES**	EPC HQ above one.
Malathion	38.0 - 68.0	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Merphos	57.0 - 100	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Methyl parathion	20.0 - 35.0	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Mevinphos	77.0 - 140	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Monocrotophos	380 - 680	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Naled	200 - 350	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Parathion	38.0 - 68.0	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Ronnel	38.0 - 68.0	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Sulfotepp	20.0 - 35.0	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Tetrachlorvinphos	38.0 - 68.0	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Thionazin	38.0 - 68.0	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Tokuthion (Prothiophos)	38.0 - 68.0	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Toxaphene	95.0 - 630	0 / 11	--	--			100	--	--	-- / --	6.30	NO	Not detected

TABLE H-9

Site 69 Surface Soil Screen - Step 3

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Exposure Point Concentration	EPC Basis	Ecological Screening Value	Supplemental Screening Value	Supplemental Screening Value Source	Frequency of Exceedance[1]	EPC Hazard Quotient	Step 3 COPC?	Rationale
Trichloronate	38.0 - 68.0	0 / 11	--	--			NSV	--	--	-- / --	NSV	NO	Not detected
Inorganics (MG/KG)													
Antimony	1.30 - 2.70	3 / 12	1.10	IR69-SS02-10A	1.08	95% KM (t) UCL	0.27	--	--	2 / 12	4.00	NO	See text discussion
Manganese	-- - --	12 / 12	347	IR69-SS05-10A	120	95% Approximate Gamma UCL	220	--	--	1 / 12	0.55	NO	HQ less than one
Mercury	0.19 - 0.19	11 / 12	0.31	IR69-SS05-10A	0.19	95% KM (Chebyshev) UCL	0.10	--	--	3 / 12	1.92	NO	Low magnitude of exceedance; no food chain effects.

NOTES

[1] - Count of detected samples exceeding or equaling ESV

* Too few unique detected values to calculate a conservative estimate of the mean. In these cases, the lowest of the arithmetic mean or maximum was selected.

µg/kg - Micrograms per kilogram

COPC - Contaminant of potential concern

HQ - Hazard quotient

mg/kg - Milligrams per kilogram

NSV - No Screening Value

Generated By: Kelly Taylor/DFW

Checked By: Sara Kent/ATL

TABLE H-10

Site 69 Subsurface Soil Screen - Step 3

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Exposure Point Concentration	EPC Basis[1]	Ecological Screening Value	Supplemental Screening Value	Supplemental Screening Value Source	Frequency of Exceedance[2]	EPC Hazard Quotient	Step 3 COPC?	Rationale
Volatile Organic Compounds (UG/KG)													
1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	4.70 - 5.10	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,2-Dibromo-3-chloropropane	4.70 - 5.10	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,2-Dibromoethane	4.70 - 5.10	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2-Butanone	12.0 - 13.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2-Hexanone	12.0 - 13.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Methyl-2-pentanone	12.0 - 13.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Acetone	26.0 - 26.0	1 / 2	44.0	IR69-SB03-04-05-10A	28.50	Arithmetic mean	NSV	2500	Buchman, 2008	-- / --	0.01	NO	Arithmetic mean -based HQ less than one
Bromodichloromethane	4.70 - 5.10	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Bromoform	4.70 - 5.10	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Bromomethane	4.70 - 5.10	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Carbon disulfide	4.70 - 4.70	1 / 2	0.53	IR69-SB03-04-05-10A	0.53	Maximum	NSV	94.1	Buchman, 2008	-- / --	0.01	NO	Maximum -based HQ less than one
Chloroform	4.70 - 5.10	0 / 2	--	--	--	--	1.00	--	--	-- / --	5.10	NO	Not detected
Chloromethane	4.70 - 5.10	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
cis-1,2-Dichloroethene	4.70 - 5.10	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
cis-1,3-Dichloropropene	4.70 - 5.10	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dibromochloromethane	4.70 - 5.10	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dichlorodifluoromethane (Freon-12)	4.70 - 5.10	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Isopropylbenzene	4.70 - 5.10	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
m- and p-Xylene	9.50 - 10.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Methyl acetate	-- - --	2 / 2	63.0	IR69-SB03-04-05-10A	33.8	Arithmetic mean	NSV	--	--	-- / --	NSV	NO	Uncertainty, no screening value
Methylcyclohexane	4.70 - 5.10	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Methyl-tert-butyl ether (MTBE)	4.70 - 5.10	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
o-Xylene	4.70 - 5.10	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
trans-1,3-Dichloropropene	4.70 - 5.10	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Trichloroethene	4.70 - 5.10	0 / 2	--	--	--	--	1.00	--	--	-- / --	5.10	NO	Not detected
Trichlorofluoromethane(Freon-11)	4.70 - 5.10	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Semivolatile Organic Compounds (UG/KG)													
2,2'-Oxybis(1-chloropropane)	210 - 210	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2,4-Dichlorophenol	410 - 410	0 / 2	--	--	--	--	3.00	--	--	-- / --	137	NO	Not detected
2,4-Dimethylphenol	410 - 410	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2,4-Dinitrotoluene	210 - 210	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2,6-Dinitrotoluene	210 - 210	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2-Chlorophenol	410 - 410	0 / 2	--	--	--	--	10.0	--	--	-- / --	41.0	NO	Not detected
2-Nitroaniline	410 - 410	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2-Nitrophenol	410 - 410	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
3,3'-Dichlorobenzidine	210 - 210	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
3-Nitroaniline	410 - 410	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4,6-Dinitro-2-methylphenol	410 - 410	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Bromophenyl-phenylether	210 - 210	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Chloro-3-methylphenol	410 - 410	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Chlorophenyl-phenylether	210 - 210	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Nitroaniline	410 - 410	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Acetophenone	210 - 210	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Atrazine	210 - 210	0 / 2	--	--	--	--	0.050	--	--	-- / --	4,200	NO	Not detected
Benzaldehyde	210 - 210	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
bis(2-Chloroethoxy)methane	210 - 210	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
bis(2-Chloroethyl)ether	210 - 210	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
bis(2-Ethylhexyl)phthalate	210 - 210	0 / 2	--	--	--	--	100	--	--	-- / --	2.10	NO	Not detected
Butylbenzylphthalate	210 - 210	0 / 2	--	--	--	--	100	--	--	-- / --	2.10	NO	Not detected
Caprolactam	210 - 210	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Carbazole	210 - 210	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dibenzofuran	210 - 210	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dimethoate	85.0 - 87.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Di-n-octylphthalate	210 - 210	0 / 2	--	--	--	--	100	--	--	-- / --	2.10	NO	Not detected
Famphur	85.0 - 87.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Hexachlorobenzene	210 - 210	0 / 2	--	--	--	--	2.50	--	--	-- / --	84.0	NO	Not detected
Hexachlorobutadiene	210 - 210	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected

TABLE H-10

Site 69 Subsurface Soil Screen - Step 3

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Exposure Point Concentration	EPC Basis[1]	Ecological Screening Value	Supplemental Screening Value	Supplemental Screening Value Source	Frequency of Exceedance[2]	EPC Hazard Quotient	Step 3 COPC?	Rationale
Hexachloroethane	210 - 210	0 / 2	--	--	--	--	100	--	--	-- / --	2.10	NO	Not detected
Isophorone	210 - 210	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
n-Nitroso-di-n-propylamine	210 - 210	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Phenol	410 - 410	0 / 2	--	--	--	--	50.0	--	--	-- / --	8.20	NO	Not detected
Phorate	42.0 - 43.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Pesticide/Polychlorinated Biphenyls (UG/KG)													
Aroclor-1016	30.0 - 30.0	0 / 2	--	--	--	--	20.0	--	--	-- / --	1.50	NO	Not detected
Aroclor-1221	43.0 - 43.0	0 / 2	--	--	--	--	20.0	--	--	-- / --	2.15	NO	Not detected
Aroclor-1232	21.0 - 21.0	0 / 2	--	--	--	--	20.0	--	--	-- / --	1.05	NO	Not detected
Aroclor-1242	21.0 - 21.0	0 / 2	--	--	--	--	20.0	--	--	-- / --	1.05	NO	Not detected
Aroclor-1248	21.0 - 21.0	0 / 2	--	--	--	--	20.0	--	--	-- / --	1.05	NO	Not detected
Aroclor-1254	21.0 - 21.0	0 / 2	--	--	--	--	20.0	--	--	-- / --	1.05	NO	Not detected
Aroclor-1260	21.0 - 21.0	0 / 2	--	--	--	--	20.0	--	--	-- / --	1.05	NO	Not detected
Azinphos methyl	42.0 - 43.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Bolstar	42.0 - 43.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Chlorpyrifos	42.0 - 43.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Coumaphos	42.0 - 43.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Demeton-O	110 - 110	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Demeton-S	110 - 110	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Diazinon	42.0 - 43.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dichlorvos	85.0 - 87.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Disulfoton	85.0 - 87.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Endrin	4.10 - 4.10	1 / 2	1.10	IR69-SB01-01-02-10A	1.10	Maximum	1.00	--	--	1 / 2	1.10	NO	Low magnitude of exceedance
Ethoprop	22.0 - 22.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Fensulfothion	220 - 220	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Ethyl p-nitrophenyl phenylphosphorothioate	42.0 - 43.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Fenthion	42.0 - 43.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
gamma-BHC (Lindane)	2.10 - 2.10	0 / 2	--	--	--	--	0.050	--	--	-- / --	42.0	NO	Not detected
Malathion	42.0 - 43.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Merphos	64.0 - 65.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Methyl parathion	22.0 - 22.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Mevinphos	85.0 - 87.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Monocrotophos	420 - 430	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Naled	220 - 220	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Parathion	42.0 - 43.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Ronnel	42.0 - 43.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Sulfotepp	22.0 - 22.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Tetrachlorvinphos	42.0 - 43.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Thionazin	42.0 - 43.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Tokuthion (Prothiophos)	42.0 - 43.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Toxaphene	100 - 100	0 / 2	--	--	--	--	100	--	--	-- / --	1.00	NO	Not detected
Trichloronate	42.0 - 43.0	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Inorganics (MG/KG)													
Antimony	-- - --	2 / 2	1.40	IR69-SB03-04-05-10A	0.88	Arithmetic mean	0.27			2 / 2	3.26	NO	See text discussion
Mercury	-- - --	2 / 2	0.15	IR69-SB01-01-02-10A	0.09	Arithmetic mean	0.10			1 / 2	0.90	NO	HQ less than one
Thallium	1.10 - 1.20	0 / 2	--	--	--	--	1.00	--	--	-- / --	1.20	NO	Not detected

NOTES

[1] - Because of the limited sample size, an upper confidence limit of the mean could not be calculated and the EPC is represented by the lowest of the arithemitic mean or maximum detection.

[2] - Count of detected samples exceeding or equaling ESV

COPC - Contaminant of potential concern

HQ - Hazard quotient

mg/kg - Milligrams per kilogram

NSV - No Screening Value

µg/kg - Micrograms per kilogram

Generated By: Kelly Taylor/DFW

Checked By: Sara Kent/ATL

TABLE H-11

Site 69 Surface Water Screen - Step 3

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Exposure Point Concentration	EPC Basis[1]	Ecological Screening Value[2]	Supplemental Screening Value	Supplemental Screening Value Source	Frequency of Exceedance[3]	EPC Hazard Quotient	Step 3 COPC?	Rationale
Volatile Organic Compounds (UG/L)													
1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	0.50 - 0.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,1,2-Trichloroethane	0.50 - 0.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,1-Dichloroethane	0.50 - 0.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,2-Dibromo-3-chloropropane	0.50 - 0.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,2-Dibromoethane	0.50 - 0.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2-Hexanone	2.50 - 2.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Methyl-2-pentanone	2.50 - 2.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Bromodichloromethane	0.50 - 0.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Carbon disulfide	0.50 - 0.50	2 / 3	0.036	IR69-SW02-10A	0.036	Maximum	NSV	0.92	USEPA, 2006a	-- / --	0.04	NO	Maxium-based HQ less than one
Chloroethane	0.50 - 0.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
cis-1,2-Dichloroethene	0.50 - 0.50	2 / 3	1.20	IR69-SW01-10A	0.52	Arithmetic mean	NSV	--	--	-- / --	NSV	NO	Uncertainty, no screening value
Cyclohexane	0.50 - 0.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dibromochloromethane	0.50 - 0.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dichlorodifluoromethane (Freon-12)	0.50 - 0.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Isopropylbenzene	0.50 - 0.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
m- and p-Xylene	1.00 - 1.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Methyl acetate	0.50 - 0.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Methylcyclohexane	0.50 - 0.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Methyl-tert-butyl ether (MTBE)	0.50 - 0.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
o-Xylene	0.50 - 0.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Styrene	0.50 - 0.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
trans-1,2-Dichloroethene	0.50 - 0.50	1 / 3	0.068	IR69-SW01-10A	0.068	Maximum	NSV	--	--	-- / --	NSV	NO	Uncertainty, no screening value
Trichloroethene	0.50 - 0.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Trichlorofluoromethane(Freon-11)	0.50 - 0.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Vinyl chloride	0.50 - 0.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Xylene, total	0.50 - 0.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Semivolatile Organic Compounds (UG/L)													
1,1-Biphenyl	5.00 - 5.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2,2'-Oxybis(1-chloropropane)	5.00 - 5.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2,4,5-Trichlorophenol	10.0 - 10.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2,4,6-Trichlorophenol	10.0 - 10.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2,4-Dinitrophenol	10.0 - 10.0	0 / 3	--	--	--	--	6.20	--	--	-- / --	1.61	NO	Not detected
2,4-Dinitrotoluene	5.00 - 5.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2,6-Dinitrotoluene	5.00 - 5.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2-Chloronaphthalene	5.00 - 5.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2-Methylnaphthalene	0.20 - 0.20	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2-Methylphenol	10.0 - 10.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2-Nitroaniline	10.0 - 10.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
3,3'-Dichlorobenzidine	5.00 - 5.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
3-Nitroaniline	10.0 - 10.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4,6-Dinitro-2-methylphenol	10.0 - 10.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Chloro-3-methylphenol	10.0 - 10.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Chloroaniline	10.0 - 10.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Chlorophenyl-phenylether	5.00 - 5.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Methylphenol	10.0 - 10.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Nitroaniline	10.0 - 10.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Acenaphthylene	0.20 - 0.20	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Acetophenone	5.00 - 5.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Anthracene	0.20 - 0.20	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Atrazine	5.00 - 5.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Benzaldehyde	5.00 - 5.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Benzo(a)anthracene	0.20 - 0.20	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Benzo(a)pyrene	0.20 - 0.20	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Benzo(b)fluoranthene	0.20 - 0.20	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Benzo(g,h,i)perylene	0.20 - 0.20	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Benzo(k)fluoranthene	0.20 - 0.20	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
bis(2-Chloroethoxy)methane	5.00 - 5.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
bis(2-Ethylhexyl)phthalate	5.00 - 5.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected

TABLE H-11

Site 69 Surface Water Screen - Step 3

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Exposure Point Concentration	EPC Basis[1]	Ecological Screening Value[2]	Supplemental Screening Value	Supplemental Screening Value Source	Frequency of Exceedance[3]	EPC Hazard Quotient	Step 3 COPC?	Rationale
Caprolactam	5.00 - 5.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Carbazole	5.00 - 5.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Chrysene	0.20 - 0.20	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dibenz(a,h)anthracene	0.20 - 0.20	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dibenzofuran	5.00 - 5.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dimethoate	1.90 - 2.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Di-n-butylphthalate	5.00 - 5.00	0 / 3	--	--	--	--	3.40	--	--	-- / --	1.47	NO	Not detected
Di-n-octylphthalate	5.00 - 5.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Famphur	1.90 - 2.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Fluorene	0.20 - 0.20	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Hexachlorobenzene	5.00 - 5.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Hexachlorobutadiene	5.00 - 5.00	0 / 3	--	--	--	--	0.32	--	--	-- / --	15.6	NO	Not detected
Hexachlorocyclopentadiene	5.00 - 5.00	0 / 3	--	--	--	--	0.07	--	--	-- / --	71.4	NO	Not detected
Indeno(1,2,3-cd)pyrene	0.20 - 0.20	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
n-Nitroso-di-n-propylamine	5.00 - 5.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Pentachlorophenol	10.0 - 10.0	0 / 3	--	--	--	--	7.90	--	--	-- / --	1.27	NO	Not detected
Phenanthrene	0.20 - 0.20	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Phorate	0.95 - 1.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Pyrene	0.20 - 0.20	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Pesticide/Polychlorinated Biphenyls (UG/L)													
4,4'-DDD	0.10 - 0.10	0 / 3	--	--	--	--	0.0064	--	--	-- / --	15.63	NO	Not detected
4,4'-DDT	0.10 - 0.10	0 / 3	--	--	--	--	0.001	--	--	-- / --	100	NO	Not detected
alpha-Chlordane	0.050 - 0.051	0 / 3	--	--	--	--	0.004	--	--	-- / --	12.8	NO	Not detected
Aroclor-1016	0.93 - 0.95	0 / 3	--	--	--	--	0.03	--	--	-- / --	31.7	NO	Not detected
Aroclor-1221	1.30 - 1.30	0 / 3	--	--	--	--	0.03	--	--	-- / --	43.3	NO	Not detected
Aroclor-1232	0.93 - 0.95	0 / 3	--	--	--	--	0.03	--	--	-- / --	31.7	NO	Not detected
Aroclor-1242	0.63 - 0.64	0 / 3	--	--	--	--	0.03	--	--	-- / --	21.3	NO	Not detected
Aroclor-1248	0.63 - 0.64	0 / 3	--	--	--	--	0.03	--	--	-- / --	21.3	NO	Not detected
Aroclor-1254	0.63 - 0.64	0 / 3	--	--	--	--	0.03	--	--	-- / --	21.3	NO	Not detected
Aroclor-1260	0.93 - 0.95	0 / 3	--	--	--	--	0.03	--	--	-- / --	31.7	NO	Not detected
Azinphos methyl	0.95 - 1.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Bolstar	0.95 - 1.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Chlorpyrifos	0.95 - 1.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Coumaphos	0.95 - 1.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
delta-BHC	0.050 - 0.051	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Demeton-O	2.40 - 2.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Demeton-S	2.40 - 2.40	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Diazinon	0.95 - 1.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dichlorvos	1.90 - 2.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dieldrin	0.10 - 0.10	0 / 3	--	--	--	--	0.0019	--	--	-- / --	52.6	NO	Not detected
Disulfoton	1.90 - 2.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Endosulfan I	0.050 - 0.051	0 / 3	--	--	--	--	0.01	--	--	-- / --	5.86	NO	Not detected
Endosulfan II	0.10 - 0.10	0 / 3	--	--	--	--	0.01	--	--	-- / --	11.5	NO	Not detected
Endosulfan sulfate	0.10 - 0.10	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Endrin	0.10 - 0.10	0 / 3	--	--	--	--	0.0023	--	--	-- / --	43.5	NO	Not detected
Endrin aldehyde	0.10 - 0.10	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Endrin ketone	0.10 - 0.10	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Ethoprop	0.48 - 0.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Fensulfothion	4.80 - 5.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Ethyl p-nitrophenyl phenylphosphorothioate	0.95 - 1.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Fenthion	0.95 - 1.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
gamma-BHC (Lindane)	0.050 - 0.051	0 / 3	--	--	--	--	0.02	--	--	-- / --	3.19	NO	Not detected
gamma-Chlordane	0.050 - 0.051	0 / 3	--	--	--	--	0.00	--	--	-- / --	12.8	NO	Not detected
Heptachlor	0.050 - 0.051	0 / 3	--	--	--	--	0.00	--	--	-- / --	14.2	NO	Not detected
Heptachlor epoxide	0.050 - 0.051	0 / 3	--	--	--	--	0.00	--	--	-- / --	14.2	NO	Not detected
Malathion	0.95 - 1.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Merphos	1.40 - 1.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Methoxychlor	0.50 - 0.51	0 / 3	--	--	--	--	0.03	--	--	-- / --	17.0	NO	Not detected
Methyl parathion	0.48 - 0.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected

TABLE H-11

Site 69 Surface Water Screen - Step 3

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Exposure Point Concentration	EPC Basis[1]	Ecological Screening Value[2]	Supplemental Screening Value	Supplemental Screening Value Source	Frequency of Exceedance[3]	EPC Hazard Quotient	Step 3 COPC?	Rationale
Mevinphos	1.90 - 2.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Monocrotophos	9.50 - 10.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Naled	4.80 - 5.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Parathion	0.95 - 1.00	0 / 3	--	--	--	--	0.18	--	--	-- / --	5.62	NO	Not detected
Ronnel	0.95 - 1.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Sulfotepp	0.48 - 0.50	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Tetrachlorvinphos	0.95 - 1.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Thionazin	0.95 - 1.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Tokuthion (Prothiophos)	0.95 - 1.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Toxaphene	2.50 - 2.60	0 / 3	--	--	--	--	0.00	--	--	-- / --	1,300	NO	Not detected
Trichloronate	0.95 - 1.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Inorganics (UG/L)													
Aluminum	200 - 200	1 / 3	474	IR69-SW03-10A	225	Arithmetic mean	87	--	--	-- / --	2.59	NO	Low magnitude of exceedance, not an issue in filtered samples
Antimony	10.0 - 10.0	0 / 3	--	--	--	--	160	--	--	-- / --	0.0625	NO	Not detected
Barium	-- - --	3 / 3	32.3	IR69-SW03-10A	26.3	Arithmetic mean	NSV	25	TCEQ, 2006	-- / --	1.05	NO	Low magnitude of exceedance, not detected in filtered samples
Beryllium	5.00 - 5.00	0 / 3	--	--	--	--	0.53			-- / --	9.43	NO	Not detected
Cadmium	5.00 - 5.00	0 / 3	--	--			0.25	--	--	-- / --	20	NO	Not detected
Cobalt	5.00 - 5.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Copper	5.00 - 5.00	0 / 3	--	--	--	--	3.10	--	--	-- / --	1.61	NO	Not detected
Lead	-- - --	3 / 3	2.90	IR69-SW02-10A	2.57	Arithmetic mean	2.50	--	--	2 / 3	1.03	NO	Low magnitude of exceedance, not detected in filtered samples
Manganese	-- - --	3 / 3	27.5	IR69-SW03-10A	21.0	Arithmetic mean	NSV	120	TCEQ, 2006	-- / --	0.18	NO	HQ less than one
Selenium	5.00 - 5.00	2 / 3	6.20	IR69-SW02-10A	4.73	Arithmetic mean	5.00	--	--	2 / 3	0.95	NO	HQ less than one
Silver	5.00 - 5.00	0 / 3	--	--	--	--	0.012	--	--	-- / --	416.7	NO	Not detected
Thallium	10.0 - 10.0	1 / 3	6.90	IR69-SW02-10A	5.63	Arithmetic mean	4.00	--	--	1 / 3	1.41	NO	Low magnitude of exceedance, not detected in filtered samples
Vanadium	20.0 - 20.0	1 / 3	0.71	IR69-SW03-10A	0.71	Maximum	NSV	--	--	-- / --	NSV	NO	Not detected in filtered samples
Zinc	20.0 - 20.0	1 / 3	104	IR69-SW03-10A	41.3	Arithmetic mean	81.00	--	--	1 / 3	0.51	NO	HQ less than one
Dissolved Metals (UG/L)													
Aluminum, Dissolved	200 - 200	2 / 3	329	IR69-SW03-10A	183	Arithmetic mean	87	--	--	-- / --	2.10	NO	Low magnitude of exceedance
Antimony, Dissolved	10.0 - 10.0	0 / 3	--	--	--	--	160	--	--	-- / --	0.0625	NO	Not detected
Barium, Dissolved	200 - 200	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Beryllium, Dissolved	5.00 - 5.00	0 / 3	--	--	--	--	0.53	--	--	-- / --	9.43	NO	Not detected
Cadmium, Dissolved	5.00 - 5.00	0 / 3	--	--	--	--	0.25	--	--	-- / --	20	NO	Not detected
Cobalt, Dissolved	5.00 - 5.00	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Copper, Dissolved	5.00 - 5.00	0 / 3	--	--	--	--	3.10	--	--	-- / --	1.61	NO	Not detected
Lead, Dissolved	3.00 - 3.00	0 / 3	--	--	--	--	2.50	--	--	-- / --	1.20	NO	Not detected
Manganese, Dissolved	-- - --	3 / 3	29.4	IR69-SW03-10A	22.2	Arithmetic mean	NSV	120	TCEQ, 2006	-- / --	0.19	NO	HQ less than one
Silver, Dissolved	5.00 - 5.00	1 / 3	1.00	IR69-SW01-10A	1.00	Maximum	0.012	--	--	1 / 3	83.33	NO	See text discussion
Thallium, Dissolved	10.0 - 10.0	0 / 3	--	--	--	--	4.00	--	--	-- / --	2.50	NO	Not detected
Vanadium, Dissolved	20.0 - 20.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Zinc, Dissolved	20.0 - 20.0	1 / 3	113	IR69-SW03-10A	44	Arithmetic mean	81.00	--	--	1 / 3	0.55	NO	HQ less than one

NOTES

The categorized analytes were retained for quantitative refinement in the Step 3 table.

[1] - Because of the limited sample size, an upper confidence limit of the mean could not be calculated and the EPC is represented by the lowest of the arithemitic mean or maximum detection.

[2] - Lowest of freshwater and marine screening values

[3] - Count of detected samples exceeding or equaling ESV

COPC - Contaminant of potential concern

HQ - Hazard quotient

NSV - No Screening Value

µg/L - Micrograms per liter

Generated By: Kelly Taylor/DFW

Checked By: Sara Kent/ATL

TABLE H-12

Site 69 Groundwater Screen - Step 3

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Exposure Point Concentration	EPC Basis[4]	Ecological Screening Value	Supplemental Screening Value	Supplemental Screening Value Source	Frequency of Exceedance[1]	EPC Hazard Quotient	Step 3 COPC?	Rationale
Volatile Organic Compounds (UG/L)													
1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	0.50 - 3.10	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,1,2-Trichloroethane	0.50 - 0.50	3 / 15	7.80	IR69-GW02-10A	2.05	95% KM (t) UCL	NSV	275	TCEQ, 2006	-- / --	0.007	NO	Supplemental HQ less than one
1,1-Dichloroethane	0.50 - 0.50	1 / 15	0.043	IR69-GW03-10A	0.043	Maximum Result	NSV	47000	Buchman, 2008[2]	-- / --	0.000001	NO	Supplemental HQ less than one
1,2-Dibromo-3-chloropropane	0.50 - 3.10	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,2-Dibromoethane	0.50 - 3.10	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2-Butanone	2.50 - 16.0	0 / 4	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2-Hexanone	2.50 - 16.0	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Methyl-2-pentanone	2.50 - 16.0	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Acetone	2.50 - 16.0	0 / 5	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Bromodichloromethane	0.50 - 3.10	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Carbon disulfide	0.50 - 3.10	3 / 15	0.14	IR69-GW15-10A	0.132	95% KM (t) UCL	NSV	105	TCEQ, 2006[2]	-- / --	0.001	NO	Supplemental HQ less than one
Chloroethane	0.50 - 3.10	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
cis-1,2-Dichloroethene	0.50 - 0.50	6 / 15	180	IR69-GW03-10A	45.8	95% KM (t) UCL	NSV	590000	Buchman, 2008[2]	-- / --	0.0001	NO	Supplemental HQ less than one
Cyclohexane	0.50 - 3.10	1 / 15	0.27	IR69-GW10-10A	0.257	95% Chebyshev UCL[3]	NSV	--	--	-- / --	NSV	NO	Uncertainty, no screening value
Dibromochloromethane	0.50 - 3.10	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dichlorodifluoromethane (Freon-12)	0.50 - 3.10	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Isopropylbenzene	0.50 - 3.10	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
m- and p-Xylene	1.00 - 6.30	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Methyl acetate	0.50 - 3.10	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Methylcyclohexane	0.50 - 3.10	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Methyl-tert-butyl ether (MTBE)	0.50 - 3.10	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
o-Xylene	0.50 - 3.10	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Styrene	0.50 - 3.10	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
trans-1,2-Dichloroethene	0.50 - 0.50	6 / 15	23.0	IR69-GW02-10A	4.85	95% KM (t) UCL	NSV	22000	TCEQ, 2006[2]	-- / --	0.0002	NO	Supplemental HQ less than one
Trichloroethene	0.50 - 0.50	6 / 15	3.50	IR69-GW03-10A	1.17	95% KM (BCA) UCL	NSV	970	TCEQ, 2006	-- / --	0.001	NO	Supplemental HQ less than one
Trichlorofluoromethane(Freon-11)	0.50 - 3.10	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Vinyl chloride	0.50 - 0.50	4 / 15	20.0	IR69-GW02-10A	5.58	95% KM (t) UCL	NSV	2820	TCEQ, 2006	-- / --	0.002	NO	Supplemental HQ less than one
Xylene, total	0.50 - 3.10	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Semivolatile Organic Compounds (UG/L)													
1,1-Biphenyl	5.00 - 5.60	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2,2'-Oxybis(1-chloropropane)	5.00 - 5.60	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2,4,5-Trichlorophenol	10.0 - 11.0	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2,4,6-Trichlorophenol	10.0 - 11.0	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2,4-Dichlorophenol	10.0 - 11.0	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2,4-Dimethylphenol	10.0 - 11.0	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2,4-Dinitrotoluene	5.00 - 5.60	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2,6-Dinitrotoluene	5.00 - 5.60	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2-Chloronaphthalene	5.00 - 5.60	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2-Chlorophenol	10.0 - 11.0	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2-Methylnaphthalene	0.20 - 0.22	3 / 15	0.13	IR69-GW03-10A	0.121	95% KM (t) UCL	NSV	30	TCEQ, 2006	-- / --	0.004	NO	Supplemental HQ less than one
2-Methylphenol	10.0 - 11.0	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2-Nitroaniline	10.0 - 11.0	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2-Nitrophenol	10.0 - 11.0	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
3,3'-Dichlorobenzidine	5.00 - 5.60	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
3-Nitroaniline	10.0 - 11.0	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4,6-Dinitro-2-methylphenol	10.0 - 11.0	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Bromophenyl-phenylether	5.00 - 5.60	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Chloro-3-methylphenol	10.0 - 11.0	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Chloroaniline	10.0 - 11.0	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Chlorophenyl-phenylether	5.00 - 5.60	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Methylphenol	10.0 - 11.0	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Nitroaniline	10.0 - 11.0	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Acenaphthylene	0.20 - 0.22	1 / 15	0.010	IR69-GW03-10A	0.01	Maximum Result	NSV	4840	Buchman, 2008[2]	-- / --	0.000002	NO	Supplemental HQ less than one
Acetophenone	5.00 - 5.60	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Anthracene	0.20 - 0.22	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Atrazine	5.00 - 5.60	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Benzaldehyde	5.00 - 5.60	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected

TABLE H-12

Site 69 Groundwater Screen - Step 3

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Exposure Point Concentration	EPC Basis[4]	Ecological Screening Value	Supplemental Screening Value	Supplemental Screening Value Source	Frequency of Exceedance[1]	EPC Hazard Quotient	Step 3 COPC?	Rationale
Benzo(a)anthracene	0.20 - 0.22	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Benzo(a)pyrene	0.20 - 0.22	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Benzo(b)fluoranthene	0.20 - 0.22	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Benzo(g,h,i)perylene	0.20 - 0.22	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Benzo(k)fluoranthene	0.20 - 0.22	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
bis(2-Chloroethoxy)methane	5.00 - 5.60	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
bis(2-Chloroethyl)ether	5.00 - 5.60	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
bis(2-Ethylhexyl)phthalate	5.00 - 5.60	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Caprolactam	5.00 - 5.60	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Carbazole	5.00 - 5.60	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Chrysene	0.20 - 0.22	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dibenz(a,h)anthracene	0.20 - 0.22	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dibenzofuran	5.00 - 5.60	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dimethoate	1.90 - 2.00	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Di-n-butylphthalate	5.00 - 5.60	0 / 15	--	--	--	--	3.40	--	--	-- / --	1.65	NO	Not detected
Di-n-octylphthalate	5.00 - 5.60	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Famphur	1.90 - 2.00	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Fluorene	0.20 - 0.22	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Hexachlorobenzene	5.00 - 5.60	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Hexachlorobutadiene	5.00 - 5.60	0 / 15	--	--	--	--	0.32	--	--	-- / --	17.5	NO	Not detected
Hexachlorocyclopentadiene	5.00 - 5.60	0 / 15	--	--	--	--	0.070	--	--	-- / --	80.0	NO	Not detected
Indeno(1,2,3-cd)pyrene	0.20 - 0.22	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
n-Nitroso-di-n-propylamine	5.00 - 5.60	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Pentachlorophenol	10.0 - 11.0	0 / 15	--	--	--	--	7.90	--	--	-- / --	1.39	NO	Not detected
Phenanthrene	0.20 - 0.22	1 / 15	0.037	IR69-GW01-10A	0.037	Maximum Result	NSV	4.6	TCEQ, 2006	-- / --	0.008	NO	Supplemental HQ less than one
Phorate	0.94 - 1.00	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Pyrene	0.20 - 0.22	4 / 15	0.018	IR69-GW01-10A	0.018	Maximum Result	NSV	0.24	TCEQ, 2006	-- / --	0.08	NO	Supplemental HQ less than one
Pesticide/Polychlorinated Biphenyls (UG/L)													
4,4'-DDD	0.10 - 0.11	0 / 15	--	--	--	--	0.025	--	--	-- / --	4.40	NO	Not detected
4,4'-DDT	0.10 - 0.11	1 / 15	0.0052	IR69-GW03-10A	0.0052	Maximum Result	0.0010	--	--	1 / 15	5.20	**YES**	HQ greater than one
alpha-Chlordane	0.050 - 0.056	0 / 15	--	--	--	--	0.0040	--	--	-- / --	14.0	NO	Not detected
Aroclor-1016	0.93 - 1.00	0 / 15	--	--	--	--	0.030	--	--	-- / --	33.3	NO	Not detected
Aroclor-1221	1.30 - 1.40	0 / 15	--	--	--	--	0.030	--	--	-- / --	46.7	NO	Not detected
Aroclor-1232	0.93 - 1.00	0 / 15	--	--	--	--	0.030	--	--	-- / --	33.3	NO	Not detected
Aroclor-1242	0.63 - 0.69	0 / 15	--	--	--	--	0.030	--	--	-- / --	23.0	NO	Not detected
Aroclor-1248	0.63 - 0.69	0 / 15	--	--	--	--	0.030	--	--	-- / --	23.0	NO	Not detected
Aroclor-1254	0.63 - 0.69	0 / 15	--	--	--	--	0.030	--	--	-- / --	23.0	NO	Not detected
Aroclor-1260	0.93 - 1.00	1 / 15	1.20	IR69-GW15-10A	0.734	95% Chebyshev UCL[3]	0.030	--	--	1 / 15	24.5	NO	Low exceedance frequency and not detected in other media.
Azinphos methyl	0.94 - 1.00	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
beta-BHC	0.050 - 0.056	2 / 15	0.19	IR69-GW03-10A	0.125	97.5% KM (Chebyshev) UCL	NSV	83	TCEQ, 2006[2]	-- / --	0.002	NO	Supplemental HQ less than one
Bolstar	0.94 - 1.00	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Chlorpyrifos	0.94 - 1.00	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Coumaphos	0.94 - 1.00	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
delta-BHC	0.050 - 0.056	2 / 15	1.50	IR69-GW03-10A	1.46	99% KM (Chebyshev) UCL	NSV	141	TCEQ, 2006[2]	-- / --	0.010	NO	Supplemental HQ less than one
Demeton-O	2.40 - 2.50	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Demeton-S	2.40 - 2.50	0 / 12	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Diazinon	0.94 - 1.00	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dichlorvos	1.90 - 2.00	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dieldrin	0.10 - 0.11	0 / 15	--	--	--	--	0.0019	--	--	-- / --	57.9	NO	Not detected
Disulfoton	1.90 - 2.00	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Endosulfan I	0.050 - 0.056	0 / 15	--	--	--	--	0.0087	--	--	-- / --	6.44	NO	Not detected
Endosulfan II	0.10 - 0.11	0 / 15	--	--	--	--	0.0087	--	--	-- / --	12.6	NO	Not detected
Endosulfan sulfate	0.10 - 0.11	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Endrin	0.10 - 0.11	1 / 15	0.029	IR69-GW15-10A	0.029	Maximum Result	0.0023	--	--	1 / 15	12.6	**YES**	HQ greater than one
Endrin aldehyde	0.10 - 0.11	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Endrin ketone	0.10 - 0.11	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Ethoprop	0.47 - 0.50	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected

TABLE H-12

Site 69 Groundwater Screen - Step 3

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Exposure Point Concentration	EPC Basis[4]	Ecological Screening Value	Supplemental Screening Value	Supplemental Screening Value Source	Frequency of Exceedance[1]	EPC Hazard Quotient	Step 3 COPC?	Rationale
Fensulfothion	4.70 - 5.00	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Ethyl p-nitrophenyl phenylphosphorothioate	0.94 - 1.00	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Fenthion	0.94 - 1.00	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
gamma-BHC (Lindane)	0.050 - 0.056	0 / 15	--	--	--	--	0.016	--	--	-- / --	3.50	NO	Not detected
gamma-Chlordane	0.050 - 0.056	2 / 15	0.060	IR69-GW15-10A	0.0391	95% KM (t) UCL	0.0040	--	--	2 / 15	9.8	**YES**	HQ greater than one
Heptachlor	0.050 - 0.056	0 / 15	--	--	--	--	0.0036	--	--	-- / --	15.6	NO	Not detected
Heptachlor epoxide	0.050 - 0.056	1 / 15	0.079	IR69-GW15-10A	0.0447	95% Chebyshev UCL[3]	0.0036	--	--	1 / 15	12.4	**YES**	HQ greater than one
Malathion	0.94 - 1.00	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Merphos	1.40 - 1.50	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Methoxychlor	0.50 - 0.56	1 / 15	0.32	IR69-GW04-10A	0.283	95% Chebyshev UCL[3]	0.030	--	--	1 / 15	9.4	**YES**	HQ greater than one
Methyl parathion	0.47 - 0.50	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Mevinphos	1.90 - 2.00	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Monocrotophos	9.40 - 10.0	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Naled	4.70 - 5.00	0 / 14	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Parathion	0.94 - 1.00	0 / 15	--	--	--	--	0.18	--	--	-- / --	5.62	NO	Not detected
Ronnel	0.94 - 1.00	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Sulfotepp	0.47 - 0.50	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Tetrachlorvinphos	0.94 - 1.00	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Thionazin	0.94 - 1.00	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Tokuthion (Prothiophos)	0.94 - 1.00	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Toxaphene	2.50 - 2.80	0 / 15	--	--	--	--	0.0020	--	--	-- / --	1,400	NO	Not detected
Trichloronate	0.94 - 1.00	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Inorganics (UG/L)													
Antimony	10.0 - 10.0	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Beryllium	5.00 - 5.00	0 / 15	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Silver	5.00 - 5.00	0 / 15	--	--	--	--	0.23	--	--	-- / --	21.7	NO	Not detected
Vanadium	20.0 - 20.0	8 / 15	26.0	IR69-GW02-10A	8.5	95% KM (BCA) UCL	NSV	50000	Buchman, 2008[2]	-- / --	0.00017	NO	Supplemental HQ less than one
Dissolved Metals (UG/L)													
Antimony, Dissolved	10.0 - 10.0	0 / 4	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Beryllium, Dissolved	5.00 - 5.00	0 / 4	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Cobalt, Dissolved	5.00 - 5.00	0 / 4	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Copper, Dissolved	5.00 - 5.00	0 / 4	--	--	--	--	3.10	--	--	-- / --	1.61	NO	Not detected
Silver, Dissolved	5.00 - 5.00	0 / 4	--	--	--	--	0.23	--	--	-- / --	21.7	NO	Not detected
Vanadium, Dissolved	20.0 - 20.0	0 / 4	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected

NOTES

The categorized analytes were retained for quantitative refinement in the Step 3 table.

[1] - Count of detected samples exceeding or equaling ESV

[2] Supplemental screening value based on freshwater

[3]ProUCL Version 4 does not offer a calculated UCL when there are too few unique detected results. In these cases, a 95% Chebyshev UCL using a proxy value of 1/2 the detection limit for NDs is provided.

COPC - Contaminant of potential concern

HQ - Hazard quotient

NSV - No Screening Value

µg/L - Micrograms per liter

Generated By: Kelly Taylor/DFW

Checked By: Sara Kent/ATL

TABLE H-13

Site 69 Sediment Screen - Step 3

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Exposure Point Concentration	EPC Basis[1]	Ecological Screening Value	Supplemental Screening Value	Supplemental Screening Value Source	Frequency of Exceedance[2]	EPC Hazard Quotient	Step 3 COPC?	Rationale
Volatile Organic Compounds (UG/KG)													
1,1,1-Trichloroethane	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,1,2,2-Tetrachloroethane	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,1,2-Trichloroethane	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,1-Dichloroethane	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,1-Dichloroethene	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,2,4-Trichlorobenzene	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,2-Dibromo-3-chloropropane	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,2-Dibromoethane	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,2-Dichlorobenzene	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,2-Dichloroethane	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,2-Dichloropropane	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,3-Dichlorobenzene	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
1,4-Dichlorobenzene	4.80 - 23.0	1 / 3	1.10	IR69-SD02-10A	1.10	Maximum	NSV	90	WADE, 2001	-- / --	0.012	NO	Maximum-based HQ less than one
2-Butanone	12.0 - 58.0	1 / 3	66.0	IR69-SD02-10A	33.7	Arithmetic mean	NSV	--	--	-- / --	NSV	NO	Common lab contaminant
2-Hexanone	12.0 - 58.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Methyl-2-pentanone	12.0 - 58.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Acetone	-- - --	3 / 3	760	IR69-SD02-10A	470	Arithmetic mean	NSV	9.9	USEPA, 2003	-- / --	47.5	NO	Common lab contaminant
Benzene	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Bromodichloromethane	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Bromoform	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Bromomethane	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Carbon disulfide	4.80 - 4.80	2 / 3	17.0	IR69-SD01D-10A	9.5	Arithmetic mean	NSV	23.9	USEPA, 2003	-- / --	0.4	NO	Arthimetic-based HQ less than one
Carbon tetrachloride	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Chlorobenzene	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Chloroethane	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Chloroform	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Chloromethane	4.80 - 20.0	1 / 3	2.50	IR69-SD01D-10A	2.50	Maximum	NSV	--	--	-- / --	NSV	NO	Uncertainty, no screening value
cis-1,2-Dichloroethene	4.80 - 20.0	1 / 3	51.0	IR69-SD01D-10A	21.1	Arithmetic mean	NSV	--	--	-- / --	NSV	NO	Uncertainty, no screening value
cis-1,3-Dichloropropene	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Cyclohexane	4.80 - 20.0	1 / 3	1.80	IR69-SD01D-10A	1.80	Maximum	NSV	--	--	-- / --	NSV	NO	Uncertainty, no screening value
Dibromochloromethane	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dichlorodifluoromethane (Freon-12)	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Ethylbenzene	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Isopropylbenzene	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
m- and p-Xylene	9.60 - 40.0	1 / 3	0.77	IR69-SD01D-10A	0.77	Maximum	NSV	433	USEPA, 2003	-- / --	0.002	NO	Maximum-based HQ less than one
Methyl acetate	-- - --	3 / 3	570	IR69-SD02-10A	243	Arithmetic mean	NSV	--	--	-- / --	NSV	NO	Uncertainty, no screening value
Methylcyclohexane	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Methylene chloride	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Methyl-tert-butyl ether (MTBE)	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
o-Xylene	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Styrene	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Tetrachloroethene	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Toluene	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
trans-1,2-Dichloroethene	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
trans-1,3-Dichloropropene	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Trichloroethene	4.80 - 20.0	1 / 3	2.80	IR69-SD01D-10A	2.80	Maximum	NSV	--	--	-- / --	NSV	NO	Uncertainty, no screening value
Trichlorofluoromethane(Freon-11)	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Vinyl chloride	4.80 - 20.0	1 / 3	6.00	IR69-SD01D-10A	6.00	Maximum	NSV	202	USEPA, 2003	-- / --	0.030	NO	Maximum-based HQ less than one
Xylene, total	4.80 - 23.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Semivolatile Organic Compounds (UG/KG)													
1,1-Biphenyl	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2,2'-Oxybis(1-chloropropane)	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2,4,5-Trichlorophenol	440 - 1,400	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2,4,6-Trichlorophenol	440 - 1,400	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2,4-Dichlorophenol	440 - 1,400	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2,4-Dimethylphenol	440 - 1,400	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected

TABLE H-13

Site 69 Sediment Screen - Step 3

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Exposure Point Concentration	EPC Basis[1]	Ecological Screening Value	Supplemental Screening Value	Supplemental Screening Value Source	Frequency of Exceedance[2]	EPC Hazard Quotient	Step 3 COPC?	Rationale
2,4-Dinitrophenol	440 - 1,400	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2,4-Dinitrotoluene	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2,6-Dinitrotoluene	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2-Chloronaphthalene	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2-Chlorophenol	440 - 1,400	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2-Methylphenol	440 - 1,400	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2-Nitroaniline	440 - 1,400	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
2-Nitrophenol	440 - 1,400	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
3,3'-Dichlorobenzidine	230 - 740	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
3-Nitroaniline	440 - 1,400	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4,6-Dinitro-2-methylphenol	440 - 1,400	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Bromophenyl-phenylether	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Chloro-3-methylphenol	440 - 1,400	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Chloroaniline	440 - 1,400	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Chlorophenyl-phenylether	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Methylphenol	440 - 1,400	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Nitroaniline	440 - 1,400	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
4-Nitrophenol	440 - 1,400	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Acenaphthylene	11.0 - 36.0	0 / 3	--	--	--	--	5.87	--	--	-- / --	6.13	NO	Not detected
Acetophenone	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Atrazine	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Benzaldehyde	230 - 230	2 / 3	400	IR69-SD02-10A	252	Arithmetic mean	NSV	--	--	-- / --	NSV	NO	Uncertainty, no screening value
bis(2-Chloroethoxy)methane	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
bis(2-Chloroethyl)ether	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
bis(2-Ethylhexyl)phthalate	230 - 710	1 / 3	400	IR69-SD01D-10A	290	Arithmetic mean	NSV	182	USEPA, 2003	-- / --	1.59	NO	Low magnitude of exceedance
Butylbenzylphthalate	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Caprolactam	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Carbazole	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dibenz(a,h)anthracene	11.0 - 36.0	0 / 3	--	--	--	--	6.22	--	--	-- / --	5.79	NO	Not detected
Dibenzofuran	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Diethylphthalate	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dimethoate	93.0 - 390	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dimethyl phthalate	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Di-n-butylphthalate	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Di-n-octylphthalate	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Famphur	93.0 - 390	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Hexachlorobenzene	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Hexachlorobutadiene	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Hexachlorocyclopentadiene	230 - 740	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Hexachloroethane	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Isophorone	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Naphthalene	11.0 - 36.0	0 / 3	--	--	--	--	34.6	--	--	-- / --	1.04	NO	Not detected
n-Nitroso-di-n-propylamine	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
n-Nitrosodiphenylamine	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Nitrobenzene	230 - 740	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Pentachlorophenol	440 - 1,400	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Phenol	440 - 1,400	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Phorate	46.0 - 190	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Pesticide/Polychlorinated Biphenyls (UG/KG)													
4,4'-DDD	4.40 - 4.40	2 / 3	13.0	IR69-SD01D-10A	9.4	Arithmetic mean	1.22	--	--	2 / 3	10.7	**YES**	Arthimetic-based HQ above one; no food chain effects
4,4'-DDE	-- - --	3 / 3	14.0	IR69-SD02-10A	7.95	Arithmetic mean	2.07	--	--	2 / 3	6.76	**YES**	Arthimetic-based HQ above one; no food chain effects
4,4'-DDT	-- - --	2 / 2	5.50	IR69-SD01D-10A	5.00	Arithmetic mean	1.19	--	--	2 / 2	4.62	**YES**	Arthimetic mean-based HQ above one; no food chain effects
Aldrin	2.30 - 35.0	1 / 3	2.30	IR69-SD01D-10A	2.30	Maximum	NSV	2.0	USEPA, 2003	-- / --	1.15	NO	Low magnitude of exceedance; no food chain effects
alpha-BHC	2.30 - 35.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected

TABLE H-13

Site 69 Sediment Screen - Step 3

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Exposure Point Concentration	EPC Basis[1]	Ecological Screening Value	Supplemental Screening Value	Supplemental Screening Value Source	Frequency of Exceedance[2]	EPC Hazard Quotient	Step 3 COPC?	Rationale
alpha-Chlordane	35.0 - 35.0	2 / 3	6.00	IR69-SD01D-10A	6.00	Maximum	0.50	--	--	2 / 3	12.0	**YES**	Maximum-based HQ above one; no food chain effects
Aroclor-1016	32.0 - 500	0 / 3	--	--	--	--	21.6	--	--	-- / --	23.1	NO	Not detected
Aroclor-1221	45.0 - 710	0 / 3	--	--	--	--	21.6	--	--	-- / --	32.9	NO	Not detected
Aroclor-1232	23.0 - 350	0 / 3	--	--	--	--	21.6	--	--	-- / --	16.2	NO	Not detected
Aroclor-1242	23.0 - 350	0 / 3	--	--	--	--	21.6	--	--	-- / --	16.2	NO	Not detected
Aroclor-1248	23.0 - 350	0 / 3	--	--	--	--	21.6	--	--	-- / --	16.2	NO	Not detected
Aroclor-1254	23.0 - 350	0 / 3	--	--	--	--	21.6	--	--	-- / --	16.2	NO	Not detected
Aroclor-1260	23.0 - 350	0 / 3	--	--	--	--	21.6	--	--	-- / --	16.2	NO	Not detected
Azinphos methyl	46.0 - 190	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
beta-BHC	18.0 - 18.0	2 / 3	2.30	IR69-SD01D-10A	2.30	Maximum	NSV	--	--	-- / --	NSV	NO	Uncertainty, no screening value
Bolstar	46.0 - 190	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Chlorpyrifos	46.0 - 190	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Coumaphos	46.0 - 190	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
delta-BHC	2.30 - 35.0	1 / 3	6.70	IR69-SD01D-10A	6.70	Maximum	NSV	--	--	-- / --	NSV	NO	Uncertainty, no screening value
Demeton-O	120 - 490	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Demeton-S	120 - 490	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Diazinon	46.0 - 190	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dichlorvos	93.0 - 390	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Dieldrin	69.0 - 69.0	2 / 3	2.70	IR69-SD01D-10A	2.70	Maximum	0.020	--	--	2 / 3	135	**YES**	Maximum-based HQ above one; no food chain effects
Disulfoton	93.0 - 390	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Endosulfan I	35.0 - 35.0	2 / 3	13.0	IR69-SD01D-10A	10.5	Arithmetic mean	NSV	2.9	USEPA, 2006b	-- / --	3.62	**YES**	Arithmetic-based HQ above one; no food chain effects
Endosulfan II	4.40 - 69.0	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Endosulfan sulfate	-- - --	3 / 3	170	IR69-SD02-10A	61	Arithmetic mean	NSV	5.4	USEPA, 2006b	-- / --	11	**YES**	Arithmetic-based HQ above one; no food chain effects
Endrin	14.0 - 69.0	1 / 3	0.97	IR69-SD03-10A	0.97	Maximum	0.020	--	--	1 / 3	48.5	**YES**	Maximum-based HQ above one; no food chain effects
Endrin aldehyde	4.40 - 4.40	2 / 3	560	IR69-SD02-10A	189	Arithmetic mean	NSV	480	USEPA, 2003	-- / --	0.39	NO	Low magnitude of exceedance
Endrin ketone	-- - --	3 / 3	130	IR69-SD02-10A	46.2	Arithmetic mean	NSV	--	--	-- / --	NSV	NO	Uncertainty, no screening value
Ethoprop	24.0 - 100	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Fensulfothion	240 - 1,000	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Ethyl p-nitrophenyl phenylphosphorothioate	46.0 - 190	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Fenthion	46.0 - 190	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
gamma-BHC (Lindane)	7.40 - 35.0	1 / 3	2.00	IR69-SD03-10A	2.00	Maximum	0.32	--	--	1 / 3	6.25	**YES**	Maximum-based HQ above one; no food chain effects
gamma-Chlordane	-- - --	3 / 3	9.10	IR69-SD01D-10A	4.90	Arithmetic mean	NSV	--	--	-- / --	NSV	NO	Uncertainty, no screening value
Heptachlor	35.0 - 35.0	2 / 3	6.00	IR69-SD01D-10A	6.00	Maximum	NSV	0.6	USEPA, 2003	-- / --	10	**YES**	Maximum-based HQ above one; no food chain effects
Heptachlor epoxide	2.30 - 35.0	1 / 3	3.70	IR69-SD01D-10A	3.70	Maximum	NSV	2.47	USEPA, 2006b	-- / --	1.50	NO	Low magnitude of exceedance; no food chain effects
Malathion	46.0 - 190	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Merphos	70.0 - 290	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Methoxychlor	23.0 - 74.0	1 / 3	150	IR69-SD02-10A	66.2	Arithmetic mean	NSV	13.6	USEPA, 2003	-- / --	4.87	**YES**	Arithmetic-based HQ above one; no food chain effects
Methyl parathion	24.0 - 100	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Mevinphos	93.0 - 390	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Monocrotophos	1,900 - 1,900	1 / 2	420	IR69-SD03-10A	420	Maximum	NSV	--	--	-- / --	NSV	NO	Uncertainty, no screening value
Naled	240 - 1,000	0 / 2	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Parathion	46.0 - 190	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Ronnel	46.0 - 190	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Sulfotepp	24.0 - 100	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Tetrachlorvinphos	46.0 - 190	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Thionazin	46.0 - 190	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Tokuthion (Prothiophos)	46.0 - 190	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Toxaphene	110 - 1,700	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Trichloronate	46.0 - 190	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Inorganics (MG/KG)													
Aluminum	-- - --	3 / 3	8,650	IR69-SD02-10A	5,530	Arithmetic mean	NSV	58,000	USEPA, 1996	-- / --	0.10	NO	Supplemental HQ less than one

TABLE H-13

Site 69 Sediment Screen - Step 3

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Range of Non-Detect Values	Frequency of Detection	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Exposure Point Concentration	EPC Basis[1]	Ecological Screening Value	Supplemental Screening Value	Supplemental Screening Value Source	Frequency of Exceedance[2]	EPC Hazard Quotient	Step 3 COPC?	Rationale
Antimony	4.10 - 4.10	2 / 3	5.30	IR69-SD02-10A	2.95	Arithmetic mean	2.00	--	--	1 / 3	1.48	NO	Low magnitude of exceedance
Barium	-- - --	3 / 3	36.5	IR69-SD01D-10A	19.0	Arithmetic mean	NSV	--	--	-- / --	NSV	NO	Uncertainty, no screening value
Beryllium	0.64 - 0.64	2 / 3	0.67	IR69-SD02-10A	0.42	Arithmetic mean	NSV	--	--	-- / --	NSV	NO	Uncertainty, no screening value
Cadmium	0.64 - 2.10	0 / 3	--	--	--	--	0.68	--	--	-- / --	3.11	NO	Not detected
Cobalt	0.64 - 2.10	1 / 3	0.69	IR69-SD01D-10A	0.69	Maximum	NSV	50	USEPA, 2003	-- / --	0.01	NO	Supplemental HQ less than one
Iron	-- - --	3 / 3	3,100	IR69-SD01D-10A	1,738	Arithmetic mean	NSV	20,000	USEPA, 2006b	-- / --	0.09	NO	Supplemental HQ less than one
Manganese	-- - --	3 / 3	98.2	IR69-SD01D-10A	36.1	Arithmetic mean	NSV	460	USEPA, 2006b	-- / --	0.08	NO	Supplemental HQ less than one
Mercury	0.040 - 0.14	1 / 3	0.19	IR69-SD01D-10A	0.09	Arithmetic mean	0.13	--	--	1 / 3	0.72	NO	HQ less than one
Selenium	0.64 - 2.10	1 / 3	0.94	IR69-SD02-10A	0.77	Arithmetic mean	NSV	2	USEPA, 2006b	-- / --	0.39	NO	Supplemental HQ less than one
Silver	0.64 - 2.10	0 / 3	--	--	--	--	0.73	--	--	-- / --	2.86	NO	Not detected
Thallium	1.30 - 4.10	0 / 3	--	--	--	--	NSV	--	--	-- / --	NSV	NO	Not detected
Vanadium	-- - --	3 / 3	12.7	IR69-SD01D-10A	7.9	Arithmetic mean	NSV	--	--	-- / --	NSV	NO	Uncertainty, no screening value

NOTES

The categorized analytes were retained for quantitative refinement in the Step 3 table.

[1] - Because of the limited sample size, an upper confidence limit of the mean could not be calculated and the EPC is represented by the lowest of the arithemitic mean or maximum detection.

[2] - Count of detected samples exceeding or equaling Screening Value

COPC - Contaminant of potential concern

HQ - Hazard quotient

mg/kg - Milligrams per kilogram

NSV - No Screening Value

µg/kg - Micrograms per kilogram

Generated By: Kelly Taylor/DFW

Checked By: Sara Kent/ATL

Table H-14

Hazard Quotients Based on Maximum Concentrations for Wildlife Receptors Exposed to Bioaccumulative Surface Soil and Surface Water Analytes at Site 69 - Step 3

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Short-tailed shrew		White-footed mouse		White-tailed deer		Red fox		American robin		Eastern screech-owl	
	NOAEL	LOAEL	NOAEL	LOAEL	NOAEL	LOAEL	NOAEL	LOAEL	NOAEL	LOAEL	NOAEL	LOAEL
Inorganics												
Lead	0.40	0.04	0.10	0.01	<0.01	<0.01	0.03	<0.01	0.46	0.09	0.55	0.11
Mercury	**23.80**	**4.76**	**6.17**	**1.23**	0.24	0.05	0.11	0.06	0.85	0.35	0.79	0.32
Selenium	0.84	0.51	0.49	0.30	0.06	0.04	0.27	0.16	0.50	0.15	0.51	0.15
Zinc	0.14	0.07	0.03	0.02	<0.01	<0.01	0.09	0.02	0.76	0.08	**1.15**	0.13
Pesticides/PCBs												
4,4'-DDE	0.17	0.03	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	0.12	0.01	0.55	0.11
4,4'-DDT	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.79	0.32
alpha-BHC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.51	0.15
beta-BHC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**1.15**	0.13
Endrin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	<0.01	0.06	0.01
gamma-BHC (Lindane)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Notes:

Values based on the maximum concentration

HQs in **bold** exceed one

LOAEL - Lowest observable effect level

NOAEL - No observable effect level

Toxicty values and exposure parameters used in the wildlife exposure calculations can be found in **Appendix H-2**.

Generated By: Kelly Taylor/DFW

Checked By: Sara Kent/ATL

Table H-15

Hazard Quotients Based on the EPC for Wildlife Receptors Exposed to Bioaccumulative Surface Soil and Surface Water Analytes at Site 69 - Step 3

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Short-tailed shrew		White-footed mouse	
	NOAEL	LOAEL	NOAEL	LOAEL
Inorganics				
Mercury	**14.59**	**2.92**	**3.78**	0.76

Notes:

HQs in **bold** exceed one

LOAEL - Lowest observable effect level

NOAEL - No observable effect level

Toxicty values and exposure parameters used in the wildlife exposure calculations can be found in **Appendix H-2**.

Generated By: Kelly Taylor/DFW

Checked By: Sara Kent/ATL

Table H-16

Hazard Quotients Based on Maximum Concentrations for Wildlife Receptors Exposed to Bioaccumulative Sediment and Surface Water Analytes at Site 69 - Step 3

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Raccoon		American Woodcock*	
	NOAEL	LOAEL	NOAEL	LOAEL
Inorganics				
Lead	0.02	<0.01	**1.05**	0.21
Mercury	0.14	0.09	**1.45**	0.59
Selenium	0.26	0.16	0.56	0.16
Zinc	0.07	0.01	**2.75**	0.30
Pesticides/PCBs				
4,4'-DDD	<0.01	<0.01	<0.01	<0.01
4,4'-DDE	<0.01	<0.01	0.05	<0.01
4,4'-DDT	<0.01	<0.01	<0.01	<0.01
Aldrin	<0.01	<0.01	0.02	<0.01
alpha-Chlordane	<0.01	<0.01	<0.01	<0.01
beta-BHC	<0.01	<0.01	<0.01	<0.01
delta-BHC	<0.01	<0.01	<0.01	<0.01
Dieldrin	<0.01	<0.01	<0.01	<0.01
Endosulfan I	<0.01	<0.01	<0.01	<0.01
Endrin	<0.01	<0.01	0.13	0.03
gamma-BHC (Lindane)	<0.01	<0.01	<0.01	<0.01
Heptachlor	<0.01	<0.01	<0.01	<0.01
Heptachlor epoxide	<0.01	<0.01	<0.01	<0.01
Methoxychlor	<0.01	<0.01	<0.01	<0.01

Notes:

* American Woodcock was assumed to forage for invertebrates in dry sediments.

HQs in **bold** exceed one

LOAEL - Lowest observable effect level

NOAEL - No observable effect level

NA - Not applicable/available

Toxicty values and exposure parameters used in the wildlife exposure calculations can be found in **Appendix H-2**.

Generated By: Kelly Taylor/DFW

Checked By: Sara Kent/ATL

StationID	IR69-IS01	IR69-IS01	IR69-IS02	IR69-IS03	IR69-IS04	IR69-IS05	IR69-IS06	MR02-IR69-SS01	MR02-IR69-SS01	MR02-IR69-SS02	MR02-IR69-SS03
SampleID	IR69-SS01-10A	IR69-SS01D-10A	IR69-SS02-10A	IR69-SS03-10A	IR69-SS04-10A	IR69-SS05-10A	IR69-SS06-10A	MR02-IR69-SS01-10A	MR02-IR69-SS01D-10A	MR02-IR69-SS02-10A	MR02-IR69-SS03-10A
SampleDate	3/4/2010	3/4/2010	2/28/2010	3/4/2010	3/4/2010	3/4/2010	3/4/2010	3/4/2010	3/4/2010	3/13/2010	3/13/2010
AnalyteName											
VOA(UG/KG)											
1,1,1-Trichloroethane	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 UJ	7.1 U	5.6 U	6.6 U	340 U	NS
1,1,2,2-Tetrachloroethane	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 U	7.1 U	5.6 U	6.6 U	340 U	NS
1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 UJ	7.1 U	5.6 U	6.6 U	340 U	NS
1,1,2-Trichloroethane	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 U	7.1 U	5.6 U	6.6 U	340 U	NS
1,1-Dichloroethane	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 UJ	7.1 U	5.6 U	6.6 U	340 U	NS
1,1-Dichloroethene	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 UJ	7.1 U	5.6 U	6.6 U	340 U	NS
1,2,4-Trichlorobenzene	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 U	7.1 U	5.6 U	6.6 U	340 U	NS
1,2-Dibromo-3-chloropropane	6.2 UJ	6.3 UJ	3.7 U	5.5 UJ	6.2 UJ	8.5 UJ	7.1 UJ	5.6 UJ	6.6 UJ	340 U	NS
1,2-Dibromoethane	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 U	7.1 U	5.6 U	6.6 U	340 U	NS
1,2-Dichlorobenzene	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 U	7.1 U	5.6 U	6.6 U	340 U	NS
1,2-Dichloroethane	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 UJ	7.1 U	5.6 U	6.6 U	340 U	NS
1,2-Dichloropropane	6.2 UJ	6.3 UJ	3.7 UJ	5.5 UJ	6.2 UJ	8.5 UJ	7.1 UJ	5.6 UJ	6.6 UJ	340 UJ	NS
1,3-Dichlorobenzene	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 U	7.1 U	5.6 U	6.6 U	340 U	NS
1,4-Dichlorobenzene	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 U	7.1 U	5.6 U	6.6 U	340 U	NS
2-Butanone	**25 J**	**23 J**	9.2 U	14 U	**110 J**	**27 J**	18 UJ	14 U	16 U	850 U	NS
2-Hexanone	15 UJ	16 UJ	9.2 U	14 UJ	16 UJ	21 UJ	18 UJ	14 UJ	16 UJ	850 U	NS
4-Methyl-2-pentanone	15 UJ	16 UJ	9.2 U	14 UJ	16 UJ	21 UJ	18 UJ	14 UJ	16 UJ	850 U	NS
Acetone	**410 J**	**560 J**	**93**	**230 J**	**470 J**	**840**	**520 J**	**360 J**	**390 J**	850 U	NS
Benzene	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 UJ	7.1 U	5.6 U	6.6 U	340 U	NS
Bromodichloromethane	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 UJ	7.1 U	5.6 U	6.6 U	340 U	NS
Bromoform	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 U	7.1 U	5.6 U	6.6 U	340 U	NS
Bromomethane	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 UJ	7.1 U	5.6 U	6.6 U	340 U	NS
Carbon disulfide	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 UJ	7.1 U	5.6 U	6.6 U	340 U	NS
Carbon tetrachloride	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 UJ	7.1 U	5.6 U	6.6 U	340 U	NS
Chlorobenzene	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 U	7.1 U	5.6 U	6.6 U	340 U	NS
Chloroethane	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 UJ	7.1 U	5.6 U	6.6 U	340 U	NS
Chloroform	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 UJ	7.1 U	5.6 U	6.6 U	340 U	NS
Chloromethane	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 UJ	7.1 U	5.6 U	6.6 U	340 U	NS
cis-1,2-Dichloroethene	6.2 U	6.3 U	3.7 UJ	5.5 U	6.2 U	8.5 UJ	7.1 U	5.6 U	6.6 U	340 U	NS
cis-1,3-Dichloropropene	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 UJ	7.1 U	5.6 U	6.6 U	340 U	NS
Cyclohexane	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 U	7.1 U	5.6 U	6.6 U	340 U	NS
Dibromochloromethane	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 U	7.1 U	5.6 U	6.6 U	340 U	NS
Dichlorodifluoromethane (Freon-12)	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 UJ	7.1 U	5.6 U	6.6 U	340 U	NS
Ethylbenzene	6.2 U	6.3 U	3.7 U	5.5 U	**3.3 J**	8.5 U	7.1 U	5.6 U	6.6 U	340 U	NS
Isopropylbenzene	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 U	7.1 U	5.6 U	6.6 U	340 U	NS
m- and p-Xylene	12 U	13 U	7.3 U	11 U	**11 J**	17 U	14 U	11 U	13 U	680 U	NS
Methyl acetate	**110 J**	**230 J**	**87**	**5.2 J**	**27 J**	**170**	**18 J**	**9.9 J**	**54 J**	**710**	NS
Methylcyclohexane	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 U	7.1 U	5.6 U	6.6 U	340 U	NS
Methylene chloride	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 UJ	7.1 U	5.6 U	6.6 U	340 U	NS
Methyl-tert-butyl ether (MTBE)	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 UJ	7.1 U	5.6 U	6.6 U	340 U	NS
o-Xylene	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 U	7.1 U	5.6 U	6.6 U	340 U	NS
Styrene	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 U	7.1 U	5.6 U	6.6 U	340 U	NS
Tetrachloroethene	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 U	7.1 U	5.6 U	6.6 U	340 U	NS
Toluene	6.2 U	6.3 U	3.7 U	5.5 U	**58**	8.5 U	7.1 U	8.8 U	6.6 U	340 U	NS
trans-1,2-Dichloroethene	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 UJ	7.1 U	5.6 U	6.6 U	340 U	NS
trans-1,3-Dichloropropene	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 U	7.1 U	5.6 U	6.6 U	340 U	NS
Trichloroethene	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 UJ	7.1 U	5.6 U	6.6 U	340 U	NS
Trichlorofluoromethane(Freon-11)	6.2 U	6.3 U	3.7 UJ	5.5 U	6.2 U	8.5 UJ	7.1 U	5.6 U	6.6 U	340 U	NS
Vinyl chloride	6.2 U	6.3 U	3.7 U	5.5 U	6.2 U	8.5 UJ	7.1 U	5.6 U	6.6 U	340 U	NS
Xylene, total	6.2 U	6.3 U	3.7 U	5.5 U	**14 J**	8.5 U	7.1 U	5.6 U	6.6 U	340 U	NS
SVOA(UG/KG)											
1,1-Biphenyl	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS
2,2'-Oxybis(1-chloropropane)	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS
2,4,5-Trichlorophenol	500 U	500 U	380 U	450 U	450 U	630 U	480 UJ	430 U	420 U	400 U	NS
2,4,6-Trichlorophenol	500 U	500 U	380 U	450 U	450 U	630 U	480 UJ	430 U	420 U	400 U	NS
2,4-Dichlorophenol	500 U	500 U	380 U	450 U	450 U	630 U	480 UJ	430 U	420 U	400 U	NS
2,4-Dimethylphenol	500 U	500 U	380 U	450 U	450 U	630 U	480 UJ	430 U	420 U	400 U	NS
2,4-Dinitrophenol	500 U	500 U	380 U	450 U	450 U	630 U	480 UJ	430 U	420 U	400 U	NS
2,4-Dinitrotoluene	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	580 U
2,6-Dinitrotoluene	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	580 U
2-Chloronaphthalene	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS

2-Chlorophenol	500 U	500 U	380 U	450 U	450 U	630 U	480 UJ	430 U	420 U	400 U	NS
2-Methylnaphthalene	**1.9 J**	**1.4 J**	9.5 U	**2.2 J**	**1.8 J**	**1.6 J**	**1.2 J**	**1.9 J**	**1.4 J**	**2 J**	NS
2-Methylphenol	500 U	500 U	380 U	450 U	450 U	630 U	480 UJ	430 U	420 U	400 U	NS
2-Nitroaniline	500 U	500 U	380 U	450 U	450 U	630 U	480 U	430 U	420 U	400 U	NS
2-Nitrophenol	500 U	500 U	380 U	450 U	450 U	630 U	480 UJ	430 U	420 U	400 U	NS
3,3'-Dichlorobenzidine	260 U	260 U	200 R	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS
3-Nitroaniline	500 U	500 U	380 UJ	450 U	450 U	630 U	480 U	430 U	420 U	400 U	NS
4,6-Dinitro-2-methylphenol	500 UJ	500 UJ	380 U	450 UJ	450 UJ	630 UJ	480 UJ	430 UJ	420 UJ	400 U	NS
4-Bromophenyl-phenylether	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 UJ	NS
4-Chloro-3-methylphenol	500 U	500 U	380 U	450 U	450 U	630 U	480 UJ	430 U	420 U	400 U	NS
4-Chloroaniline	500 U	500 U	380 UJ	450 U	450 U	630 U	480 U	430 U	420 U	400 U	NS
4-Chlorophenyl-phenylether	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS
4-Methylphenol	500 U	500 U	380 U	450 U	450 U	630 U	480 UJ	430 U	420 U	400 U	NS
4-Nitroaniline	500 U	500 U	380 UJ	450 U	450 U	630 U	480 U	430 U	420 U	400 U	NS
4-Nitrophenol	500 U	500 U	380 U	450 U	450 U	630 U	480 UJ	430 U	420 U	400 U	NS
Acenaphthene	**1 J**	13 U	9.5 U	**1.9 J**	**1.5 J**	16 U	**4.6 J**	**2.1 J**	**1.8 J**	**0.8 J**	NS
Acenaphthylene	13 U	13 U	9.5 U	11 U	11 U	16 U	12 U	11 U	**0.93 J**	10 U	NS
Acetophenone	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS
Anthracene	13 U	**1.2 J**	9.5 U	**1.6 J**	**0.99 J**	16 U	**1.6 J**	**1.4 J**	**1.1 J**	**0.68 J**	NS
Atrazine	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS
Benzaldehyde	**100 J**	**59 J**	**38 J**	**86 J**	**62 J**	**82 J**	**140 J**	**110 J**	**78 J**	**74 J**	NS
Benzo(a)anthracene	**2.6 J**	**3 J**	**1.2 J**	11 U	**0.88 J**	**2.4 J**	12 U	**1.8 J**	**3.2 J**	**3 J**	NS
Benzo(a)pyrene	**1.6 J**	**1.5 J**	**3.2 J**	**1.8 J**	**1.9 J**	**1.4 J**	**1.9 J**	**4.1 J**	**3.7 J**	**1.8 J**	NS
Benzo(b)fluoranthene	**1.4 J**	**2.5 J**	**3 J**	**3.2 J**	**2.1 J**	**2.1 J**	**5.7 J**	**2.1 J**	**2 J**	**3.2 J**	NS
Benzo(g,h,i)perylene	**0.7 J**	**1.1 J**	**1.8 J**	11 U	11 U	16 U	**0.64 J**	**0.82 J**	**0.62 J**	10 U	NS
Benzo(k)fluoranthene	**1.8 J**	**2.7 J**	**2 J**	**3.3 J**	**2.3 J**	**1.8 J**	**3.2 J**	**2 J**	**1.8 J**	**2.8 J**	NS
bis(2-Chloroethoxy)methane	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS
bis(2-Chloroethyl)ether	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS
bis(2-Ethylhexyl)phthalate	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS
Butylbenzylphthalate	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS
Caprolactam	260 U	260 U	200 UJ	230 U	230 U	**81 J**	250 U	220 U	220 U	200 U	NS
Carbazole	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS
Chrysene	**1.9 J**	**2.9 J**	**2.5 J**	**1.3 J**	**1.6 J**	**2.2 J**	12 U	**1.8 J**	**2.1 J**	**3 J**	NS
Dibenz(a,h)anthracene	13 U	13 U	9.5 U	11 U	11 U	16 U	12 U	11 U	11 U	10 U	NS
Dibenzofuran	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS
Diethylphthalate	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS
Dimethoate	110 U	110 U	78 UJ	98 U	94 U	94 U	140 U	99 U	100 U	80 U	NS
Dimethyl phthalate	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS
Di-n-butylphthalate	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS
Di-n-octylphthalate	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS
Famphur	110 U	110 U	78 U	98 U	94 U	94 U	140 U	99 U	100 U	80 U	NS
Fluoranthene	**2.4 J**	**5.8 J**	**3.2 J**	11 U	**2.6 J**	**4.7 J**	12 U	11 U	**3.9 J**	**4.1 J**	NS
Fluorene	13 U	**0.83 J**	9.5 U	11 U	**0.86 J**	16 U	12 U	**1.2 J**	**0.99 J**	**0.59 J**	NS
Hexachlorobenzene	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS
Hexachlorobutadiene	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS
Hexachlorocyclopentadiene	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS
Hexachloroethane	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS
Indeno(1,2,3-cd)pyrene	**0.84 J**	**1.4 J**	**2.1 J**	11 U	**0.75 J**	**1.1 J**	**1 J**	**1.2 J**	**0.97 J**	**0.86 J**	NS
Isophorone	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS
Naphthalene	**2.6 J**	**1.9 J**	9.5 U	**3.2 J**	**2.6 J**	**1.7 J**	**2 J**	**2.6 J**	**1.7 J**	10 U	NS
n-Nitroso-di-n-propylamine	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS
n-Nitrosodiphenylamine	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	NS
Nitrobenzene	260 U	260 U	200 U	230 U	230 U	330 U	250 U	220 U	220 U	200 U	580 U
Pentachlorophenol	500 U	500 U	380 U	450 U	450 U	630 U	480 UJ	430 U	420 U	400 U	NS
Phenanthrene	**2.8 J**	**4.3 J**	**3.4 J**	**3.8 J**	**3.1 J**	**3.1 J**	**3.6 J**	**3 J**	**3.9 J**	**3.2 J**	NS
Phenol	500 U	500 U	380 U	450 U	450 U	630 U	480 UJ	430 U	420 U	400 U	NS
Phorate	53 U	53 U	38 U	48 U	46 U	46 U	68 U	49 U	49 U	39 U	NS
Pyrene	**1.6 J**	**4.4 J**	**2.7 J**	**1.2 J**	**2 J**	**3.6 J**	12 U	**2 J**	**3.5 J**	**3.5 J**	NS
PEST/PCB(UG/KG)											
4,4'-DDD	25 UJ	**3.5 NJ**	3.8 U	**1.4 NJ**	8.9 UJ	**1.9 NJ**	**1.2 NJ**	21 UJ	**2.7 NJ**	20 U	NS
4,4'-DDE	**99 NJ**	**110 NJ**	**1.7 NJ**	**2 NJ**	**3.8 NJ**	**1.3 NJ**	**1.8 NJ**	**73 NJ**	**73 NJ**	**56 NJ**	NS
4,4'-DDT	**45 J**	**56 J**	3.8 R	**1.6 J**	**1.7 J**	**4.8 J**	**3.7 J**	**36 J**	**39 J**	**24 J**	NS
Aldrin	**1.8 J**	13 U	**2**	4.7 U	**0.49 J**	**1.2 J**	**2 J**	11 U	11 U	10 U	NS
alpha-BHC	13 UJ	13 UJ	2 U	4.7 UJ	**2.8 J**	3.3 UJ	**3.1 J**	**1.4 J**	**3.3 J**	10 U	NS
alpha-Chlordane	**1.5 J**	13 U	**1.4 J**	4.7 U	**0.8 J**	**1.1 J**	**0.61 J**	**1.8 J**	**2.5 J**	**10 J**	NS
Aroclor-1016	180 U	180 U	28 U	66 U	65 U	46 U	70 U	160 U	150 U	140 U	NS

Aroclor-1221	260 U	260 U	39 U	93 U	92 U	65 U	99 U	220 U	220 U	200 U	NS
Aroclor-1232	130 U	130 U	20 U	47 U	46 U	33 U	49 U	110 U	110 U	100 U	NS
Aroclor-1242	130 U	130 U	20 U	47 U	46 U	33 U	49 U	110 U	110 U	100 U	NS
Aroclor-1248	130 U	130 U	20 U	47 U	46 U	33 U	49 U	110 U	110 U	100 U	NS
Aroclor-1254	130 U	130 U	20 U	47 U	46 U	33 U	49 U	110 U	110 U	100 U	NS
Aroclor-1260	130 U	130 U	20 U	47 U	46 U	33 U	49 U	110 U	110 U	100 U	NS
Azinphos methyl	53 U	53 U	38 U	48 U	46 U	46 U	68 U	49 U	49 U	39 U	NS
beta-BHC	6.4 UJ	6.4 UJ	0.98 U	2.3 UJ	2.3 UJ	1.6 UJ	2.5 UJ	5.5 UJ	5.5 UJ	**2 J**	NS
Bolstar	53 U	53 U	38 U	48 U	46 U	46 U	68 U	49 U	49 U	39 U	NS
Chlorpyrifos	53 U	53 U	38 U	48 U	46 U	46 U	68 U	49 U	49 U	39 U	NS
Coumaphos	53 U	53 U	38 U	48 U	46 U	46 U	68 U	49 U	49 U	39 U	NS
delta-BHC	13 UJ	13 UJ	2 U	**0.55 J**	4.6 UJ	3.3 UJ	4.9 UJ	11 UJ	11 UJ	**2.1 J**	NS
Demeton-O	130 U	130 U	96 U	120 U	120 U	120 U	170 U	120 U	120 U	99 U	NS
Demeton-S	130 UJ	130 UJ	96 R	120 UJ	120 UJ	120 UJ	170 UJ	120 UJ	120 UJ	99 UJ	NS
Diazinon	53 U	53 U	38 U	48 U	46 U	46 U	68 U	49 U	49 U	39 U	NS
Dichlorvos	110 U	110 U	78 U	98 U	94 U	94 U	140 U	99 U	100 U	80 U	NS
Dieldrin	25 U	25 U	3.8 U	9 U	8.9 U	6.3 U	9.6 U	21 U	21 U	20 U	NS
Disulfoton	110 U	110 U	78 U	98 U	94 U	94 U	140 U	99 U	100 U	80 U	NS
Endosulfan I	13 U	13 U	2 U	**2.3 J**	**0.75 J**	3.3 U	4.9 U	11 U	11 U	10 U	NS
Endosulfan II	25 U	25 U	3.8 U	9 U	8.9 U	6.3 U	**1.9 J**	21 U	21 U	20 U	NS
Endosulfan sulfate	**11 J**	**9.7 J**	**2.8 J**	**30 J**	**8.1 J**	**26 J**	**25**	21 U	**17 J**	**12 J**	NS
Endrin	25 U	25 U	3.8 U	9 U	8.9 U	**3.9 J**	9.6 U	21 U	21 U	20 U	NS
Endrin aldehyde	25 U	25 U	3.8 U	9 U	**25**	**3.1 J**	9.6 U	21 U	21 U	20 U	NS
Endrin ketone	**13 J**	**18 J**	3.8 UJ	**6.5 J**	**11 J**	**9.7 J**	**3.2 J**	**7.2 J**	**20 J**	**11 J**	NS
Ethoprop	27 U	28 U	20 U	25 U	24 U	24 U	35 U	25 U	25 U	20 U	NS
Fensulfothion	270 U	280 U	200 U	250 U	240 U	240 U	350 U	250 U	250 U	200 U	NS
Ethyl p-nitrophenyl phenylphosphorothioate	53 U	53 U	38 U	48 U	46 U	46 U	68 U	49 U	49 U	39 U	NS
Fenthion	53 U	53 U	38 U	48 U	46 U	46 U	68 U	49 U	49 U	39 U	NS
gamma-BHC (Lindane)	13 U	13 U	2 U	4.7 U	**8.4**	3.3 U	**1.8 J**	11 U	11 U	10 U	NS
gamma-Chlordane	13 U	13 U	2 U	4.7 U	**1.3 J**	**1.9 J**	**0.96 J**	11 U	11 U	**2.1 J**	NS
Heptachlor	13 U	13 U	**1.4 J**	**0.52 J**	4.6 U	**1.1 J**	**1.4 J**	11 U	11 U	**1.5 J**	NS
Heptachlor epoxide	13 U	13 U	2 U	4.7 U	4.6 U	3.3 U	4.9 U	11 U	11 U	10 U	NS
Malathion	53 U	53 U	38 U	48 U	46 U	46 U	68 U	49 U	49 U	39 U	NS
Merphos	81 U	81 U	58 U	73 U	70 U	70 U	100 U	74 U	75 U	60 U	NS
Methoxychlor	130 UJ	130 UJ	20 UJ	47 UJ	**11 J**	**4.9 J**	49 UJ	110 UJ	110 UJ	100 UJ	NS
Methyl parathion	27 U	28 U	20 U	25 U	24 U	24 U	35 U	25 U	25 U	20 U	NS
Mevinphos	110 U	110 U	78 U	98 U	94 U	94 U	140 U	99 U	100 U	80 U	NS
Monocrotophos	530 U	530 U	380 UJ	480 U	460 U	460 U	680 U	490 U	490 U	390 U	NS
Naled	270 U	280 U	200 UJ	250 U	240 U	240 U	350 U	250 U	250 U	200 UJ	NS
Parathion	53 U	53 U	38 U	48 U	46 U	46 U	68 U	49 U	49 U	39 U	NS
Ronnel	53 U	53 U	38 U	48 U	46 U	46 U	68 U	49 U	49 U	39 U	NS
Sulfotepp	27 U	28 U	20 U	25 U	24 U	24 U	35 U	25 U	25 U	20 U	NS
Tetrachlorvinphos	53 U	53 U	38 U	48 U	46 U	46 U	68 U	49 U	49 U	39 U	NS
Thionazin	53 U	53 U	38 U	48 U	46 U	46 U	68 U	49 U	49 U	39 U	NS
Tokuthion (Prothiophos)	53 U	53 U	38 U	48 U	46 U	46 U	68 U	49 U	49 U	39 U	NS
Toxaphene	630 U	630 U	95 U	230 U	220 U	160 U	240 U	540 U	530 U	500 U	NS
Trichloronate	53 U	53 U	38 U	48 U	46 U	46 U	68 U	49 U	49 U	39 U	NS
EXPLO(UG/KG)											
1,3,5-Trinitrobenzene	NS	NS	NS	NS	NS	NS	NS	550 UJ	860 UJ	530 UJ	580 UJ
1,3-Dinitrobenzene	NS	NS	NS	NS	NS	NS	NS	550 U	860 U	530 U	580 U
2,4,6-Trinitrotoluene	NS	NS	NS	NS	NS	NS	NS	550 U	860 U	530 U	580 U
2-Amino-4,6-dinitrotoluene	NS	NS	NS	NS	NS	NS	NS	550 U	860 U	530 U	580 U
2-Nitrotoluene	NS	NS	NS	NS	NS	NS	NS	550 U	860 U	530 U	580 U
3-Nitrotoluene	NS	NS	NS	NS	NS	NS	NS	550 U	860 U	530 U	580 U
4-Amino-2,6-dinitrotoluene	NS	NS	NS	NS	NS	NS	NS	550 U	860 U	530 U	580 U
4-Nitrotoluene	NS	NS	NS	NS	NS	NS	NS	550 U	860 U	530 U	580 U
HMX	NS	NS	NS	NS	NS	NS	NS	550 U	860 U	530 U	580 U
Nitroglycerin	NS	NS	NS	NS	NS	NS	NS	880 U	1400 U	850 U	930 U
Perchlorate	NS	NS	NS	NS	NS	NS	NS	2.6 U	2.6 U	2.4 U	2.4 U
PETN	NS	NS	NS	NS	NS	NS	NS	1600 U	2600 U	1600 U	1700 U
RDX	NS	NS	NS	NS	NS	NS	NS	550 U	860 U	530 U	580 U
Tetryl	NS	NS	NS	NS	NS	NS	NS	550 U	860 U	530 U	580 U
METAL(MG/KG)											
Aluminum	**6200**	**5700**	**1100**	**230**	**1310**	**6390**	**3590**	**3550**	**3760**	**2970**	**1140**
Antimony	**0.47 J**	1.4 U	**1.1 J**	1.4 U	1.3 U	1.9 U	1.4 U	2 UJ	2.7 UJ	2.2 UJ	**0.12 J**
Arsenic	**1.3 J**	**0.76 J**	1.1 U	1.4 U	1.3 U	1.9 U	1.4 U	**0.45 J**	**0.44 J**	**0.45 J**	**0.27 J**

Barium	**29 J**	**26.9 J**	**4.6 J**	**2.8 J**	**10.3 J**	**64.5**	**31**	**30.8 J**	**29.6 J**	**13.7 J**	**6.4 J**
Beryllium	**0.12 J**	**0.1 J**	0.57 U	0.69 U	0.66 U	**0.15 J**	**0.08 J**	0.98 U	1.3 U	1.1 U	1.1 U
Cadmium	**0.09 J**	**0.07 J**	0.57 U	0.69 U	0.66 U	0.97 U	0.7 U	0.69 U	0.94 U	0.76 U	0.76 U
Calcium	**1030 J**	**1490 J**	572 UJ	**356 J**	**547 J**	**3860**	**1120**	980 U	1300 U	1100 U	1100 U
Chromium	**8.8**	**8**	**0.96 J**	**0.55 J**	**1.8**	**4.4**	**2.2**	**2.2**	2.7 U	**2.3**	2.2 U
Cobalt	**0.5 J**	**0.44 J**	0.57 U	0.69 U	0.66 U	**0.15 J**	**0.12 J**	9.8 U	13 U	11 U	11 U
Copper	**4**	**4.9**	**0.9**	**2.1**	**1.3**	**3.8**	**2.8**	4.9 U	6.7 U	5.4 U	5.4 U
Iron	**4960**	**4090**	**606**	**174**	**544**	**2160**	**909**	**1030**	**1110**	**977**	**469**
Lead	**8.8**	**7.5**	**3.9**	**2.3**	**6.8**	**15.9**	**8**	**7.4**	**7.7**	**8.4**	**4**
Magnesium	**468 J**	**473 J**	572 U	**76.8 J**	**107 J**	**551 J**	**248 J**	980 U	1300 U	1100 U	1100 U
Manganese	**49.3 J**	**81.1 J**	**24.8 J**	**16.1**	**15.6**	**347**	**87.3**	**57.2**	**48.4**	**60.4**	**12**
Mercury	**0.07 J**	**0.18 J**	**0.03 J**	**0.04 J**	**0.08**	**0.31**	**0.11**	**0.03 J**	**0.04 J**	**0.02 J**	**0.03 J**
Nickel	**1.7**	**1.5**	0.57 UJ	0.69 U	**0.35 J**	**2.2**	**1.6**	7.9 UJ	11 UJ	8.6 UJ	8.7 UJ
Potassium	**500 J**	**533 J**	**62.6 J**	**48 J**	**107 J**	**238 J**	**164 J**	**197 J**	**170 J**	**107 J**	**63.8 J**
Selenium	**0.86**	0.7 U	0.57 U	0.69 U	0.66 U	0.97 U	0.7 U	**0.11 J**	1.3 U	**0.13 J**	1.1 U
Silver	0.76 U	0.7 U	0.57 U	0.69 U	0.66 U	0.97 U	0.7 U	2 U	2.7 U	2.2 U	2.2 U
Sodium	**215 J**	**205 J**	**41.8 J**	**162 J**	**151 J**	**262 J**	**197 J**	980 U	1300 U	1100 U	1100 U
Thallium	1.5 U	1.4 U	1.1 U	1.4 U	1.3 U	1.9 U	1.4 U	**0.05 J**	**0.04 J**	**0.03 J**	0.54 U
Vanadium	**12.1**	**10.5**	**2.1 J**	**0.69 J**	**3.2**	**7.1**	**3.3**	**3.9 J**	**4.2 J**	**3.9 J**	**2.2 J**
Zinc	**10.4**	**10.2**	**2.3**	**3.5**	**3.2**	**14.3**	**10.6**	**14.4**	**13.3**	**11.1**	4.4 U

MR02-IR69-SS04 MR02-IR69-SS04-10A 3/13/2010	MR02-IR69-SS05 MR02-IR69-SS05-10A 3/13/2010	MR02-IR69-SS06 MR02-IR69-SS06-10A 3/13/2010
5.4 UJ	4.7 R	13 UJ
5.4 UJ	4.7 UJ	13 UJ
5.4 UJ	4.7 R	13 UJ
5.4 UJ	4.7 UJ	13 UJ
5.4 UJ	4.7 R	13 UJ
5.4 UJ	4.7 R	13 UJ
5.4 UJ	4.7 UJ	**1.1 J**
5.4 UJ	4.7 UJ	13 UJ
5.4 UJ	4.7 UJ	13 UJ
5.4 UJ	4.7 UJ	13 UJ
5.4 UJ	4.7 R	13 UJ
5.4 UJ	4.7 R	13 UJ
5.4 UJ	4.7 UJ	13 UJ
5.4 UJ	4.7 UJ	13 UJ
13 U	12 R	31 UJ
13 UJ	12 UJ	31 UJ
13 UJ	12 UJ	31 UJ
210 J	**420 J**	**730 J**
5.4 UJ	4.7 R	13 UJ
5.4 UJ	4.7 R	13 UJ
5.4 UJ	4.7 UJ	13 UJ
5.4 UJ	4.7 R	13 UJ
5.4 UJ	4.7 R	13 UJ
5.4 UJ	4.7 R	13 UJ
5.4 UJ	4.7 UJ	13 UJ
5.4 UJ	4.7 R	13 UJ
5.4 UJ	4.7 R	13 UJ
5.4 UJ	4.7 R	13 UJ
5.4 UJ	4.7 R	13 UJ
0.44 J	**0.44 J**	13 UJ
5.4 UJ	4.7 UJ	13 UJ
5.4 UJ	4.7 R	13 UJ
5.4 UJ	4.7 UJ	13 UJ
5.4 UJ	4.7 UJ	13 UJ
11 UJ	9.4 UJ	25 UJ
4.7 J	**35 J**	**350**
5.4 UJ	4.7 UJ	13 UJ
5.4 UJ	4.7 R	13 UJ
5.4 UJ	4.7 R	13 UJ
5.4 UJ	4.7 UJ	13 UJ
5.4 UJ	4.7 UJ	13 UJ
5.4 UJ	4.7 UJ	13 UJ
5.4 U	4.7 U	13 U
5.4 UJ	4.7 R	13 UJ
5.4 UJ	4.7 UJ	13 UJ
5.4 UJ	4.7 R	13 UJ
5.4 UJ	4.7 R	13 UJ
5.4 UJ	4.7 R	13 UJ
5.4 UJ	4.7 UJ	13 UJ
220 U	200 U	210 U
220 U	200 U	210 U
420 U	390 U	410 U
420 U	390 U	410 U
420 U	390 U	410 U
420 U	390 U	410 U
420 U	390 U	410 U
220 U	200 U	210 U
220 U	200 U	210 U
220 U	200 U	210 U

420 U	390 U	410 U
11 U	**1.9 J**	**3.6 J**
420 U	390 U	410 U
420 U	390 U	410 U
420 U	390 U	410 U
220 U	200 U	210 U
420 U	390 U	410 U
420 U	390 U	410 U
220 UJ	200 UJ	210 UJ
420 U	390 U	410 U
420 U	390 U	410 U
220 U	200 U	210 U
420 U	390 U	410 U
420 U	390 U	410 U
420 U	390 U	410 U
1.8 J	**2.3 J**	**1.5 J**
1.1 J	9.9 U	**1.1 J**
220 U	200 U	210 U
1.6 J	9.9 U	**1.7 J**
220 U	200 U	210 U
91 J	**36 J**	**170 J**
2.1 J	**1 J**	**0.81 J**
7.3 J	**1.6 J**	**1.8 J**
4.9 J	**2.7 J**	**6.2 J**
11 U	9.9 U	**1.7 J**
3.9 J	**1.9 J**	**3.3 J**
220 U	200 U	210 U
220 U	200 U	210 U
200 J	200 U	**310**
220 U	200 U	210 U
220 U	200 U	210 U
220 U	200 U	210 U
4.2 J	**2.6 J**	**3.4 J**
11 U	9.9 U	10 U
220 U	200 U	210 U
220 U	200 U	210 U
84 U	77 U	82 U
220 U	200 U	210 U
220 U	200 U	210 U
220 U	200 U	210 U
84 U	77 U	82 U
5.7 J	**3.9 J**	**4 J**
1.1 J	**0.56 J**	10 U
220 U	200 U	210 U
220 U	200 U	210 U
220 U	200 U	210 U
220 U	200 U	210 U
11 U	9.9 U	**2.1 J**
220 U	200 U	210 U
11 U	9.9 U	10 U
220 U	200 U	210 U
220 U	200 U	210 U
220 U	200 U	210 U
420 U	390 U	410 U
5.5 J	**4.4 J**	**6 J**
420 U	390 U	410 U
41 U	38 U	40 U
4.4 J	**2.8 J**	**2.7 J**
21 U	**1.9 NJ**	**2 NJ**
2.5 NJ	**22 NJ**	**2.9 NJ**
4.6 J	**15 J**	**3.3 J**
11 U	**0.22 J**	**1 J**
11 U	**0.58 J**	**3.1 J**
11 U	**1.2 J**	**2 J**
150 U	29 U	30 U

220 U	40 U	43 U
110 U	20 U	21 U
110 U	20 U	21 U
110 U	20 U	21 U
110 U	20 U	21 U
110 U	20 U	21 U
41 U	38 U	40 U
5.5 U	1 U	1.1 U
41 U	38 U	40 U
41 U	38 U	40 U
41 U	38 U	40 U
11 UJ	**0.98 J**	**1.2 J**
100 U	95 U	100 U
100 UJ	95 UJ	100 UJ
41 U	38 U	40 U
84 U	77 U	82 U
21 U	3.9 U	4.1 U
84 U	77 U	82 U
1.5 J	**0.27 J**	**1.7 J**
21 U	**1.2 J**	4.1 U
43 J	**3.8 J**	**11 J**
21 U	**0.87 J**	**1.5 J**
21 U	**2.2 J**	**3.1 J**
9 J	**2.5 J**	**5.2 J**
21 U	20 U	21 U
210 U	200 U	210 U
41 U	38 U	40 U
41 U	38 U	40 U
1.4 J	2 U	**1.6 J**
3.9 J	**2.2 J**	**2.5 J**
11 U	2 U	**1.1 J**
11 U	2 U	**1.6 J**
41 U	38 U	40 U
62 U	57 U	61 U
110 UJ	20 UJ	21 UJ
21 U	20 U	21 U
84 U	77 U	82 U
410 U	380 U	400 U
210 UJ	200 UJ	210 UJ
41 U	38 U	40 U
41 U	38 U	40 U
21 U	20 U	21 U
41 U	38 U	40 U
41 U	38 U	40 U
41 U	38 U	40 U
530 U	99 U	100 U
41 U	38 U	40 U
540 UJ	560 UJ	600 UJ
540 U	560 U	600 U
540 U	560 U	600 U
540 U	560 U	600 U
540 U	560 U	600 U
540 U	560 U	600 U
540 U	560 U	600 U
540 U	560 U	600 U
540 U	560 U	600 U
870 U	890 U	960 U
2.5 U	2.3 U	2.5 U
1600 U	1700 U	1800 U
540 U	560 U	600 U
540 U	560 U	600 U
1480	**1320**	**1460**
2.5 UJ	2 UJ	2.4 UJ
0.51 J	**0.24 J**	**0.42 J**

21.4 J	**6.9 J**	**5 J**
1.2 U	1 U	1.2 U
0.87 U	0.7 U	0.85 U
1200 U	1000 U	1200 U
2.5 U	2 U	2.4 U
12 U	10 U	12 U
6.2 U	5 U	6.1 U
559	**587**	**797**
5.3	**2.9**	**3.2**
1200 U	1000 U	1200 U
34.3	**47.5**	**27.5**
0.04 J	0.19 U	**0.03 J**
9.9 UJ	8.1 UJ	9.7 UJ
101 J	**74.3 J**	**91.8 J**
1.2 U	1 U	1.2 U
2.5 U	2 U	2.4 U
1200 U	1000 U	1200 U
0.62 U	0.5 U	0.61 U
2.6 J	**2.1 J**	**2.9 J**
5 U	4 U	4.8 U

StationID	IR69-IS01	IR69-IS01	IR69-IS03
SampleID	IR69-SB01-01-02-10A	IR69-SB01D-01-02-10A	IR69-SB03-04-05-10A
SampleDate	3/7/2010	3/7/2010	3/16/2010
AnalyteName			
VOA(UG/KG)			
1,1,1-Trichloroethane	4.7 U	4.7 U	5.1 U
1,1,2,2-Tetrachloroethane	4.7 U	4.7 U	5.1 U
1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	4.7 U	4.7 U	5.1 U
1,1,2-Trichloroethane	4.7 U	4.7 U	5.1 U
1,1-Dichloroethane	4.7 U	4.7 U	5.1 U
1,1-Dichloroethene	4.7 U	4.7 U	5.1 U
1,2,4-Trichlorobenzene	4.7 U	4.7 U	5.1 U
1,2-Dibromo-3-chloropropane	4.7 U	4.7 U	5.1 U
1,2-Dibromoethane	4.7 U	4.7 U	5.1 U
1,2-Dichlorobenzene	4.7 U	4.7 U	5.1 U
1,2-Dichloroethane	4.7 U	4.7 U	5.1 U
1,2-Dichloropropane	4.7 U	4.7 U	5.1 UJ
1,3-Dichlorobenzene	4.7 U	4.7 U	5.1 U
1,4-Dichlorobenzene	4.7 U	4.7 U	5.1 U
2-Butanone	12 U	12 U	13 U
2-Hexanone	12 U	12 U	13 U
4-Methyl-2-pentanone	12 U	12 U	13 U
Acetone	19 U	26 U	**44**
Benzene	4.7 U	4.7 U	5.1 U
Bromodichloromethane	4.7 U	4.7 U	5.1 U
Bromoform	4.7 U	4.7 U	5.1 U
Bromomethane	4.7 U	4.7 U	5.1 UJ
Carbon disulfide	4.7 U	4.7 U	**0.53 J**
Carbon tetrachloride	4.7 U	4.7 U	5.1 U
Chlorobenzene	4.7 U	4.7 U	5.1 U
Chloroethane	4.7 U	4.7 U	5.1 UJ
Chloroform	4.7 U	4.7 U	5.1 U
Chloromethane	4.7 U	4.7 U	5.1 U
cis-1,2-Dichloroethene	4.7 U	4.7 U	5.1 U
cis-1,3-Dichloropropene	4.7 U	4.7 U	5.1 U
Cyclohexane	4.7 U	4.7 U	5.1 U
Dibromochloromethane	4.7 U	4.7 U	5.1 U
Dichlorodifluoromethane (Freon-12)	4.7 U	4.7 U	5.1 UJ
Ethylbenzene	4.7 U	4.7 U	5.1 U
Isopropylbenzene	4.7 U	4.7 U	5.1 U
m- and p-Xylene	9.5 U	9.4 U	10 U
Methyl acetate	**3 J**	**4.5 J**	**63**
Methylcyclohexane	4.7 U	4.7 U	5.1 U
Methylene chloride	4.7 U	4.7 U	5.1 U
Methyl-tert-butyl ether (MTBE)	4.7 U	4.7 U	5.1 U
o-Xylene	4.7 U	4.7 U	5.1 U
Styrene	4.7 U	4.7 U	5.1 U
Tetrachloroethene	4.7 U	4.7 U	5.1 U
Toluene	4.7 U	4.7 U	5.1 U
trans-1,2-Dichloroethene	4.7 U	4.7 U	5.1 U
trans-1,3-Dichloropropene	4.7 U	4.7 U	5.1 U
Trichloroethene	4.7 U	4.7 U	5.1 U
Trichlorofluoromethane(Freon-11)	4.7 U	4.7 U	5.1 U
Vinyl chloride	4.7 U	4.7 U	5.1 U
Xylene, total	4.7 U	4.7 U	5.1 U
SVOA(UG/KG)			
1,1-Biphenyl	210 U	200 U	210 U
2,2'-Oxybis(1-chloropropane)	210 U	200 U	210 U
2,4,5-Trichlorophenol	410 U	390 U	410 U
2,4,6-Trichlorophenol	410 U	390 U	410 U
2,4-Dichlorophenol	410 U	390 U	410 U
2,4-Dimethylphenol	410 U	390 U	410 U
2,4-Dinitrophenol	410 U	390 U	410 U
2,4-Dinitrotoluene	210 U	200 U	210 U
2,6-Dinitrotoluene	210 U	200 U	210 U
2-Chloronaphthalene	210 U	200 U	210 U

2-Chlorophenol	410 U	390 U	410 U
2-Methylnaphthalene	10 U	9.9 U	10 U
2-Methylphenol	410 U	390 U	410 U
2-Nitroaniline	410 U	390 U	410 U
2-Nitrophenol	410 U	390 U	410 U
3,3'-Dichlorobenzidine	210 U	200 U	210 U
3-Nitroaniline	410 U	390 U	410 U
4,6-Dinitro-2-methylphenol	410 U	390 U	410 U
4-Bromophenyl-phenylether	210 U	200 U	210 U
4-Chloro-3-methylphenol	410 U	390 U	410 U
4-Chloroaniline	410 U	390 U	410 U
4-Chlorophenyl-phenylether	210 U	200 U	210 U
4-Methylphenol	410 U	390 U	410 U
4-Nitroaniline	410 U	390 U	410 U
4-Nitrophenol	410 U	390 U	410 U
Acenaphthene	10 U	9.9 U	10 U
Acenaphthylene	10 U	9.9 U	10 U
Acetophenone	210 U	200 U	210 U
Anthracene	10 U	9.9 U	10 U
Atrazine	210 U	200 U	210 U
Benzaldehyde	210 U	200 U	210 U
Benzo(a)anthracene	10 U	9.9 U	10 U
Benzo(a)pyrene	10 U	9.9 U	10 U
Benzo(b)fluoranthene	10 U	9.9 U	**0.79 J**
Benzo(g,h,i)perylene	10 U	9.9 U	10 U
Benzo(k)fluoranthene	10 U	**0.52 J**	10 U
bis(2-Chloroethoxy)methane	210 U	200 U	210 U
bis(2-Chloroethyl)ether	210 U	200 U	210 U
bis(2-Ethylhexyl)phthalate	210 U	200 U	210 U
Butylbenzylphthalate	210 U	200 U	210 U
Caprolactam	210 U	200 U	210 U
Carbazole	210 U	200 U	210 U
Chrysene	10 U	9.9 U	10 U
Dibenz(a,h)anthracene	10 U	9.9 U	10 UJ
Dibenzofuran	210 U	200 U	210 U
Diethylphthalate	210 U	200 U	210 U
Dimethoate	87 U	83 U	85 U
Dimethyl phthalate	210 U	200 U	210 U
Di-n-butylphthalate	210 U	200 U	210 U
Di-n-octylphthalate	210 U	200 U	210 U
Famphur	87 U	83 U	85 U
Fluoranthene	10 U	9.9 U	10 U
Fluorene	10 U	9.9 U	10 U
Hexachlorobenzene	210 U	200 U	210 U
Hexachlorobutadiene	210 U	200 U	210 U
Hexachlorocyclopentadiene	210 U	200 U	210 U
Hexachloroethane	210 U	200 U	210 U
Indeno(1,2,3-cd)pyrene	10 U	9.9 U	10 UJ
Isophorone	210 U	200 U	210 U
Naphthalene	10 U	9.9 U	10 U
n-Nitroso-di-n-propylamine	210 U	200 U	210 U
n-Nitrosodiphenylamine	210 U	200 U	210 U
Nitrobenzene	210 U	200 U	210 U
Pentachlorophenol	410 U	390 U	410 U
Phenanthrene	10 U	9.9 U	10 U
Phenol	410 U	390 U	410 U
Phorate	43 U	41 U	42 U
Pyrene	10 U	9.9 U	10 U
PEST/PCB(UG/KG)			
4,4'-DDD	4.1 UJ	3.9 UJ	**0.6 NJ**
4,4'-DDE	**4.2 J**	**6 J**	4.1 U
4,4'-DDT	**2.4 J**	**4.5 J**	4.1 R
Aldrin	2.1 U	2 U	2.1 U
alpha-BHC	2.1 UJ	2 UJ	2.1 U
alpha-Chlordane	**2.4 J**	**1.8 J**	**0.32 J**
Aroclor-1016	30 U	29 U	30 U

Aroclor-1221	43 U	40 U	43 U
Aroclor-1232	21 U	20 U	21 U
Aroclor-1242	21 U	20 U	21 U
Aroclor-1248	21 U	20 U	21 U
Aroclor-1254	21 U	20 U	21 U
Aroclor-1260	21 U	20 U	21 U
Azinphos methyl	43 U	41 U	42 U
beta-BHC	**0.45 J**	1 UJ	1.1 U
Bolstar	43 U	41 U	42 U
Chlorpyrifos	43 U	41 U	42 U
Coumaphos	43 U	41 U	42 U
delta-BHC	2.1 UJ	2 UJ	2.1 UJ
Demeton-O	110 U	100 U	110 U
Demeton-S	110 UJ	100 UJ	110 UJ
Diazinon	43 U	41 U	42 U
Dichlorvos	87 U	83 U	85 U
Dieldrin	4.1 U	3.9 U	4.1 U
Disulfoton	87 U	83 U	85 U
Endosulfan I	**0.22 J**	**0.2 J**	2.1 U
Endosulfan II	4.1 U	3.9 U	4.1 U
Endosulfan sulfate	4.1 U	3.9 U	**0.85 J**
Endrin	**1.1 J**	**0.72 J**	4.1 U
Endrin aldehyde	4.1 U	3.9 U	4.1 U
Endrin ketone	4.1 U	3.9 U	4.1 U
Ethoprop	22 U	21 U	22 U
Fensulfothion	220 U	210 U	220 U
Ethyl p-nitrophenyl phenylphosphorothioate	43 U	41 U	42 U
Fenthion	43 U	41 U	42 U
gamma-BHC (Lindane)	2.1 U	2 U	2.1 U
gamma-Chlordane	2.1 U	2 U	**0.49 J**
Heptachlor	**0.55 J**	**0.45 J**	**0.32 J**
Heptachlor epoxide	2.1 U	2 U	2.1 U
Malathion	43 U	41 U	42 U
Merphos	65 U	62 U	64 U
Methoxychlor	21 R	20 R	21 UJ
Methyl parathion	22 U	21 U	22 U
Mevinphos	87 U	83 U	85 U
Monocrotophos	430 U	410 U	420 U
Naled	220 U	210 U	220 UJ
Parathion	43 U	41 U	42 U
Ronnel	43 U	41 U	42 U
Sulfotepp	22 U	21 U	22 U
Tetrachlorvinphos	43 U	41 U	42 U
Thionazin	43 U	41 U	42 U
Tokuthion (Prothiophos)	43 U	41 U	42 U
Toxaphene	100 U	99 U	100 U
Trichloronate	43 U	41 U	42 U
METAL(MG/KG)			
Aluminum	**15900**	**12800**	**3490**
Antimony	**0.36 J**	1.1 U	**1.4 J**
Arsenic	**3.7**	**2.6**	1.2 U
Barium	**19.9 J**	**17.9 J**	**1.6 J**
Beryllium	**0.21 J**	**0.17 J**	0.6 U
Cadmium	**0.18 J**	**0.27 J**	0.6 U
Calcium	**122 J**	**129 J**	597 U
Chromium	**24.1**	**18.1**	**3.8**
Cobalt	**1.3**	**1.1**	0.6 U
Copper	**3.4**	**2.8**	**0.31 J**
Iron	**13300**	**10200**	**262**
Lead	**6.8**	**5.6**	**2.7**
Magnesium	**1080**	**842**	**32.4 J**
Manganese	**20.3**	**18.4**	**0.98 J**
Mercury	**0.15**	**0.02 J**	**0.03 J**
Nickel	**3.4**	**3**	**0.43 J**
Potassium	**1160 J**	**883 J**	**59.6 J**
Selenium	**0.71**	0.54 U	0.6 UJ

Silver	0.57 U	0.54 U	0.6 U
Sodium	571 U	544 U	**73.2 J**
Thallium	1.1 U	1.1 U	1.2 UJ
Vanadium	**30.4**	**23**	**1.5 J**
Zinc	**10.9**	**9.1**	2.4 U

StationID	IR69-SW01	IR69-SW01	IR69-SW02	IR69-SW03
SampleID	IR69-SW01-10A	IR69-SW01D-10A	IR69-SW02-10A	IR69-SW03-10A
SampleDate	3/14/2010	3/14/2010	3/15/2010	3/15/2010
AnalyteName				
VOA(UG/L)				
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	2.5 R	2.5 R	2.5 R	2.5 R
2-Hexanone	2.5 U	2.5 U	2.5 U	2.5 U
4-Methyl-2-pentanone	2.5 U	2.5 U	2.5 U	2.5 U
Acetone	2.5 R	2.5 R	2.5 R	4.6 R
Benzene	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	0.5 UJ	0.5 UJ	**0.036 J**	**0.027 J**
Carbon tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	**1.2**	**1.2**	0.5 U	**0.099 J**
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane (Freon-12)	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	0.5 U	0.5 U	0.5 U	0.5 U
m- and p-Xylene	1 U	1 U	1 U	1 U
Methyl acetate	0.5 U	0.5 U	0.5 U	0.5 U
Methylcyclohexane	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	0.5 U	0.5 U	0.5 U	0.5 U
Methyl-tert-butyl ether (MTBE)	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	**0.058 J**	**0.068 J**	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane(Freon-11)	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	0.5 U	0.5 U	0.5 U	0.5 U
Xylene, total	0.5 U	0.5 U	0.5 U	0.5 U
SVOA(UG/L)				
1,1-Biphenyl	5 U	5 U	5 U	5 U
2,2'-Oxybis(1-chloropropane)	5 U	5 U	5 U	5 U
2,4,5-Trichlorophenol	10 U	10 U	10 U	10 U
2,4,6-Trichlorophenol	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	10 U	10 U	10 U	10 U
2,4-Dinitrophenol	10 U	10 U	10 U	10 U
2,4-Dinitrotoluene	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	5 U	5 U	5 U	5 U
2-Chloronaphthalene	5 U	5 U	5 U	5 U

2-Chlorophenol	10 U	10 U	10 U	10 U
2-Methylnaphthalene	0.2 U	0.2 U	0.2 U	0.2 U
2-Methylphenol	10 U	10 U	10 U	10 U
2-Nitroaniline	10 U	10 U	10 U	10 U
2-Nitrophenol	10 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	5 UJ	5 U	5 U	5 U
3-Nitroaniline	10 U	10 U	10 U	10 U
4,6-Dinitro-2-methylphenol	10 U	10 U	10 U	10 U
4-Bromophenyl-phenylether	5 U	5 U	5 UJ	5 UJ
4-Chloro-3-methylphenol	10 U	10 U	10 U	10 U
4-Chloroaniline	10 U	10 U	10 U	10 U
4-Chlorophenyl-phenylether	5 U	5 U	5 U	5 U
4-Methylphenol	10 U	10 U	10 U	10 U
4-Nitroaniline	10 U	10 U	10 U	10 U
4-Nitrophenol	10 U	10 U	10 U	10 U
Acenaphthene	0.2 U	0.2 U	0.2 U	0.2 U
Acenaphthylene	0.2 U	0.2 U	0.2 U	0.2 U
Acetophenone	5 U	5 U	5 U	5 U
Anthracene	0.2 U	0.2 U	0.2 U	0.2 U
Atrazine	5 U	5 U	5 U	5 U
Benzaldehyde	5 U	5 U	5 U	5 U
Benzo(a)anthracene	0.2 U	0.2 U	0.2 U	0.2 U
Benzo(a)pyrene	0.2 U	0.2 U	0.2 U	0.2 U
Benzo(b)fluoranthene	0.2 U	0.2 U	0.2 U	0.2 U
Benzo(g,h,i)perylene	0.2 U	0.2 U	0.2 U	0.2 U
Benzo(k)fluoranthene	0.2 U	0.2 U	0.2 U	0.2 U
bis(2-Chloroethoxy)methane	5 U	5 U	5 U	5 U
bis(2-Chloroethyl)ether	5 U	5 U	5 U	5 U
bis(2-Ethylhexyl)phthalate	5 U	5 U	5 U	5 U
Butylbenzylphthalate	5 U	5 U	5 U	5 U
Caprolactam	5 U	5 UJ	5 U	5 U
Carbazole	5 U	5 U	5 U	5 U
Chrysene	0.2 U	0.2 U	0.2 U	0.2 U
Dibenz(a,h)anthracene	0.2 U	0.2 U	0.2 U	0.2 U
Dibenzofuran	5 U	5 U	5 U	5 U
Diethylphthalate	5 U	5 U	5 U	5 U
Dimethoate	1.9 U	1.9 U	2 U	1.9 U
Dimethyl phthalate	5 U	5 U	5 U	5 U
Di-n-butylphthalate	5 U	5 U	5 U	5 U
Di-n-octylphthalate	5 U	5 U	5 U	5 U
Famphur	1.9 U	1.9 U	2 U	1.9 U
Fluoranthene	0.2 U	0.2 U	0.2 U	0.2 U
Fluorene	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobenzene	5 U	5 U	5 U	5 U
Hexachlorobutadiene	5 U	5 U	5 U	5 U
Hexachlorocyclopentadiene	5 U	5 U	5 U	5 U
Hexachloroethane	5 U	5 U	5 U	5 U
Indeno(1,2,3-cd)pyrene	0.2 U	0.2 U	0.2 U	0.2 U
Isophorone	5 U	5 U	5 U	5 U
Naphthalene	0.2 U	0.2 U	0.2 U	0.2 U
n-Nitroso-di-n-propylamine	5 U	5 U	5 U	5 U
n-Nitrosodiphenylamine	5 U	5 U	5 U	5 U
Nitrobenzene	5 U	5 U	5 U	5 U
Pentachlorophenol	10 U	10 U	10 U	10 U
Phenanthrene	0.2 U	0.2 U	0.2 U	0.2 U
Phenol	10 U	10 U	10 U	10 U
Phorate	0.95 U	0.97 U	1 U	0.95 U
Pyrene	0.2 U	0.2 U	0.2 U	0.2 U
PEST/PCB(UG/L)				
4,4'-DDD	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDE	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDT	0.1 U	0.1 U	0.1 U	0.1 U
Aldrin	0.05 U	0.05 U	0.05 U	0.051 U
alpha-BHC	0.05 U	0.05 U	0.05 U	0.051 U
alpha-Chlordane	0.05 U	0.05 U	0.05 U	0.051 U
Aroclor-1016	0.93 U	0.93 U	0.93 U	0.95 U

Aroclor-1221	1.3 U	1.3 U	1.3 U	1.3 U
Aroclor-1232	0.93 U	0.93 U	0.93 U	0.95 U
Aroclor-1242	0.63 U	0.63 U	0.63 U	0.64 U
Aroclor-1248	0.63 U	0.63 U	0.63 U	0.64 U
Aroclor-1254	0.63 U	0.63 U	0.63 U	0.64 U
Aroclor-1260	0.93 U	0.93 U	0.93 U	0.95 U
Azinphos methyl	0.95 U	0.97 U	1 U	0.95 U
beta-BHC	0.05 U	0.05 U	0.05 U	0.051 U
Bolstar	0.95 U	0.97 U	1 U	0.95 U
Chlorpyrifos	0.95 U	0.97 U	1 U	0.95 U
Coumaphos	0.95 U	0.97 U	1 U	0.95 U
delta-BHC	0.05 U	0.05 U	0.05 U	0.051 U
Demeton-O	2.4 U	2.4 U	2.5 U	2.4 U
Demeton-S	2.4 UJ	2.4 UJ	2.5 R	2.4 UJ
Diazinon	0.95 U	0.97 U	1 U	0.95 U
Dichlorvos	1.9 U	1.9 U	2 U	1.9 U
Dieldrin	0.1 U	0.1 U	0.1 U	0.1 U
Disulfoton	1.9 U	1.9 U	2 U	1.9 U
Endosulfan I	0.05 U	0.05 U	0.05 U	0.051 U
Endosulfan II	0.1 U	0.1 U	0.1 U	0.1 U
Endosulfan sulfate	0.1 U	0.1 U	0.1 U	0.1 U
Endrin	0.1 U	0.1 U	0.1 U	0.1 U
Endrin aldehyde	0.1 U	0.1 U	0.1 U	0.1 U
Endrin ketone	0.1 U	0.1 U	0.1 U	0.1 U
Ethoprop	0.48 U	0.49 U	0.5 U	0.48 U
Fensulfothion	4.8 U	4.9 U	5 U	4.8 U
Ethyl p-nitrophenyl phenylphosphorothioate	0.95 U	0.97 U	1 U	0.95 U
Fenthion	0.95 U	0.97 U	1 U	0.95 U
gamma-BHC (Lindane)	0.05 U	0.05 U	0.05 U	0.051 U
gamma-Chlordane	0.05 U	0.05 U	0.05 U	0.051 U
Heptachlor	0.05 U	0.05 U	0.05 U	0.051 U
Heptachlor epoxide	0.05 U	0.05 U	0.05 U	0.051 U
Malathion	0.95 U	0.97 U	1 U	0.95 U
Merphos	1.4 U	1.5 U	1.5 U	1.4 U
Methoxychlor	0.5 U	0.5 U	0.5 U	0.51 U
Methyl parathion	0.48 U	0.49 U	0.5 U	0.48 U
Mevinphos	1.9 U	1.9 U	2 U	1.9 U
Monocrotophos	9.5 U	9.7 U	10 U	9.5 U
Naled	4.8 U	4.9 U	5 U	4.8 U
Parathion	0.95 U	0.97 U	1 U	0.95 U
Ronnel	0.95 U	0.97 U	1 U	0.95 U
Sulfotepp	0.48 U	0.49 U	0.5 U	0.48 U
Tetrachlorvinphos	0.95 U	0.97 U	1 U	0.95 U
Thionazin	0.95 U	0.97 U	1 U	0.95 U
Tokuthion (Prothiophos)	0.95 U	0.97 U	1 U	0.95 U
Toxaphene	2.5 U	2.5 U	2.5 U	2.6 U
Trichloronate	0.95 U	0.97 U	1 U	0.95 U
METAL(UG/L)				
Aluminum	200 U	200 U	200 U	**474**
Antimony	10 U	10 U	10 U	10 U
Arsenic	10 U	10 U	10 U	10 U
Barium	**26.5 J**	**23.6 J**	**20 J**	**32.3 J**
Beryllium	5 U	5 U	5 U	5 U
Cadmium	5 U	5 U	5 U	5 U
Calcium	**2370 J**	**3420 J**	**4300 J**	**3060 J**
Chromium	10 U	10 U	10 U	10 U
Cobalt	5 U	5 U	5 U	5 U
Copper	5 U	5 U	5 U	5 U
Iron	**31.7 J**	**96.5 J**	**101**	**752**
Lead	**2.5 J**	3 U	**2.9 J**	**2.3 J**
Magnesium	**1930 J**	**2150 J**	5000 U	**1210 J**
Manganese	**10.2 J**	**17.1 J**	**18.4**	**27.5**
Mercury	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	5 U	5 U	5 U	5 U
Potassium	**553 J**	**652 J**	**2080 J**	**708 J**
Selenium	**5.5 J**	**4 J**	**6.2 J**	5 UJ

Silver	5 U	5 U	5 U	5 U
Sodium	**13300**	**15500**	**56800**	**7720**
Thallium	10 U	10 U	**6.9 J**	10 U
Vanadium	20 U	20 U	20 U	**0.71 J**
Zinc	20 U	20 U	20 U	**104**
FMETAL(UG/L)				
Aluminum, Dissolved	200 U	200 U	**121 J**	**329**
Antimony, Dissolved	10 U	10 U	10 U	10 U
Arsenic, Dissolved	10 U	10 U	10 U	10 U
Barium, Dissolved	200 U	200 U	200 U	200 U
Beryllium, Dissolved	5 U	5 U	5 U	5 U
Cadmium, Dissolved	5 U	5 U	5 U	5 U
Calcium, Dissolved	**2460 J**	**3390 J**	5000 U	**3210 J**
Chromium, Dissolved	10 U	10 U	10 U	10 U
Cobalt, Dissolved	5 U	5 U	5 U	5 U
Copper, Dissolved	5 U	5 U	5 U	5 U
Iron, Dissolved	**79 J**	100 U	**62.3 J**	**408**
Lead, Dissolved	3 U	3 U	3 U	3 U
Magnesium, Dissolved	**1900 J**	**2110 J**	**5190**	**1190 J**
Manganese, Dissolved	**10.7 J**	**17.9 J**	**19.2**	**29.4**
Mercury, Dissolved	0.2 U	0.2 U	0.2 U	0.2 U
Nickel, Dissolved	5 U	5 U	5 U	5 U
Potassium, Dissolved	5000 U	5000 U	**2840 J**	5000 U
Selenium, Dissolved	5 UJ	5 UJ	5 UJ	5 UJ
Silver, Dissolved	5 U	**1 J**	5 U	5 U
Sodium, Dissolved	**15100**	**16200**	**65800**	**8080**
Thallium, Dissolved	10 U	10 U	10 U	10 U
Vanadium, Dissolved	20 U	20 U	20 U	20 U
Zinc, Dissolved	20 U	20 U	20 U	**113**

StationID	IR69-MW01	IR69-MW01	IR69-MW02	IR69-MW03	IR69-MW03	IR69-MW04	IR69-MW05	IR69-MW05	IR69-MW06	IR69-MW07	IR69-MW07	IR69-MW08
SampleID	IR69-GW01-10A	IR69-GW01D-10A	IR69-GW02-10A	IR69-GW03-10A	IR69-GW03D-10A	IR69-GW04-10A	IR69-GW05-10A	IR69-GW05D-10A	IR69-GW06-10A	IR69-GW07-10A	IR69-GW07D-10A	IR69-GW08-10A
SampleDate	3/8/2010	3/8/2010	3/2/2010	3/7/2010	3/7/2010	3/14/2010	3/8/2010	3/8/2010	3/9/2010	3/9/2010	3/9/2010	3/8/2010
AnalyteName												
VOA(UG/L)												
1,1,1-Trichloroethane	0.5 UJ	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	**9.8**	**0.18 J**	3.1 U	**0.17 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	**7.8**	**0.39 J**	**0.5 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	**0.043 J**	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.5 U	0.5 U	**0.21 J**	**0.42 J**	**0.53 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	0.5 UJ	0.5 UJ	0.5 U	0.5 U	3.1 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 U
1,2-Dibromo-3-chloropropane	0.5 UJ	0.5 UJ	0.5 U	0.5 U	3.1 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 U
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	**1.7**	**0.76**	**0.72 J**	**0.48 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.5 UJ	0.5 U	0.5 U	0.5 UJ	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	0.5 UJ	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	2.5 R	2.5 R	2.5 R	2.5 R	16 U	2.5 R	2.5 R	2.5 R	2.5 U	2.5 R	2.5 R	2.5 U
2-Hexanone	2.5 U	2.5 U	2.5 U	2.5 U	16 UJ	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 UJ
4-Methyl-2-pentanone	2.5 U	2.5 U	2.5 U	2.5 U	16 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Acetone	2.5 R	2.5 R	2.5 R	2.5 R	16 U	2.5 R	2.5 R	2.5 R	2.5 U	2.5 R	2.5 R	2.5 U
Benzene	0.5 U	0.5 U	0.5 U	**0.58**	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	0.5 U	0.5 UJ	0.5 U	0.5 U	3.1 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 U
Carbon disulfide	0.5 U	0.5 U	**0.041 J**	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	0.5 UJ	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	**7.1**	**7.5**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	**1.3**	0.5 U	0.5 U	**1.5**	0.5 U	0.5 U	**0.64**
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	0.5 U	0.5 U	**110 J**	**180**	**170**	**3.1**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane (Freon-12)	0.5 U	0.5 UJ	0.5 U	0.5 U	3.1 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m- and p-Xylene	1 U	1 U	1 U	1 U	6.3 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl acetate	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylcyclohexane	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl-tert-butyl ether (MTBE)	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.5 U	0.5 U	**0.19 J**	0.5 U	3.1 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ
Toluene	0.5 U	0.5 U	0.5 U	**0.73**	3.1 U	**8.3**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	**23**	**3.2**	**3.9**	**0.67**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	0.5 U	0.5 U	**2.3**	**3.2**	**3.5**	**0.38 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane(Freon-11)	0.5 UJ	0.5 U	0.5 U	0.5 U	3.1 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ
Vinyl chloride	0.5 U	0.5 U	**20**	**5.2**	**4.8**	**0.21 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylene, total	0.5 U	0.5 U	0.5 U	0.5 U	3.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SVOA(UG/L)												
1,1-Biphenyl	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
2,2'-Oxybis(1-chloropropane)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
2,4,5-Trichlorophenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	11 U	11 U	10 U
2,4,6-Trichlorophenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	11 U	11 U	10 U
2,4-Dichlorophenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	11 U	11 U	10 U
2,4-Dimethylphenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	11 U	11 U	10 U
2,4-Dinitrophenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	11 U	11 U	10 U
2,4-Dinitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
2,6-Dinitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
2-Chloronaphthalene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U

2-Chlorophenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	11 U	11 U	10 U
2-Methylnaphthalene	0.2 U	0.2 U	**0.016 J**	**0.13 J**	**0.12 J**	**0.019 J**	0.2 U	0.2 U	0.21 U	0.22 U	0.22 U	0.21 U
2-Methylphenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	11 U	11 U	10 U
2-Nitroaniline	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	11 U	11 U	10 U
2-Nitrophenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	11 U	11 U	10 U
3,3'-Dichlorobenzidine	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
3-Nitroaniline	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	11 U	11 U	10 U
4,6-Dinitro-2-methylphenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	11 U	11 U	10 U
4-Bromophenyl-phenylether	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
4-Chloro-3-methylphenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	11 U	11 U	10 U
4-Chloroaniline	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	11 U	11 U	10 U
4-Chlorophenyl-phenylether	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
4-Methylphenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	11 U	11 U	10 U
4-Nitroaniline	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	11 U	11 U	10 U
4-Nitrophenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	11 U	11 U	10 U
Acenaphthene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	0.22 U	0.22 U	0.21 U
Acenaphthylene	0.2 U	0.2 U	0.2 U	0.2 U	**0.01 J**	0.2 U	0.2 U	0.2 U	0.21 U	0.22 U	0.22 U	0.21 U
Acetophenone	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
Anthracene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	0.22 U	0.22 U	0.21 U
Atrazine	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
Benzaldehyde	5 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
Benzo(a)anthracene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	0.22 U	0.22 U	0.21 U
Benzo(a)pyrene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	0.22 U	0.22 U	0.21 U
Benzo(b)fluoranthene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	0.22 U	0.22 U	0.21 U
Benzo(g,h,i)perylene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	0.22 U	0.22 U	0.21 U
Benzo(k)fluoranthene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	0.22 U	0.22 U	0.21 U
bis(2-Chloroethoxy)methane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
bis(2-Chloroethyl)ether	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
bis(2-Ethylhexyl)phthalate	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
Butylbenzylphthalate	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
Caprolactam	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
Carbazole	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
Chrysene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	0.22 U	0.22 U	0.21 U
Dibenz(a,h)anthracene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	0.22 U	0.22 U	0.21 U
Dibenzofuran	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
Diethylphthalate	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
Dimethoate	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	2 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Dimethyl phthalate	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
Di-n-butylphthalate	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
Di-n-octylphthalate	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
Famphur	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	2 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Fluoranthene	0.2 U	**0.013 J**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	**0.012 J**	0.22 U	0.21 U
Fluorene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	0.22 U	0.22 U	0.21 U
Hexachlorobenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
Hexachlorobutadiene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
Hexachlorocyclopentadiene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
Hexachloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
Indeno(1,2,3-cd)pyrene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	0.22 U	0.22 U	0.21 U
Isophorone	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
Naphthalene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	0.22 U	0.22 U	0.21 U
n-Nitroso-di-n-propylamine	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
n-Nitrosodiphenylamine	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
Nitrobenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.3 U	5.6 U	5.6 U	5.1 U
Pentachlorophenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	11 U	11 U	10 U
Phenanthrene	0.2 U	**0.037 J**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	0.22 U	0.22 U	0.21 U
Phenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	11 U	11 U	10 U
Phorate	0.94 U	0.94 U	0.95 U	0.95 U	0.94 U	1 U	0.95 U	0.95 U	0.97 U	0.97 U	0.97 U	0.95 U
Pyrene	0.2 U	**0.018 J**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	**0.016 J**	0.22 U	0.21 U
PEST/PCB(UG/L)												
4,4'-DDD	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.11 U	0.11 U
4,4'-DDE	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.11 U	0.11 U
4,4'-DDT	0.1 U	0.1 U	0.1 U	**0.0052 J**	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.11 U	0.11 U
Aldrin	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.056 U	0.056 U	0.054 U	0.053 U
alpha-BHC	0.05 U	0.05 U	0.05 U	**0.077**	**0.075**	0.05 U	0.05 U	0.05 U	0.056 U	0.056 U	0.054 U	0.053 U
alpha-Chlordane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.056 U	0.056 U	0.054 U	0.053 U
Aroclor-1016	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	1 U	1 U	1 U	0.98 U

Aroclor-1221	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.4 U	1.3 U
Aroclor-1232	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	1 U	1 U	1 U	0.98 U
Aroclor-1242	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.69 U	0.69 U	0.68 U	0.66 U
Aroclor-1248	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.69 U	0.69 U	0.68 U	0.66 U
Aroclor-1254	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.69 U	0.69 U	0.68 U	0.66 U
Aroclor-1260	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	1 U	1 U	1 U	0.98 U
Azinphos methyl	0.94 U	0.94 U	0.95 U	0.95 U	0.94 U	1 U	0.95 U	0.95 U	0.97 U	0.97 U	0.97 U	0.95 U
beta-BHC	0.05 U	0.05 U	**0.012 J**	**0.19 J**	**0.14 J**	0.05 U	0.05 U	0.05 U	0.056 U	0.056 U	0.054 U	0.053 U
Bolstar	0.94 U	0.94 U	0.95 U	0.95 U	0.94 U	1 U	0.95 U	0.95 U	0.97 U	0.97 U	0.97 U	0.95 U
Chlorpyrifos	0.94 U	0.94 U	0.95 U	0.95 U	0.94 U	1 U	0.95 U	0.95 U	0.97 U	0.97 U	0.97 U	0.95 U
Coumaphos	0.94 U	0.94 U	0.95 U	0.95 U	0.94 U	1 U	0.95 U	0.95 U	0.97 U	0.97 U	0.97 U	0.95 U
delta-BHC	0.05 U	0.05 U	0.05 U	**1.5**	**1.4**	**0.012 J**	0.05 U	0.05 U	0.056 U	0.056 U	0.054 U	0.053 U
Demeton-O	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.5 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
Demeton-S	2.4 UJ	2.4 UJ	2.4 R	2.4 UJ	2.4 UJ	2.5 R	2.4 UJ	2.4 UJ	2.4 R	2.4 UJ	2.4 UJ	2.4 UJ
Diazinon	0.94 U	0.94 U	0.95 U	0.95 U	0.94 U	1 U	0.95 U	0.95 U	0.97 U	0.97 U	0.97 U	0.95 U
Dichlorvos	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	2 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Dieldrin	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.11 U	0.11 U
Disulfoton	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	2 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Endosulfan I	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.056 U	0.056 U	0.054 U	0.053 U
Endosulfan II	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.11 U	0.11 U
Endosulfan sulfate	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.11 U	0.11 U
Endrin	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.11 U	0.11 U
Endrin aldehyde	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.11 U	0.11 U
Endrin ketone	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.11 U	0.11 U
Ethoprop	0.47 U	0.47 U	0.48 U	0.48 U	0.47 U	0.5 U	0.48 U	0.48 U	0.49 U	0.49 U	0.49 U	0.48 U
Fensulfothion	4.7 U	4.7 U	4.8 U	4.8 U	4.7 U	5 U	4.8 U	4.8 U	4.9 U	4.9 U	4.9 U	4.8 U
Ethyl p-nitrophenyl phenylphosphorothioate	0.94 U	0.94 U	0.95 U	0.95 U	0.94 U	1 U	0.95 U	0.95 U	0.97 U	0.97 U	0.97 U	0.95 U
Fenthion	0.94 U	0.94 U	0.95 U	0.95 U	0.94 U	1 U	0.95 U	0.95 U	0.97 U	0.97 U	0.97 U	0.95 U
gamma-BHC (Lindane)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.056 U	0.056 U	0.054 U	0.053 U
gamma-Chlordane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.033 J**	0.05 U	0.05 U	0.056 U	0.056 U	0.054 U	0.053 U
Heptachlor	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.056 U	0.056 U	0.054 U	0.053 U
Heptachlor epoxide	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.056 U	0.056 U	0.054 U	0.053 U
Malathion	0.94 U	0.94 U	0.95 U	0.95 U	0.94 U	1 U	0.95 U	0.95 U	0.97 U	0.97 U	0.97 U	0.95 U
Merphos	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.5 U	1.4 U	1.4 U	1.5 U	1.5 U	1.5 U	1.4 U
Methoxychlor	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.32 J**	0.5 U	0.5 U	0.56 U	0.56 U	0.54 U	0.53 U
Methyl parathion	0.47 U	0.47 U	0.48 U	0.48 U	0.47 U	0.5 U	0.48 U	0.48 U	0.49 U	0.49 U	0.49 U	0.48 U
Mevinphos	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	2 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Monocrotophos	9.4 U	9.4 U	9.5 U	9.5 U	9.4 U	10 U	9.5 U	9.5 U	9.7 U	9.7 U	9.7 U	9.5 U
Naled	4.7 U	4.7 U	4.8 U	4.8 U	4.7 U	5 U	4.8 U	4.8 UJ	4.9 R	4.9 UJ	4.9 UJ	4.8 U
Parathion	0.94 U	0.94 U	0.95 U	0.95 U	0.94 U	1 U	0.95 U	0.95 U	0.97 U	0.97 U	0.97 U	0.95 U
Ronnel	0.94 U	0.94 U	0.95 U	0.95 U	0.94 U	1 U	0.95 U	0.95 U	0.97 U	0.97 U	0.97 U	0.95 U
Sulfotepp	0.47 U	0.47 U	0.48 U	0.48 U	0.47 U	0.5 U	0.48 U	0.48 U	0.49 U	0.49 U	0.49 U	0.48 U
Tetrachlorvinphos	0.94 U	0.94 U	0.95 U	0.95 U	0.94 U	1 U	0.95 U	0.95 U	0.97 U	0.97 U	0.97 U	0.95 U
Thionazin	0.94 U	0.94 U	0.95 U	0.95 U	0.94 U	1 U	0.95 U	0.95 U	0.97 U	0.97 U	0.97 U	0.95 U
Tokuthion (Prothiophos)	0.94 U	0.94 U	0.95 U	0.95 U	0.94 U	1 U	0.95 U	0.95 U	0.97 U	0.97 U	0.97 U	0.95 U
Toxaphene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.8 U	2.8 U	2.7 U	2.6 U
Trichloronate	0.94 U	0.94 U	0.95 U	0.95 U	0.94 U	1 U	0.95 U	0.95 U	0.97 U	0.97 U	0.97 U	0.95 U
METAL(UG/L)												
Aluminum	**480 J**	**466 J**	**515**	**942 J**	**704 J**	**1040 J**	**153 J**	**136 J**	200 U	200 UJ	200 UJ	**499**
Antimony	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Arsenic	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Barium	**82.6 J**	**85.5 J**	**21.6 J**	**46.3 J**	**45.9 J**	**62.9 J**	**22.2 J**	**19.7 J**	**20.7 J**	**27.5 J**	**27.7 J**	**12.6 J**
Beryllium	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Cadmium	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Calcium	**13500**	**14100**	**7900**	**7390**	**7360**	**1490 J**	**1820 J**	**1640 J**	5000 U	**3710 J**	**3740 J**	5000 U
Chromium	10 U	10 U	**1.8 J**	**1.9 J**	**1.5 J**	**1.6 J**	10 U	10 U	**1.8 J**	10 U	10 U	10 U
Cobalt	5 U	5 U	5 U	**1.7 J**	**1.5 J**	**2.8 J**	5 U	5 U	5 U	5 U	5 U	5 U
Copper	5 U	**2.3 J**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Iron	**711**	**687**	**4200**	**13600**	**12300**	**7550**	**244 J**	**120 J**	100 U	**38.1 J**	**49.5 J**	**254**
Lead	3 U	3 U	3 U	**1.8 J**	**1.8 J**	**2.5 J**	3 U	3 U	3 U	3 U	3 U	3 U
Magnesium	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U
Manganese	**23.9**	**24.2**	**152**	**130**	**129**	**147**	**38.4**	**36.1**	**2.5 J**	**3 J**	**3.1 J**	**4.3 J**
Mercury	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	5 U	5 U	**1.4 J**	5 U	5 U	**4.2 J**	5 U	5 U	5 U	5 U	5 U	5 U
Potassium	**715 J**	**722 J**	**150 J**	5000 U	5000 U	**180 J**	**113 J**	**109 J**	5000 U	**1210 J**	**1210 J**	5000 U
Selenium	5 U	5 U	**3.8 J**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U

Silver	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Sodium	**27700**	**29800**	**21400**	**12500**	**12200**	**6150**	**5020**	5000 U	**8590**	**8220**	**8440**	**6150**
Thallium	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Vanadium	20 U	20 U	**26**	**4.8 J**	**3.3 J**	**3.4 J**	20 U	20 U	20 U	20 U	20 U	20 U
Zinc	**4.3 J**	**8.5 J**	**35.8 J**	**4760**	**4660**	**6840**	**3.6 J**	**2.8 J**	**2.7 J**	**1.7 J**	**1.6 J**	**72.7**
FMETAL(UG/L)												
Aluminum, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Antimony, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Arsenic, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Barium, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Beryllium, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cadmium, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Calcium, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chromium, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cobalt, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Copper, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Iron, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Lead, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Magnesium, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Mercury, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nickel, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Potassium, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Selenium, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Silver, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sodium, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Thallium, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Vanadium, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Zinc, Dissolved	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
WCHEM()												
Alkalinity (MG/L)	10 U	10 U	10 U	**32.1**	**15.6**	10 U	10 U	10 U	10 U	**9.82 J**	**9.57 J**	10 U
Chloride (MG/L)	1 U	1 U	**33.9 D**	**43**	**43**	**23 D**	**7.2**	**7.4**	**10**	**12**	**13**	**7**
Ethane (UG/L)	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Ethene (UG/L)	2 U	2 U	**0.1 J**	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Methane (UG/L)	2 B	2 B	36 B	30 BD	25 BD	150 BD	0.3 JB	0.3 JB	0.3 JB	6 B	7 B	0.3 JB
Sulfate (MG/L)	**22**	**22**	**11.5 D**	**7.5**	**9.9**	**4.7 D**	**6.9**	**6.5**	**8**	**6**	**6.1**	**5.5**
Sulfide (MG/L)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total organic carbon (TOC) (MG/L)	**2.8**	**3.6**	**3.4**	**2.2**	**2.1**	**5**	**0.89 J**	**0.87 J**	**0.7 J**	**0.61 J**	**0.63 J**	**0.54 J**

IR69-MW08 IR69-GW08D-10A 3/8/2010	IR69-MW09 IR69-GW09-10A 3/1/2010	IR69-MW10 IR69-GW10-10A 3/8/2010	IR69-MW11 IR69-GW11-10A 3/1/2010	IR69-MW12 IR69-GW12-10A 2/27/2010	IR69-MW13 IR69-GW13-10A 3/1/2010	IR69-MW14 IR69-GW14-10A 2/28/2010	IR69-MW15 IR69-GW15-10A 3/7/2010
0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**2.9**
0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.3**
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.13 J**
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**13**
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.5 U	0.5 U	**0.14 J**	0.5 U	0.5 U	0.5 U	0.5 U	**0.55**
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**3.3**
2.5 U	2.5 R	2.5 R	2.5 R	2.5 R	2.5 R	2.5 R	2.5 U
2.5 UJ	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UJ
2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2.5 U	2.5 R	2.5 U	2.5 R	2.5 R	2.5 R	3.2 R	2.5 U
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.031 J**	0.5 U	**0.14 J**
0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.3**
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.66	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.5 U	**6.5**	0.5 U	0.5 U	**0.8**	0.5 U	0.5 U	**2.1**
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.5 U	0.5 U	**0.27 J**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.5 U	**0.56**	0.5 U	0.5 U	**0.14 J**	0.5 U	0.5 U	**0.78**
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.5 U	**0.3 J**	0.5 U	0.5 U	**0.29 J**	0.5 U	0.5 U	**0.38 J**
0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**12**
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
11 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
11 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
11 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
11 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
11 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U

11 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
0.22 U	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
11 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
11 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
11 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
11 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
11 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
11 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
11 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
11 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
11 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
11 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
0.22 U	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
0.22 U	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
0.22 U	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
0.22 U	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
0.22 U	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
0.22 U	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
0.22 U	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
0.22 U	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
5.4 U	5 UJ	5.4 U	5 UJ	5 U	5 UJ	5 U	5 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
0.22 U	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
0.22 U	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 UJ
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
1.9 U	1.9 U	1.9 U	1.9 U	2 U	1.9 U	2 U	1.9 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
5.4 UJ	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
1.9 U	1.9 U	1.9 U	1.9 U	2 U	1.9 U	2 U	1.9 U
0.22 U	0.2 U	**0.011 J**	0.2 U	0.2 U	0.2 U	0.2 U	**0.013 J**
0.22 U	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
0.22 U	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
0.22 U	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
5.4 U	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U
11 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
0.22 U	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
11 U	10 U	11 U	10 U	10 U	10 U	10 U	10 U
0.97 U	0.95 U	0.97 U	0.94 U	1 U	0.94 U	1 U	0.94 U
0.22 U	0.2 U	**0.015 J**	0.2 U	0.2 U	0.2 U	0.2 U	**0.018 J**
0.11 U	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U
0.11 U	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U
0.11 U	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U
0.056 U	0.05 U	0.054 U	0.05 U	0.05 U	0.05 U	0.05 U	0.054 U
0.056 U	0.05 U	0.054 U	0.05 U	0.05 U	0.05 U	0.05 U	0.054 U
0.056 U	0.05 U	0.054 U	0.05 U	0.05 U	0.05 U	0.05 U	0.054 U
1 U	0.93 U	1 U	0.93 U	0.93 U	0.93 U	0.93 U	1 U

1.4 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.3 U	1.4 U
1 U	0.93 U	1 U	0.93 U	0.93 U	0.93 U	0.93 U	1 U
0.69 U	0.63 U	0.68 U	0.63 U	0.63 U	0.63 U	0.63 U	0.68 U
0.69 U	0.63 U	0.68 U	0.63 U	0.63 U	0.63 U	0.63 U	0.68 U
0.69 U	0.63 U	0.68 U	0.63 U	0.63 U	0.63 U	0.63 U	0.68 U
1 U	0.93 U	1 U	0.93 U	0.93 U	0.93 U	0.93 U	**1.2**
0.97 U	0.95 U	0.97 U	0.94 U	1 U	0.94 U	1 U	0.94 U
0.056 U	0.05 U	0.054 U	0.05 U	0.05 U	0.05 U	0.05 U	0.054 U
0.97 U	0.95 U	0.97 U	0.94 U	1 U	0.94 U	1 U	0.94 U
0.97 U	0.95 U	0.97 U	0.94 U	1 U	0.94 U	1 U	0.94 U
0.97 U	0.95 U	0.97 U	0.94 U	1 U	0.94 U	1 U	0.94 U
0.056 U	0.05 U	0.054 U	0.05 U	0.05 U	0.05 U	0.05 U	0.054 U
2.4 U	2.4 U	2.4 U	2.4 U	2.5 U	2.4 U	2.5 U	2.4 U
2.4 UJ	2.4 UJ	2.4 UJ	2.4 UJ	2.5 UJ	2.4 UJ	2.5 UJ	2.4 UJ
0.97 U	0.95 U	0.97 U	0.94 U	1 U	0.94 U	1 U	0.94 U
1.9 U	1.9 U	1.9 U	1.9 U	2 U	1.9 U	2 U	1.9 U
0.11 U	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U
1.9 U	1.9 U	1.9 U	1.9 U	2 U	1.9 U	2 U	1.9 U
0.056 U	0.05 U	0.054 U	0.05 U	0.05 U	0.05 U	0.05 U	0.054 U
0.11 U	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U
0.11 U	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U
0.11 U	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.029 J**
0.11 U	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U
0.11 U	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U
0.49 U	0.48 U	0.49 U	0.47 U	0.5 U	0.47 U	0.5 U	0.47 U
4.9 U	4.8 U	4.9 U	4.7 U	5 U	4.7 U	5 U	4.7 U
0.97 U	0.95 U	0.97 U	0.94 U	1 U	0.94 U	1 U	0.94 U
0.97 U	0.95 U	0.97 U	0.94 U	1 U	0.94 U	1 U	0.94 U
0.056 U	0.05 U	0.054 U	0.05 U	0.05 U	0.05 U	0.05 U	0.054 U
0.056 U	0.05 U	0.054 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.06 J**
0.056 U	0.05 U	0.054 U	0.05 U	0.05 U	0.05 U	0.05 U	0.054 U
0.056 U	0.05 U	0.054 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.079 J**
0.97 U	0.95 U	0.97 U	0.94 U	1 U	0.94 U	1 U	0.94 U
1.5 U	1.4 U	1.5 U	1.4 U	1.5 U	1.4 U	1.5 U	1.4 U
0.56 U	0.5 U	0.54 U	0.5 U	0.5 U	0.5 U	0.5 U	0.54 U
0.49 U	0.48 U	0.49 U	0.47 U	0.5 U	0.47 U	0.5 U	0.47 U
1.9 U	1.9 U	1.9 U	1.9 U	2 U	1.9 U	2 U	1.9 U
9.7 U	9.5 U	9.7 U	9.4 U	10 U	9.4 U	10 U	9.4 U
4.9 U	4.8 U	4.9 UJ	4.7 U	5 U	4.7 U	5 U	4.7 U
0.97 U	0.95 U	0.97 U	0.94 U	1 U	0.94 U	1 U	0.94 U
0.97 U	0.95 U	0.97 U	0.94 U	1 U	0.94 U	1 U	0.94 U
0.49 U	0.48 U	0.49 U	0.47 U	0.5 U	0.47 U	0.5 U	0.47 U
0.97 U	0.95 U	0.97 U	0.94 U	1 U	0.94 U	1 U	0.94 U
0.97 U	0.95 U	0.97 U	0.94 U	1 U	0.94 U	1 U	0.94 U
0.97 U	0.95 U	0.97 U	0.94 U	1 U	0.94 U	1 U	0.94 U
2.8 U	2.5 U	2.7 U	2.5 U	2.5 U	2.5 U	2.5 U	2.7 U
0.97 U	0.95 U	0.97 U	0.94 U	1 U	0.94 U	1 U	0.94 U
200 U	**1770**	**668 J**	**765**	**800**	**1130**	**348**	**790**
10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
10 U	10 U	10 U	10 U	10 U	10 U	10 U	**2.9 J**
200 U	**43.9 J**	**16.8 J**	**33.3 J**	**22 J**	**6.9 J**	**10.5 J**	**97.2 J**
5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
5000 U	**5230**	**963 J**	**1080 J**	5000 U	**942 J**	**4080 J**	**65200**
10 U	**3.1 J**	**1.3 J**	10 U	10 U	**1.1 J**	10 U	**2.4 J**
5 U	**1.8 J**	5 U	5 U	5 U	5 U	5 U	**0.78 J**
5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
100 U	**1740**	**2180**	**217**	**5120**	**1470**	**287**	**29100**
3 U	3 U	**2.2 J**	3 U	**3.1**	3 U	3 U	**2.5 J**
5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U
10 U	**41.6**	**6.2 J**	**5 J**	**18.7**	**9.9 J**	**16.3**	**800**
0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
5 U	**2.4 J**	5 U	5 U	5 U	5 U	5 U	5 U
5000 U	**784 J**	**175 J**	**326 J**	**363 J**	**47.6 J**	**159 J**	5000 U
5 U	**3.9 J**	5 U	5 UJ	5 UJ	5 UJ	5 UJ	5 U

5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
5000 U	**14400**	**6090**	**11200**	**8620**	**6970**	**7220**	**24300**
10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
20 U	**2.1 J**	**11.6 J**	20 U	**1.7 J**	**1.8 J**	20 U	**2.5 J**
20 U	20 UJ	**3.3 J**	20 UJ	**75.9 J**	20 UJ	20 UJ	20 U
NS	200 U	NS	**773**	**296**	**413**	NS	NS
NS	10 U	NS	10 U	10 U	10 U	NS	NS
NS	10 U	NS	10 U	10 U	10 U	NS	NS
NS	**34.1 J**	NS	**33.5 J**	**22.5 J**	**6.8 J**	NS	NS
NS	5 U	NS	5 U	5 U	5 U	NS	NS
NS	5 U	NS	5 U	5 U	5 U	NS	NS
NS	5000 U	NS	5000 U	**1660 J**	5000 U	NS	NS
NS	10 U	NS	**1.2 J**	10 U	10 U	NS	NS
NS	5 U	NS	5 U	5 U	5 U	NS	NS
NS	5 U	NS	5 U	5 U	5 U	NS	NS
NS	100 U	NS	**128**	**4850**	**1150**	NS	NS
NS	3 U	NS	**3.1**	3 U	3 U	NS	NS
NS	5000 U	NS	5000 U	5000 U	5000 U	NS	NS
NS	**33.7 J**	NS	**4.9 J**	**19.2 J**	**9.5 J**	NS	NS
NS	0.2 U	NS	0.2 U	0.2 U	0.2 U	NS	NS
NS	**1.2 J**	NS	5 U	5 U	5 U	NS	NS
NS	**552 J**	NS	**259 J**	**312 J**	**37.5 J**	NS	NS
NS	5 U	NS	5 U	5 U	5 U	NS	NS
NS	5 U	NS	5 U	5 U	5 U	NS	NS
NS	**13400**	NS	**9780**	**8800**	**6780**	NS	NS
NS	10 U	NS	10 U	10 U	10 U	NS	NS
NS	20 U	NS	20 U	20 U	20 U	NS	NS
NS	20 U	NS	20 U	**80**	20 U	NS	NS
10 U	10 U	**20.8**	10 U	10 U	10 U	10 U	**15.2**
6.9	**20.8 D**	**8.1**	**13.4 D**	**14.3 D**	**7.02 D**	**8.4 D**	**48 D**
2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2 U	2 U	2 U	2 U	2 U	2 U	2 U	**0.6 J**
0.3 JB	0.7 JB	5 B	0.3 JB	16 B	9 BD	0.3 JB	17 B
5.5	**10 D**	**6.6**	**13.4 D**	**8.45 D**	**6.18 D**	**7.63 D**	**150 D**
1 U	1 U	1 U	1 U	**0.8 J**	1 U	1 U	1 U
0.52 J	**2.4**	**0.63 J**	**1.3**	**4.5**	**4.3**	**2.3**	**12**

StationID	IR69-SD01	IR69-SD01	IR69-SD02	IR69-SD03
SampleID	IR69-SD01-10A	IR69-SD01D-10A	IR69-SD02-10A	IR69-SD03-10A
SampleDate	3/14/2010	3/14/2010	3/15/2010	3/15/2010
AnalyteName				
VOA(UG/KG)				
1,1,1-Trichloroethane	23 UJ	22 UJ	20 UJ	4.8 UJ
1,1,2,2-Tetrachloroethane	23 U	22 U	20 UJ	4.8 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	23 UJ	22 UJ	20 UJ	4.8 UJ
1,1,2-Trichloroethane	23 U	22 U	20 UJ	4.8 UJ
1,1-Dichloroethane	23 UJ	22 UJ	20 UJ	4.8 UJ
1,1-Dichloroethene	23 UJ	22 UJ	20 UJ	4.8 UJ
1,2,4-Trichlorobenzene	23 U	22 U	20 UJ	4.8 UJ
1,2-Dibromo-3-chloropropane	23 U	22 U	20 UJ	4.8 UJ
1,2-Dibromoethane	23 U	22 U	20 UJ	4.8 UJ
1,2-Dichlorobenzene	23 U	22 U	20 UJ	4.8 UJ
1,2-Dichloroethane	23 UJ	22 UJ	20 UJ	4.8 UJ
1,2-Dichloropropane	23 UJ	22 UJ	20 UJ	4.8 UJ
1,3-Dichlorobenzene	23 U	22 U	20 UJ	4.8 UJ
1,4-Dichlorobenzene	23 U	22 U	**1.1 J**	4.8 UJ
2-Butanone	58 U	54 U	**66 J**	12 UJ
2-Hexanone	58 U	54 U	50 UJ	12 UJ
4-Methyl-2-pentanone	58 U	54 U	50 UJ	12 UJ
Acetone	**540 J**	**290 J**	**760 J**	**110 J**
Benzene	23 UJ	22 UJ	20 UJ	4.8 UJ
Bromodichloromethane	23 UJ	22 UJ	20 UJ	4.8 UJ
Bromoform	23 U	22 U	20 UJ	4.8 UJ
Bromomethane	23 UJ	22 UJ	20 UJ	4.8 UJ
Carbon disulfide	**17 J**	**13 J**	**9.2 J**	4.8 UJ
Carbon tetrachloride	23 UJ	22 UJ	20 UJ	4.8 UJ
Chlorobenzene	23 U	22 U	20 UJ	4.8 UJ
Chloroethane	23 UJ	22 UJ	20 UJ	4.8 UJ
Chloroform	23 UJ	22 UJ	20 UJ	4.8 UJ
Chloromethane	**2.5 J**	**1.7 J**	20 UJ	4.8 UJ
cis-1,2-Dichloroethene	**51 J**	**27 J**	20 UJ	4.8 UJ
cis-1,3-Dichloropropene	23 UJ	22 UJ	20 UJ	4.8 UJ
Cyclohexane	**1.8 J**	**1.7 J**	20 UJ	4.8 UJ
Dibromochloromethane	23 U	22 U	20 UJ	4.8 UJ
Dichlorodifluoromethane (Freon-12)	23 UJ	22 UJ	20 UJ	4.8 UJ
Ethylbenzene	23 U	22 U	20 UJ	4.8 UJ
Isopropylbenzene	23 U	22 U	20 UJ	4.8 UJ
m- and p-Xylene	**0.77 J**	43 U	40 UJ	9.6 UJ
Methyl acetate	**95 J**	**57 J**	**570 J**	**65**
Methylcyclohexane	23 U	22 U	20 UJ	4.8 UJ
Methylene chloride	23 UJ	22 UJ	20 UJ	4.8 UJ
Methyl-tert-butyl ether (MTBE)	23 UJ	22 UJ	20 UJ	4.8 UJ
o-Xylene	23 U	22 U	20 UJ	4.8 UJ
Styrene	23 U	22 U	20 UJ	4.8 UJ
Tetrachloroethene	23 U	22 U	20 UJ	4.8 UJ
Toluene	23 U	22 U	20 U	4.8 U
trans-1,2-Dichloroethene	23 UJ	22 UJ	20 UJ	4.8 UJ
trans-1,3-Dichloropropene	23 U	22 U	20 UJ	4.8 UJ
Trichloroethene	**2.8 J**	**1.9 J**	20 UJ	4.8 UJ
Trichlorofluoromethane(Freon-11)	23 UJ	22 UJ	20 UJ	4.8 UJ
Vinyl chloride	**6 J**	22 UJ	20 UJ	4.8 UJ
Xylene, total	23 U	22 U	20 UJ	4.8 UJ
SVOA(UG/KG)				
1,1-Biphenyl	740 U	710 U	710 U	230 U
2,2'-Oxybis(1-chloropropane)	740 U	710 U	710 U	230 U
2,4,5-Trichlorophenol	1400 U	1400 U	1400 U	440 U
2,4,6-Trichlorophenol	1400 U	1400 U	1400 U	440 U
2,4-Dichlorophenol	1400 U	1400 U	1400 U	440 U
2,4-Dimethylphenol	1400 U	1400 U	1400 U	440 U
2,4-Dinitrophenol	1400 U	1400 U	1400 U	440 U
2,4-Dinitrotoluene	740 U	710 U	710 U	230 U
2,6-Dinitrotoluene	740 U	710 U	710 U	230 U
2-Chloronaphthalene	740 U	710 U	710 U	230 U

2-Chlorophenol	1400 U	1400 U	1400 U	440 U
2-Methylnaphthalene	**10 J**	**8.4 J**	**8.5 J**	**1.3 J**
2-Methylphenol	1400 U	1400 U	1400 U	440 U
2-Nitroaniline	1400 U	1400 U	1400 U	440 U
2-Nitrophenol	1400 U	1400 U	1400 U	440 U
3,3'-Dichlorobenzidine	740 U	710 U	710 R	230 U
3-Nitroaniline	1400 U	1400 U	1400 UJ	440 U
4,6-Dinitro-2-methylphenol	1400 U	1400 U	1400 U	440 U
4-Bromophenyl-phenylether	740 UJ	710 UJ	710 U	230 U
4-Chloro-3-methylphenol	1400 U	1400 U	1400 U	440 U
4-Chloroaniline	1400 U	1400 U	1400 R	440 U
4-Chlorophenyl-phenylether	740 U	710 U	710 U	230 U
4-Methylphenol	1400 U	1400 U	1400 U	440 U
4-Nitroaniline	1400 U	1400 U	1400 UJ	440 U
4-Nitrophenol	1400 U	1400 U	1400 U	440 U
Acenaphthene	**4.3 J**	35 U	35 U	11 U
Acenaphthylene	36 U	35 U	35 U	11 U
Acetophenone	740 U	710 U	710 U	230 U
Anthracene	**14 J**	**5.1 J**	**3.8 J**	11 U
Atrazine	740 U	710 UJ	710 U	230 U
Benzaldehyde	**130 J**	**240 J**	**400 J**	230 U
Benzo(a)anthracene	**17 J**	**2.6 J**	**2.9 J**	11 U
Benzo(a)pyrene	**32 J**	**37**	**18 J**	**0.84 J**
Benzo(b)fluoranthene	**24 J**	**9.6 J**	**7 J**	11 U
Benzo(g,h,i)perylene	36 U	35 U	**5.9 J**	11 U
Benzo(k)fluoranthene	**17 J**	**6.1 J**	**4.7 J**	11 U
bis(2-Chloroethoxy)methane	740 U	710 U	710 U	230 U
bis(2-Chloroethyl)ether	740 U	710 U	710 U	230 U
bis(2-Ethylhexyl)phthalate	**400 J**	710 U	710 U	230 U
Butylbenzylphthalate	740 U	710 U	710 U	230 U
Caprolactam	740 U	710 U	710 U	230 U
Carbazole	740 U	710 U	710 U	230 U
Chrysene	**18 J**	**6.1 J**	**4.9 J**	11 U
Dibenz(a,h)anthracene	36 U	35 U	35 UJ	11 UJ
Dibenzofuran	740 U	710 U	710 U	230 U
Diethylphthalate	740 U	710 U	710 U	230 U
Dimethoate	390 U	360 U	320 R	93 U
Dimethyl phthalate	740 U	710 U	710 U	230 U
Di-n-butylphthalate	740 U	710 U	710 U	230 U
Di-n-octylphthalate	740 U	710 U	710 U	230 U
Famphur	390 U	360 U	320 U	93 U
Fluoranthene	**25 J**	**9.2 J**	**6.9 J**	11 U
Fluorene	**5.4 J**	35 U	**2.4 J**	11 U
Hexachlorobenzene	740 U	710 U	710 U	230 U
Hexachlorobutadiene	740 U	710 U	710 U	230 U
Hexachlorocyclopentadiene	740 U	710 U	710 R	230 U
Hexachloroethane	740 U	710 U	710 U	230 U
Indeno(1,2,3-cd)pyrene	36 U	35 U	**3.1 J**	11 UJ
Isophorone	740 U	710 U	710 U	230 U
Naphthalene	36 U	35 U	35 U	11 U
n-Nitroso-di-n-propylamine	740 U	710 U	710 U	230 U
n-Nitrosodiphenylamine	740 U	710 U	710 U	230 U
Nitrobenzene	740 U	710 U	710 U	230 U
Pentachlorophenol	1400 U	1400 U	1400 U	440 U
Phenanthrene	**21 J**	**9.7 J**	**8.4 J**	**2 J**
Phenol	1400 U	1400 U	1400 U	440 U
Phorate	190 U	180 U	160 U	46 U
Pyrene	**22 J**	**6.8 J**	**5.3 J**	**0.76 J**
PEST/PCB(UG/KG)				
4,4'-DDD	**13 J**	**4 NJ**	**13 NJ**	4.4 U
4,4'-DDE	**7.8 J**	**9.2 NJ**	**14 NJ**	**0.65 NJ**
4,4'-DDT	**5.5 J**	14 R	69 R	**4.5 J**
Aldrin	**2.3 J**	**2.2 J**	35 U	2.3 U
alpha-BHC	7.4 U	7.1 U	35 U	2.3 U
alpha-Chlordane	7.4 U	**6 J**	35 UJ	**0.98 J**
Aroclor-1016	100 U	100 U	500 U	32 U

Aroclor-1221	150 U	140 U	710 U	45 U
Aroclor-1232	74 U	71 U	350 U	23 U
Aroclor-1242	74 U	71 U	350 U	23 U
Aroclor-1248	74 U	71 U	350 U	23 U
Aroclor-1254	74 U	71 U	350 U	23 U
Aroclor-1260	74 U	71 U	350 U	23 U
Azinphos methyl	190 U	180 U	160 U	46 U
beta-BHC	**2.3 J**	3.5 U	18 U	**0.48 J**
Bolstar	190 U	180 U	160 U	46 U
Chlorpyrifos	190 U	180 U	160 U	46 U
Coumaphos	190 U	180 U	160 U	46 U
delta-BHC	**3.6 J**	**6.7 J**	35 UJ	2.3 UJ
Demeton-O	490 U	440 U	400 U	120 U
Demeton-S	490 UJ	440 UJ	400 R	120 UJ
Diazinon	190 U	180 U	160 U	46 U
Dichlorvos	390 U	360 U	320 U	93 U
Dieldrin	**2.7 J**	**1.8 J**	69 U	**1.1 J**
Disulfoton	390 U	360 U	320 U	93 U
Endosulfan I	**13 J**	**6.6 J**	35 U	**0.99 J**
Endosulfan II	14 U	14 U	69 U	4.4 U
Endosulfan sulfate	**10 J**	**8.8 J**	**170 J**	**2.9 J**
Endrin	14 U	14 U	69 U	**0.97 J**
Endrin aldehyde	14 U	**4.7 J**	**560 NJ**	4.4 U
Endrin ketone	**7.4 J**	**4.9 J**	**130 J**	**1.3 J**
Ethoprop	100 U	90 U	81 U	24 U
Fensulfothion	1000 U	900 U	810 U	240 U
Ethyl p-nitrophenyl phenylphosphorothioate	190 U	180 U	160 U	46 U
Fenthion	190 U	180 U	160 U	46 U
gamma-BHC (Lindane)	7.4 U	7.1 U	35 U	**2 J**
gamma-Chlordane	**9.1 J**	**2.5 J**	**4.5 J**	**1.1 J**
Heptachlor	**6 J**	**5 J**	35 U	**0.34 J**
Heptachlor epoxide	**3.7 J**	**2.1 J**	35 U	2.3 U
Malathion	190 U	180 U	160 U	46 U
Merphos	290 U	270 U	240 U	70 U
Methoxychlor	74 U	71 UJ	**150 J**	23 UJ
Methyl parathion	100 U	90 U	81 U	24 U
Mevinphos	390 U	360 U	320 UJ	93 U
Monocrotophos	1900 U	1800 U	1600 R	**420 J**
Naled	1000 UJ	900 UJ	810 R	240 UJ
Parathion	190 U	180 U	160 U	46 U
Ronnel	190 U	180 U	160 U	46 U
Sulfotepp	100 U	90 U	81 U	24 U
Tetrachlorvinphos	190 U	180 U	160 U	46 U
Thionazin	190 U	180 U	160 U	46 U
Tokuthion (Prothiophos)	190 U	180 U	160 U	46 U
Toxaphene	360 U	350 U	1700 U	110 U
Trichloronate	190 U	180 U	160 U	46 U
METAL(MG/KG)				
Aluminum	**7470**	**6540**	**8650**	**469**
Antimony	4.1 U	3.9 U	**5.3 J**	**1.5 J**
Arsenic	4.1 U	3.9 U	4.1 U	1.3 U
Barium	**36.5 J**	**32.6 J**	**18.6 J**	**1.8 J**
Beryllium	**0.27 J**	**0.21 J**	**0.67 J**	0.64 U
Cadmium	2.1 U	1.9 U	2.1 U	0.64 U
Calcium	**3970**	**3830**	**2350**	643 U
Chromium	**8.8**	**7.4**	**9**	**0.75 J**
Cobalt	**0.69 J**	**0.38 J**	2.1 U	0.64 U
Copper	**9.5**	**7.7**	**4.2**	**0.95**
Iron	**3100**	**2700**	**2000**	**114**
Lead	**12.4**	**11.5**	**13.7**	**1.7**
Magnesium	2070 U	1930 U	**1320 J**	**21.8 J**
Manganese	**98.2**	**85.2**	**9.4**	**0.81 J**
Mercury	**0.19**	**0.09 J**	0.14 U	0.04 U
Nickel	**3.8**	**2.9**	**4.3**	0.64 U
Potassium	2070 UJ	1930 UJ	**520 J**	**24.8 J**
Selenium	2.1 U	1.9 U	**0.94 J**	0.64 UJ

Silver	2.1 U	1.9 U	2.1 U	0.64 U
Sodium	2070 U	1930 U	**1400 J**	**69.7 J**
Thallium	4.1 U	3.9 U	4.1 UJ	1.3 UJ
Vanadium	**12.7**	**10.9**	**10.2**	**0.7 J**
Zinc	**14.4 J**	**9.6 J**	**17**	**11.6**
WCHEM()				
Total organic carbon (TOC) (MG/KG)	**180300**	**184800**	**146200**	**13530**

Table H-2.1
Ingestion Screening Values for Mammals at Site 69
Supplemental Investigation Site 69, Operable Unit No. 14
MCB CamLej, North Carolina

Chemical	Test Organism	Body Weight (kg)	Duration	Exposure Route	Effect/Endpoint	LOAEL (mg/kg/d)	NOAEL (mg/kg/d)	Reference
Inorganics								
Lead	rat	0.35	3 generations	oral in diet	reproduction	80	8	Sample et al. 1996
Mercury[a]	rat	0.35	3 generations	oral in diet	reproduction	0.16	0.032	Sample et al. 1996
Mercury[b]	mink	1.00	93 days	oral in diet	survival/weight loss	0.25	0.15	Sample et al. 1996
Selenium	rat	0.35	1 year	oral in water	reproduction	0.33	0.2	Sample et al. 1996
Silver	rat	0.35	2 weeks	oral in water	survival	45.3	9.06	ATSDR 1990
Pesticides/PCBs								
4,4'-DDD[b]	rat	0.35	2 years	oral in diet	reproduction	4	0.8	Sample et al. 1996
4,4'-DDD[a]	dog	10.0	2 generations	oral in diet	reproduction	5.00	1.00	ATSDR 1994
4,4'-DDE[b]	rat	0.35	2 years	oral in diet	reproduction	4.00	0.80	Sample et al. 1996
4,4'-DDE[a]	dog	10.0	2 generations	oral in diet	reproduction	5.00	1.00	ATSDR 1994
4,4'-DDT[b]	rat	0.35	2 years	oral in diet	reproduction	4.00	0.80	Sample et al. 1996
4,4'-DDT[a]	dog	10.0	2 generations	oral in diet	reproduction	5.00	1.00	ATSDR 1994
Aldrin	rat	0.35	3 generations	oral in diet	reproduction	1.00	0.20	Sample et al. 1996
alpha-BHC	rat	0.35	4 generations	oral in diet	reproduction	3.20	1.60	Sample et al. 1996
alpha-Chlordane	mouse	0.03	6 generations	oral in diet	reproduction	9.16	4.58	Sample et al. 1996
beta-BHC	rat	0.35	4 generations	oral in diet	reproduction	3.20	1.60	Sample et al. 1996
delta-BHC	rat	0.35	4 generations	oral in diet	reproduction	3.20	1.60	Sample et al. 1996
Dieldrin[b]	rat	0.35	3 generations	oral in diet	reproduction	0.20	0.04	Sample et al. 1996
Dieldrin[a]	dog	10	15.7 months	oral in diet	systemic	0.14	0.03	ATSDR 1993a
Endosulfan I[b]	rat	0.35	30 days	oral (gavage)	fertility	7.50	1.50	Sample et al. 1996
Endosulfan I[a]	dog	10.0	2 years	oral in diet	systemic	5.00	1.00	ATSDR 1993b
Endrin	mouse	0.03	120 days	oral in diet	reproduction	0.92	0.18	Sample et al. 1996
gamma-BHC (Lindane)	rat	0.35	3 generations	oral in diet	reproduction	40.0	8.00	Sample et al. 1996
Heptachlor[b]	mouse	0.03	70 days	oral in diet	reproduction	1.63	0.33	ATSDR 1993c
Heptachlor[a]	mink	1.00	181 days	oral in diet	reproduction	1.00	0.20	Sample et al. 1996
Heptachlor epoxide[b]	mouse	0.03	70 days	oral in diet	reproduction	1.63	0.33	ATSDR 1993c
Heptachlor epoxide[a]	mink	1.00	181 days	oral in diet	reproduction	1.00	0.20	Sample et al. 1996
Methoxychlor	rat	0.35	11 months	oral in diet	reproduction	8.00	4.00	Sample et al. 1996

Notes:
[a] Used for red fox and raccoon only
[b] Used for short-tailed shrew, white-footed deer mouse, and white-tailed deer only

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Table H-2.2

Ingestion Screening Values for Birds at Site 69

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Test Organism	Body Weight (kg)	Duration	Exposure Route	Effect/Endpoint	LOAEL (mg/kg/d)	NOAEL (mg/kg/d)	Reference
Inorganics								
Lead	American kestrel	0.13	7 months	oral in diet	reproduction	19.25	3.85	Sample et al. 1996
Mercury	red-tailed hawk	1.10	12 weeks	oral in diet	survival/neurological	1.20	0.49	USEPA 1995b
Selenium	screech owl	0.20	13.7 weeks	oral in diet	reproduction	1.50	0.44	Sample et al. 1996
Silver	chicken (chicks)	0.80	not specified	oral in diet	growth	35.0	7.00	Eisler 1996
Pesticides/PCBs								
4,4'-DDD[a]	Japanese quail	0.11	3 generations	oral in diet	reproduction	5.00	0.50	USEPA 1995b
4,4'-DDD[b]	barn owl	0.47	2 years	oral in diet	reproduction	0.40	0.08	Blus 1996
4,4'-DDE[a]	Japanese quail	0.11	3 generations	oral in diet	reproduction	5.00	0.50	USEPA 1995b
4,4'-DDE[b]	barn owl	0.47	2 years	oral in diet	reproduction	0.40	0.08	Blus 1996
4,4'-DDT[a]	Japanese quail	0.11	3 generations	oral in diet	reproduction	5.00	0.50	USEPA 1995b
4,4'-DDT[b]	barn owl	0.47	2 years	oral in diet	reproduction	0.40	0.08	Blus 1996
Aldrin	ring-necked pheasant	1.14	5 days	oral in diet	survival	0.35	0.07	Hill et al. 1975
alpha-BHC	Japanese quail	0.15	90 days	oral in diet	reproduction	2.25	0.56	Sample et al. 1996
alpha-Chlordane	red-winged blackbird	0.064	84 days	oral in diet	survival	10.7	2.14	Sample et al. 1996
beta-BHC	Japanese quail	0.15	90 days	oral in diet	reproduction	2.25	0.56	Sample et al. 1996
delta-BHC	Japanese quail	0.15	90 days	oral in diet	reproduction	2.25	0.56	Sample et al. 1996
Dieldrin	barn owl	0.466	2 years	oral in diet	reproduction	0.39	0.08	Sample et al. 1996
Endosulfan I	gray partridge	0.40	4 weeks	oral in diet	reproduction	50.0	10.0	Sample et al. 1996
Endrin	screech owl	0.181	>83 days	oral in diet	reproduction	0.10	0.02	Sample et al. 1996
gamma-BHC (Lindane)	mallard	1.00	8 weeks	oral (gavage)	reproduction	20.0	4.00	Sample et al. 1996
Heptachlor	ring-necked pheasant	1.14	5 days	oral in diet	survival	1.38	0.28	Hill et al. 1975
Heptachlor epoxide	ring-necked pheasant	1.14	5 days	oral in diet	survival	1.38	0.28	Hill et al. 1975
Methoxychlor	chicken	1.50	16 weeks	oral in diet	reproduction	1,775	355	Wiemeyer 1996

Notes:

[a] Used for American robin and American woodcock only

[b] Used for Eastern screech owl only

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Table H-2.3

Exposure Parameters for Upper Trophic Level Ecological Receptors - Step 3

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Receptor	Body Weight (kg)		Water Ingestion Rate (L/day)		Food Ingestion Rate (kg/day - dry)		Dietary Composition (percent)							Soil/ Sediment Ingestion (percent)	
	Value	Reference	Value	Reference	Value	Reference	Terr. Plants	Soil Invert.	Small Mammals	Fish/ Frogs	Aquatic Plants	Benthic Invert.	Reference	Value	Reference
Birds															
American robin	0.064	USEPA 1993	0.0129	allometric equation	0.0074	Levey and Karasov 1989	51.9	43.5	0	0	0	0	Martin et al. 1951	4.6	Sample and Suter 1994
American woodcock	0.145	Dunning 1993	0.0233	allometric equation	0.0292	USEPA 1993	0	89.6	0	0	0	0	USEPA 1993	10.4	Beyer et al. 1994
Eastern screech-owl	0.145	Dunning 1993	0.0216	allometric equation	0.0306	allometric equation	0	28.0	70.0	0	0	0	Johnsgard 1988	2.0	Assumed based on diet
Mammals															
Raccoon	4.23	Silva and Downing 1995	0.6092	allometric equation	0.1307	Conover 1989	0	0	0	7.0	40.0	43.6	USEPA 1993	9.4	Beyer et al. 1994
Red fox	3.17	Silva and Downing 1995	0.4115	allometric equation	0.1476	Sample and Suter 1994	7.0	2.8	87.4	0	0	0	USEPA 1993	2.8	Beyer et al. 1994
Short-tailed shrew	0.013	USEPA 1993	0.0048	USEPA 1993	0.0019	USEPA 1993	4.7	82.3	0	0	0	0	USEPA 1993; Sample and Suter 1994	13.0	Sample and Suter 1994
White-footed mouse	0.014	Silva and Downing 1995	0.0092	Sample and Suter 1994	0.0007	Sample and Suter 1994	51.0	47.0	0	0	0	0	Martin et al. 1951; Sample and Suter 1994	2.0	Beyer et al. 1994
White-tailed deer	52.1	Silva and Downing 1995	3.5636	allometric equation	0.2610	Sample and Suter 1994	98.0	0	0	0	0	0	Sample and Suter 1994	2.0	Beyer et al. 1994

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Table H-2.4

Soil Bioconcentration Factors For Terrestrial Plants and Soil Invertebrates - Step 3

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Soil-Plant BCF (dry weight)		Soil-Invertebrate BAF (dry weight)	
	Value	Reference	Value	Reference
Inorganics				
Lead	1.103	Bechtel Jacobs 1998a	0.52	Sample et al. 1998a
Mercury	5.000	Bechtel Jacobs 1998a	20.63	Sample et al. 1998a
Selenium	3.012	Bechtel Jacobs 1998a	1.34	Sample et al. 1998a
Zinc	1.820	Bechtel Jacobs 1998a	12.89	Sample et al. 1998a
Pesticides/PCBs				
4,4'-DDE	0.2990	USEPA 2005	10.6	Menzie et al. 1992
4,4'-DDT	0.3375	USEPA 2005	0.70	Menzie et al. 1992
alpha-BHC	1.4240	USEPA 2005	1.00	--
beta-BHC	1.4165	USEPA 2005	1.00	--
Endrin	0.7328	USEPA 2005	3.60	Edwards and Bohlen 1992
gamma-BHC (Lindane)	1.4775	USEPA 2005	1.00	--

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Table H-2.5

Soil Bioaccumulation Factors For Small Mammals - Step 3

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Soil-Mouse BAF (dry weight)		Soil-Vole BAF (dry weight)		Soil-Shrew BAF (dry weight)	
	Value	Reference	Value	Reference	Value	Reference
Inorganics						
Lead	0.286	Sample et al. 1998b	0.187	Sample et al. 1998b	0.339	Sample et al. 1998b
Mercury	0.13	Sample et al. 1998b	0.192	Sample et al. 1998b	0.192	Sample et al. 1998b
Selenium	1.263	Sample et al. 1998b	1.1867	Sample et al. 1998b	1.1867	Sample et al. 1998b
Zinc	2.7822	Sample et al. 1998b	2.3168	Sample et al. 1998b	2.9011	Sample et al. 1998b
Pesticides/PCBs*						
4,4'-DDD	--	--	--	--	--	--
4,4'-DDE	--	--	--	--	--	--
4,4'-DDT	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--
alpha-BHC	--	--	--	--	--	--
alpha-Chlordane	--	--	--	--	--	--
beta-BHC	--	--	--	--	--	--
delta-BHC	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--
Endosulfan I	--	--	--	--	--	--
Endrin	--	--	--	--	--	--
gamma-BHC (Lindane)	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--
Heptachlor epoxide	--	--	--	--	--	--
Methoxychlor	--	--	--	--	--	--

Notes

* Tissue concentrations in small mammals food items were calculated using a diet-tissue BAF of 1.

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Table H-2.6

Sediment Bioaccumulation Factors For Benthic Invertebrates and Fish - Step 3

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Sediment-Invertebrate BAF (dry weight)		Sediment-Fish BAF (dry weight)	
	Value	Reference	Value	Reference
Inorganics				
Lead	0.326	Bechtel Jacobs 1998b	0.07	Krantzberg and Boyd 1992
Mercury	2.868	Bechtel Jacobs 1998b	4.58	Cope et al. 1990
Selenium	1.000	--	1.00	--
Zinc	4.759	Bechtel Jacobs 1998b	0.15	Pascoe et al. 1996
Pesticides/PCBs				
4,4'-DDD	0.350	Oliver and Niimi 1988	2.250	Oliver and Niimi 1988
4,4'-DDE	3.360	Oliver and Niimi 1988	26.20	Oliver and Niimi 1988
4,4'-DDT	2.280	Oliver and Niimi 1988	8.800	Oliver and Niimi 1988
Aldrin	1.000	--	1.000	--
alpha-BHC	1.000	--	1.000	--
alpha-Chlordane	1.000	--	1.000	--
beta-BHC	1.000	--	1.000	--
delta-BHC	1.000	--	1.000	--
Dieldrin	4.520	Standley 1997	1.000	--
Endosulfan I	1.000	--	1.000	--
Endrin	1.000	--	1.000	--
gamma-BHC (Lindane)	1.000	--	6.200	Oliver and Niimi 1988
Heptachlor	1.000	--	1.000	--
Heptachlor epoxide	1.000	--	1.000	--
Methoxychlor	1.000	--	1.000	--

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Table H-2.7

Sediment Bioaccumulation Factors For Aquatic Plants - Step 3

Supplemental Investigation Site 69, Operable Unit No. 14

MCB CamLej, North Carolina

Chemical	Sediment-Plant BCF (dry weight)		Sediment-Frog BAF (dry weight)	
	Value	Reference	Value	Reference
Inorganics				
Lead	0.4680	Bechtel Jacobs 1998a	0.070	Krantzberg and Boyd 1992
Mercury	5.0000	Bechtel Jacobs 1998a	4.580	Cope et al. 1990
Selenium	3.0120	Bechtel Jacobs 1998a	1.000	--
Zinc	1.8200	Bechtel Jacobs 1998a	0.147	Pascoe et al. 1996
Pesticides/PCBs				
4,4'-DDD	0.4234	USEPA 2005	2.250	Oliver and Niimi 1988
4,4'-DDE	0.2990	USEPA 2005	26.20	Oliver and Niimi 1988
4,4'-DDT	0.3375	USEPA 2005	8.800	Oliver and Niimi 1988
Aldrin	0.3429	USEPA 2005	1.000	--
alpha-BHC	1.4240	USEPA 2005	1.000	--
alpha-Chlordane	0.3771	USEPA 2005	1.000	--
beta-BHC	1.4165	USEPA 2005	1.000	--
delta-BHC	1.2156	USEPA 2005	1.000	--
Dieldrin	0.6223	USEPA 2005	1.000	--
Endosulfan I	1.4016	USEPA 2005	1.000	--
Endrin	0.7328	USEPA 2005	1.000	--
gamma-BHC (Lindane)	1.4775	USEPA 2005	6.200	Oliver and Niimi 1988
gamma-Chlordane	0.3771	USEPA 2005	1.000	--
Heptachlor	0.3892	USEPA 2005	1.000	--
Heptachlor epoxide	0.7563	USEPA 2005	1.000	--
Methoxychlor	0.7251	USEPA 2005	1.000	--

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